SUSTAINABILITY REPORT ACEA GROUP 2021

(Consolidated Non-Financial Statement pursuant to Legislative Decree no. 254/2016, prepared according to the GRI Standards)

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LETTER TO THE STAKEHOLDERS

2021, which has just ended, was a crucial year for the successful overcoming of the most acute phases of the health emergency and the gradual economic and social recovery of the country and the rest of the world. If it were possible, just for a moment, to divert our thoughts from what is happening in Europe today, a conflict that marks a deep furrow of discontinuity with respect to the previous world political and economic balances, generating numerous unknowns about the future, we could, on the contrary, highlight the clear and coherent path of the European Union that is strongly characterised by the issues of sustainable and inclusive growth. This was also the case for the Acea Group in 2021.

The year began with the issue of Acea's first Green Bond, also aligning the financial strategy with the industrial and sustainability planning defined in 2020. The green projects eligible for funding through Green Bond are attributable to 4 particularly significant areas for the common challenge of sustainable growth: management of water resources, energy efficiency, circular economy and green energy. The initiative was very much welcomed by the market and initiates, for Acea, a gradual expansion of the use of sustainable finance instruments.

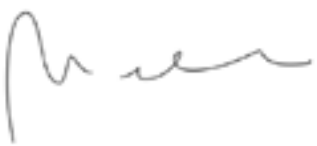
We wanted to promote a stronger rooting of sustainability issues in corporate governance by equipping the Group with policies and tools with transversal, internal and external impacts. Among these, for example, the definition and adoption of the *Principles and Values of Stakeholder Engagement*, through which we wanted to take on wider responsibilities with respect to the efficient management of the business and related to the ability to contribute to sustainable development of the territories in which we operate, increasing attention to the well-being of our people and of all the stakeholders with whom we interact. With this in mind, the principles and procedures for involving interested parties will increase the ability to listen and the effectiveness of dialogue and will facilitate the construction of a solid relational network. The evolution of the Group's vendor rating system and the partnership with Ecovadis, both implemented, also respond to the same logic, which will contribute to promoting and enhancing sustainability along the supply chain, fostering increasingly virtuous collaborations, with the utmost consideration for the health and safety of all workers.

Of equal importance during the year was the signing with the Trade Unions of a Protocol on Diversity and Inclusion, operational at Group level, which emphasises the centrality of the principles of gender equality, social inclusion, contrast to all forms of discrimination and the enhancement of diversity, and the definition of a Diversity & Inclusion Plan, for the development of initiatives dedicated to employees, and a dashboard dedicated to measuring and analysing trends relating to the variables of interest.

A particularly important step was the choice of integrating quantitative sustainability objectives into the medium-long and short-term incentive remuneration policy. Both the new Long Term Incentive Plan (LTIP), referring to the three-year period 2021-2023 and reserved for some top positions, and the annual incentive plan, Management by Objectives, applied to senior and middle management, include, in fact, starting from 2021, a composite sustainability indicator, the achievement of which affects the performance evaluation system.

The 2020-2024 Sustainability Plan in force, approved by the Board of Directors, was prepared in accordance with the Development Goals of the 2030 Agenda, with the values of our *Code of Ethics* and the principles of the United Nations "Global Pact", to which Acea confirmed to adhere to again this year. The specific objectives set out therein find a key to understanding not only in relation to the main stakeholders, but also around some drivers that qualify our sustainability strategy, and in particular: resilience and modernisation of infrastructures, customer care, the circular economy, sustainable water management, the decarbonisation of the energy system, sustainability along the supply chain, the reduction of environmental impact, the contribution to smart cities and the containment of impacts on the urban context, innovation, the centrality of people and involvement in the territory. During the year, both the state of progressive pursuit of the sustainability targets set for 2024, the annual final balance of which is published in this document, and the amount of investments envisaged in the industrial plan and related to sustainability targets were monitored. Determined to go further, we have already activated working groups that will lead us to define even more ambitious longer-term strategic planning. We are in fact convinced that business management capable of pursuing sustainable success, jointly evaluating economic growth and impacts on the environmental and social context and therefore directing the business development prospects so that they also generate a positive contribution for the territory, is, particularly in our time, the only way forward to preserve and develop the common good.

The Chairperson
Michaela Castelli



The Chief Executive Officer
Giuseppe Gola

HIGHLIGHTS

RELATIONS WITH THE STAKEHOLDERS

CUSTOMERS

152 t/year **of paper saved** thanks to the web bill option **(+44%)**

100% ECO **Acea Energia's supply of energy and gas** for free market customers

2,300 GWh **"Green" energy** sold by Acea Energia to customers on the free market **(+92%)**

COMMUNITY

140,000 **vaccine doses** anti-Covid-19 administered in **Acea vaccine hub**

131 **Water Kiosks** active: **30 million** litres supplied, **601 t** of plastic/year saved and **1,580 t** of CO_2 not emitted into the atmosphere

25,000 **users of Siamo Energia!** the online edition of **Acea Scuola 2021**

SHAREHOLDERS AND INVESTORS

+9% growth in **shares** over the year

1st **Acea Green Bond:** first Italian corporate issue with **negative yield**

40% of institutional investors are **"sustainable"**

INSTITUTIONS AND THE COMPANY

Acea receives the **SMAU Innovation Award**

40 initiatives on innovation and sustainability in the **Acea Innovation Garage** Programme

2nd Innovation Day Acea Building a sustainable future

PERSONNEL

LTIP e **MbO** provide for a **composite sustainability indicator**

Defined the **Diversity & Inclusion Plan 2021-2022**

169,522 **hours of training** in total provided during the year

SUPPLIERS

over **€ 2 billion**: total value of procurement value in 2021 **(+66%)** and **2,870 suppliers** involved

15,444 **safety inspections** at construction sites: **non-conformities decrease**

The **Ecovadis** model has been adopted for the **supplier ESG assessment**

HIGHLIGHTS

RELATIONS WITH THE ENVIRONMENT

WATER

481 Mm^3
of drinking water is supplied by Acea Ato 2, Acea Ato 5, GORI, Gesesa and AdF

around **738,000**
analytical determinations on the drinking water supplied by Acea Ato 2, Acea Ato 5, GORI, Gesesa and AdF

779 Mm^3
of waste water processed by the Acea Ato 2, Acea Ato 5, GORI, Gesesa e AdF treatment plants

around **67%**
recovered sludge

ENVIRONMENT

27,744 t
of Quality Compost produced **(+33%)**

356 GWh
of energy produced by **waste-to-energy**

over **18,170 kNm^3**
of **biogas produced** and, from this, **31 GWh** of electricity

47%
of **recovered ash** produced in the waste-to-energy plants

PRODUCTION AND DISTRIBUTION OF ENERGY

1,009 GWh
electricity produced in total, of which
69% from renewable sources

G.I.M.M.I.:
the automatic satellite system
for **monitoring the network**

220,000 t of CO_2
saved through the production of
electricity from renewable sources
instead of traditional ones

47% of the **territorial protection**
index (underground
HV network/total HV network)

GROUP

420 GWh
of electrical consumption of the
Group's member companies from
GO-certified renewable energy
equal to around **132 kt of CO_2**
avoided

45%
of **waste recovered**
on the total waste produced

2.2 Mm^3
of **water recovered and reused**
in industrial processes

DISCLOSING SUSTAINABILITY: METHODOLOGICAL NOTE

SUSTAINABILITY PERFORMANCE: LEGISLATIVE DECREE NO. 254/2016, REGULATION 852/2020 AND GRI STANDARD

Acea has published a Group Sustainability Report since 1999, the year in which the Parent Company was listed on the Stock Exchange. Since then, the sustainability report complies with the annual publication frequency, is prepared according to international Guidelines[1] and is subject to third-party verification. Since the 2017 edition, the Sustainability Report has also complied with Legislative Decree no. 254/2016[2], which transposed EU Directive 95/2014 into Italian law. Under the Decree, companies that meet the conditions set out in article 2 are required to publish their sustainability performance in a **non-financial statement** – individual or consolidated – which contains information: "(...) *to an extent necessary for ensuring an understanding of the company's activity, its performance, results and the impact it produces, relating to environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters, which are relevant given the activities and characteristics of the enterprise* (...)"[3].
It is also worth noting the entry into force of **Regulation 852/2020**[4], which "*establishes the criteria for determining whether an economic activity can be considered environmentally sustainable*"[5]. The Regulation - also known as "EU Taxonomy" - states that companies subject to the requirement to publish information of a non-financial nature include in the Consolidated Non-Financial Statement information on the activities carried out associated with "eco-sustainable activities" and on quantitative performance indicators economic (KPI) - in particular, the turnover, CapEx and OpEx shares - attributable to them[6]. Application of the Regulation is gradual and starts, in the initial phase, from 1 January 2022.

1 After also following other guidance, Acea opted for compliance with the guidelines issued by the Global Reporting Initiative (GRI), applying them starting with the 2002 Sustainability Report with the highest level of "compliance" possible and following its progressive development.

2 Article 1, paragraph 1073 of the 2019 Budget Law introduced an amendment to Legislative Decree no. 254/2016, art. 3, paragraph 1, letter c, also prescribing the illustration of the methods for managing the main risks.

3 Legislative Decree no. 254/2016 as amended, in particular articles 2, 3, paragraphs 1, 4.

4 As part of the Action Plan on Sustainable Finance adopted in March 2018 by the European Commission to steer the capital market towards a more sustainable development model, in June 2020, Regulation 852/2020 was approved "*relating to the establishment of a framework that favours sustainable investments*", which entered into force on 12 July 2020.

5 Article 1 of the Regulation - *Object and scope of application* - states: *"This regulation establishes the criteria for determining whether an economic activity can be considered environmentally sustainable, in order to identify the degree of environmental sustainability of an investment"*. The economic activities that the Regulation identifies are considered for their substantial contribution to achieving 6 environmental objectives: climate change mitigation; adaptation to climate change; sustainable use and protection of water and marine resources; transition to the circular economy, also with reference to waste reduction and recycling; pollution prevention and control; protection of biodiversity and the health of eco-systems. The Regulation has currently governed, through the adoption of Delegated Acts, the 2 objectives on climate change. Activities that potentially contribute to achieving the environmental objectives are defined as "eligible" for the taxonomy; on the other hand, only the activities that meet the technical screening criteria indicated by the Regulations are defined as "aligned" with the taxonomy, making a substantial contribution towards achieving the objectives.

6 Regulation 852/2020, art. 8, paragraphs 1 and 2, reads: "*Any company subject to the requirement to publish information of a non-financial nature (...) includes (...) in the consolidated statement of a non-financial nature, information on how and to what extent the company's activities are associated with economic activities considered environmentally sustainable pursuant to articles 3 and 9 of this regulation* ". (...) "*In particular, non-financial companies communicate the following: a) the share of their turnover deriving from products or services associated with economic activities considered environmentally sustainable pursuant to articles 3 and 9; and b) the share of their capital grants and the share of operating expenditure relating to assets or processes associated with economic activities considered environmentally sustainable pursuant to articles 3 and 9*". In July 2021, the Commission adopted the delegated act on article 8 of the Regulation "*intended to specify the content, methodology and presentation of information that must be communicated by companies*" (Disclosure Delegated Act).

This *Sustainability Report*, for the financial year 2021 has been prepared in accordance with the GRI Standards[7]: *Comprehensive* option and is therefore called *Acea Group's 2021 Sustainability Report (Consolidated Non-Financial Statement pursuant to Legislative Decree no. 254/2016, prepared in accordance with GRI Standards)*, taking the form of an autonomous document, as permitted by the aforementioned Legislative Decree[8].
The *Consolidated Non-Financial Statement* also includes the disclosure required from the first year of application of Regulation 852/2020[9] and Delegated Regulations 2021/2178 and 2021/2139; it will therefore be applied to the same set of companies included in the NFS scope, considered significant and adequately representative of the Group pursuant to Legislative Decree no. 254/2016 (see the paragraph on *Materiality, GRI Standard and scope of the report* below).
The findings that emerged, as well as the description of the methodological definition process, are reported in the chapter *The information required by the European Taxonomy*.

The *Sustainability Report*, enclosing a *Summary Note*, following its approval by the Board of Directors, is available to the supervisory body and submitted for limited assurance by the independent auditor, with which Acea has no joint interests or other connections and appointed in order to assess the compliance thereof with Legislative Decree no. 254/2016 and its consistency with the implemented reporting standards[10] the limited assurance does not concern the information and data relating to the EU Taxonomy or the requests of art. 8 of EU Regulation 2020/852 (see *Opinion Letter of the independent auditor*).
The document is disseminated through publication on the institutional website at the same time as the *Consolidated Financial Statements* and distributed during the Shareholders' Meeting.

NON-FINANCIAL DISCLOSURE IN ITALY: THE CONSOB REPORT ON LISTED COMPANIES 2020

In June 2021, Consob researchers, with the collaboration of Methodos, published the **third report on the reporting of non-financial information of listed companies** in Italy.
The study analyses the application of Legislative Decree no. 254/2016, which governs the reporting obligations on the subject, by **151** Italian **businesses** and also observes other areas and documents, such as corporate governance reports and the remuneration policy, in order to assess the integration of sustainability in the corporate governance. In particular, it focused **on the materiality analysis and** the **involvement of the Management bodies**, on the **strategic plans** (on the websites), and on the **remuneration policies**, highlighting the evolution of companies with regard to the management of ESG factors, in comparison to data from the previous survey.
It turned out that the **materiality analysis** was carried out by all the companies analysed and 80% of them provided a representation with a **matrix** (72.8% in 2018); the involvement in the process **of top management** (49% in 2020 - 31.5% in 2018), of **external stakeholders** (55% in 2020 - 29.5% in 2018) and the cases in which companies simultaneously engage **internal and external entities** (48.3% in 2020 - 24.2% in 2018). The **participation of the BoD** also significantly increases, which intervenes by sharing or approving the results of the materiality analysis, testifying to their strategic importance (25.8% in 2020 - 13.9% in 2019). Finally, another sign of the integration of sustainability into the company's vision was captured by analysing the **extracts from the Strategic Plans published on the websites**, which highlight the increase in references to long-term valuable elements, including the Sustainable Development Goals (SDG) of the 2030 Agenda (28.4% in 2020 - 23.8% in 2019).
The report also examined the **induction and self-evaluation programmes** of the Management bodies, as indicators of a process of continuous improvement, recording a stable value for the inclusion of ESG issues in updating initiatives of the BoD members (21.2% in 2020 and 2018) and strong growth in the mention of ESG factors in the Board's assessment processes (24.5% in 2020 - 8.6% in 2018).
From the analysis of *Corporate Governance Reports*, made with all listed issuers in mind and not just those subject to Legislative Decree no. 254/2016, we can see **a rise in the establishment of internal board committees responsible for sustainability** (34.7% in 2020 - 20% in 2018). Finally, with regard to the **remuneration policies of senior management** as a lever for the integration of ESG factors in business management, the researchers, based on the *Reports on the remuneration policy and remuneration paid* (in 2019), noted the significant increase of businesses that **include non-financial factors in the remuneration of CEOs** (27.6% in 2019 - 14.4% in 2018); specifically when looking at **short-term remuneration**, both the average share and the maximum share attributed to ESG factors increase (average value: 17% in 2019 - 14.2% in 2018; maximum value: 40% in 2019 - 35% in 2018. By detailing the **aspects subject to assessment for short-term remuneration**, it was found that for the social sphere, the most recalled are those linked to employees (diversity and inclusion, smart working, training) and customer satisfaction, while for the environmental aspect, the most cited issue refers to CO_2 emissions.

7 In 2016, when the previous version of the Guidelines (GRI-G4) were superseded and further developed, the Global Reporting Initiative (GRI) published the GRI Standards - Consolidated set of GRI Sustainability reporting standards 2016. Since then, GRI has, every year, also issued updates to individual standards, without having to re-edit the entire set, of which it indicates the mandatory adoption deadlines for reporting. The Italian translation of the GRI Standards (Raccolta consolidata dei GRI Sustainability Reporting Standards 2019) is available on the website www.globalreporting.org, while the English version is already in the 2021 edition, with the latest revisions introduced.

8 Legislative Decree no. 254/2016, art. 4 and art. 5, paragraph 3 b.

9 Article 10 of the Disclosure Delegated Act also governs the entry into force of the Regulation: "*From 1 January 2022 until 31 December 2022, non-financial companies should only report the share of economic activities eligible for the taxonomy and not eligible for the taxonomy within their turnover, their capital grants and their total operating expenditure and the qualitative information referred to in section 1.2. of Annex I relevant to the information in question*". The information regarding the activities effectively "aligned with the taxonomy" is, however, postponed until 1 January 2023.

10 Legislative Decree no. 254/2016, under art. 3, paragraph 10, provides that: "*The subject entitled to perform the statutory audit of the Sustainability Report (...) or another subject entitled to carry out the statutory audit as specifically designated*" issues "*a certification concerning the compliance of the provided information with the requirements under this legislative decree and the principles, methods and procedures provided under paragraph 3*". Namely principles and methodologies: "*provided by the reporting standard used as reference (...)*".

MATERIALITY, GRI STANDARDS AND REPORT SCOPE

In **2020**, Acea, driven by the disruptive change in context caused by the **Covid-19 health emergency**, deemed it appropriate to **verify the validity of the "material"** economic and governance, social and environmental issues, connected to the company's business, carrying out an ad hoc in-depth analysis **with the direct involvement of stakeholders**.

In summary, this in-depth analysis included:

- **Covid-19 context analysis**, carried out on around 35 documents (at international, European, government, sustainability and sector level) **representative of both the evidence linked to the emergency phase and the guidelines for recovery**, in order to identify the current and prospective trends;
- the **"reinterpretation" of the "material" issues on the basis of the evidence highlighted by the Covid-19 context analysis**, which placed **emphasis on specific elements** of 12 out of the 19 "material" issues[11];
- the **involvement of the interested parties (external and internal)**[12], through a **digital multi-stakeholder focus group**, in the final phase of which the Chairperson of the Company took part, aimed at gathering the **stakeholders' thoughts on the pandemic** and learning their expectations of the **role that Acea could play in the recovery** of the territory it operates in;
- the **direct involvement of Group managers**, through a virtual meeting with **25 company managers**. After illustrating the main results of the multi-stakeholder consultation, the managers assessed the most strategic aspects of the "new normal" for recovery, including in consideration of the cases raised by stakeholder involvement.

At the end of the activities, the results were returned with a report to the stakeholders and managers involved, shared with the Group's top management and explained to the members of the **Ethics and Sustainability and Control and Risk Committees** in joint session with the members of the **Board of Statutory Auditors**.

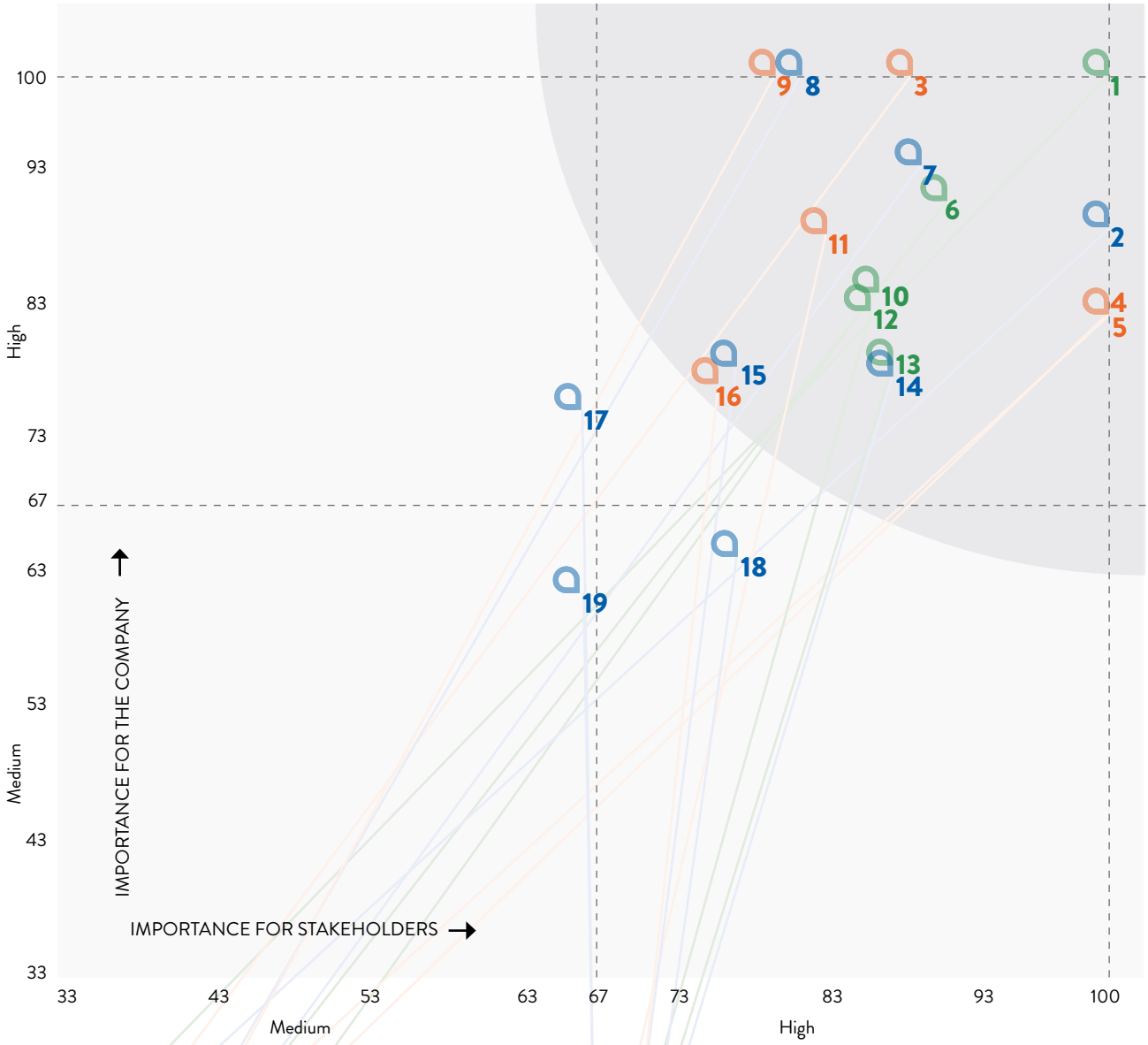
The in-depth analysis **confirmed the validity of the previously defined materiality matrix**, which therefore represents the reference up to the next round of analysis, and the "prioritisation" (of low, medium and high importance) of the 19 "material" issues of an economic, social and environmental governance, **while also being consistent with the strategic sustainability planning** of the Group. In particular, **16 topics** are located in the **high significance** area (score 68-100) and **3 in the medium significance** area (score 33-67) (see Chart no. 1).

Ahead of the new round of analysis **scheduled for 2022**, Acea, **in 2021**, **carried out a project** aimed at defining and sharing with the Group companies **an evolution of the materiality analysis process**. In particular, an **intragroup working group** was set up, which retraced the procedures and objectives of each phase of the process, reconsidered the functions and methods of use of the support tools and shared the expected changes in context around the issue, especially in light of the new GRI "Universal Standards" published in October 2021. The project, through an **inclusive approach**, intended to lay the groundwork for **enhancing the process's ability to intercept and represent the Group's relevant topics**, identifying, in a coordinated and more consistent manner, the specific needs of the Operating Companies and their stakeholders.

11 In particular, the in-depth study of the changes in the context of the health crisis focused on aspects that contribute to the more articulated definition of the following 12 material topics: Occupational health and safety; sustainability and circularity along the supply chain; strategic approach to stakeholder relations and the community; customer focus; involvement of the territory and development of skills; protection of territory and biodiversity; decarbonisation and adaptation to climate change; consolidation of sustainability elements in corporate governance; company well-being, diversity and inclusion; integrated risk management; responsible finance, and innovation as a transversal element.

12 Through the multi-stakeholder focus group, carried out remotely, and some one-to-one interviews, a total of 48 people were involved, including subjects already engaged in the previous round of materiality analysis, to give continuity to the comparison, and others particularly significant for the purposes of in-depth analysis (organisations of social importance, trade unions etc.), representing 11 stakeholder categories.

Chart no. 1 – **Relevant topics for the company and its stakeholders: Acea materiality matrix – 2021**



ECONOMIC AND GOVERNANCE TOPICS **SOCIAL TOPICS** **ENVIRONMENTAL TOPICS**

1 Sustainable water cycle management
2 Sustainability in infrastructure design, construction and management
3 Occupational health and safety
4 Innovation of smart utility processes, infrastructure and services
5 Sustainability and circularity along the supply chain
6 Recovery of waste for a circular economy
7 Strategic approach to stakeholder and community relations
8 Business ethics and integrity
9 Customer focus
10 Air quality: reducing emissions into the atmosphere and pollution
11 Involvement of personnel, investment in human capital and enhancement of skills
12 Protection of the territory and biodiversity
13 Decarbonisation and adaptation to climate change
14 Consolidation of sustainability elements in corporate governance
15 Business evolution through open innovation and development of synergies with scientific and entrepreneurial partners
16 Company well-being, diversity and inclusion
17 Integrated risk management (threats and opportunities)
18 Responsible finance
19 Performance management systems for sustainability in the medium and long-term

Besides being a strategic reference, **the "Acea Materiality Matrix"** is necessary to identify which **aspects to include in greater or lesser detail** depending on the results of prioritisation and to **select the indicators required by the adopted standards**.
To prepare the Sustainability Report **in accordance with the GRI Standards**: ***Comprehensive* option**, it is necessary to illustrate performance according to:

- "**Universal Standards**", which include the **reporting principles** (GRI 101: Reporting principles) and the **56 general standards** (GRI 102: General information);
- the "**Specific Standards**" referring to the economic, environmental and social dimension (GRI 200: Economic, GRI 300: Environmental, GRI 400: Social) **considered to be material** ("material topics") and **related indicators selected from among the 34 topics envisaged** in the specific standards;
- **the management approach** (GRI 103: Management approach) **for each of the specific topics considered material**.

In order to select GRI Material Topic-Specific Standards, consideration is given to[13] their **correlation with Acea's Materiality Matrix** and the meaning thereof conferred by international standards, in some cases tracing them back to the corporate context and, in others, establishing their non-applicability[14].
Following the assessments described above, **26 Specific Standards[15] were identified** out of a total of 34, **as consistent with Acea material topics of high significance** (see Table no. 1). Furthermore, among all the indicators envisaged in the Specific Standards considered as "material", only 3 were considered not applicable and excluded from the analysis[16].
Only one Acea material topic of high significance is not correlated to the Specific Standards, this being the ***Consolidation of elements of sustainability in corporate governance***, which however, is **fully consistent with the general standards** dedicated to aspects of **governance** (GRI 102: General information).
Lastly, also regarding Acea material topics of medium significance present in the report on a less descriptive basis, consistencies were found, albeit not highlighted in the table, with both the material specific Standards and the standards of the General information.

Table no. 1 – Consistency with GRI Material Topic-Specific Standards and Acea material topics of high significance

GRI 200: ECONOMIC	ACEA MATERIAL TOPICS	GRI 300: ENVIRONMENTAL	ACEA MATERIAL TOPICS
Economic Performance 2016	2, 4, 7, 8, 10, 11, 13	Materials 2016 (301-1 and 301-2)	1, 4, 6, 12
Indirect Economic Impacts 2016	2, 4, 5, 6, 7, 9, 15	Energy 2016 (from 302-1 to 302-4)	1, 4, 10, 12, 13
Procurement Practices 2016	2, 5	Water and effluents 2018	1, 4, 12
Anti-corruption 2016	8	Biodiversity 2016	1, 10, 12, 13
Anti-competitive Behavior 2016	8	Emissions 2016	1, 10 12, 13
		Waste 2020	1, 6, 12
		Environmental Compliance 2016	1, 8, 10, 12, 13
		Supplier Environmental Assessment 2016	5

GRI 400: SOCIAL	ACEA MATERIAL TOPICS		ACEA MATERIAL TOPICS		ACEA MATERIAL TOPICS
Employment 2016	11, 16	Non discrimination 2016	8, 16	Marketing and Labelling 2016	8, 9
Labour/Management Relations 2016	11, 16	Local Communities 2016	7, 15		
Occupational Health and Safety 2018 (from 403-1 to 403-6; from 403-8 to 403-10)	3, 5	Supplier social assessment 2016	5	Customer Privacy 2016	8, 9
Training and Education 2016	11	Public Policy (political contributions) 2016	8	Socio Economic Compliance 2016	8, 9
Diversity and Equal Opportunity 2016	11, 16	Customer Health and Safety 2016	1, 8, 9		

NOTE: the economic, environmental, and social GRI Topic-Specific Standards shown in the table are only those deemed material. When indicators are placed in brackets next to a GRI topic this means that only the indicators shown in the table apply, or, where not specified, all the indicators related to the topic apply (also see the *GRI Content Index*). For "Acea material topics" as identified in the table by a number, reference should be made to the figure showing the materiality matrix (Chart no. 1).

13 It is important to consider that both the specific GRI Standards – each of which includes a description of the management method and a number of indicators – and Acea material topics both refer to contents that are far more complex and detailed than their brief name may suggest which, given their level of detail, cannot be presented at this time. See the GRI Standards on the website www.globalreporting.org.

14 By way of example and not limited to, this has led to the exclusion of the Specific Standards related to *Market Presence* and *Human Rights* which, according to the meaning given to them by the GRI, are more pertinent to multinational enterprises and not suited to the reality of the Group's most significant operations.

15 In 2020, with the obligation to apply it to the 2021 financial year, the specific GRI 306 standard "Waste 2020" was updated, which will be reported by superseding the previous version ("Effluents and Waste 2016").

16 See the *GRI Content Index*.

The **principle of materiality** or significance is also applied to the **definition of the "report scope"**, as envisaged both by the GRI Standards and by Legislative Decree no. 254/2016. The latter, indeed, under art. 4, states: "*To an extent necessary for ensuring an understanding of the group's business, its performance, results and the impact it produces, the consolidated declaration includes data about the parent company, its fully consolidated subsidiary companies and covers the topics pursuant to article 3, paragraph 1*".
The **qualitative and quantitative criteria** necessary to identify the companies that ensure an understanding of the Group's business, performance, results and the impact it produces have been revisited and updated, verifying their adequacy. **Qualitative** criteria highlight the significance of the role carried out by the companies for the Group's qualifying business (namely, companies carrying out a relevant and current role in the main businesses, or due to the services they provide, and in implementation of the industrial and sustainability plans) and territoriality (namely, the operations in the geographic area in which **almost all of the turnover is generated**, the **majority of the stakeholders are located** and **a large part of the managed assets are located**). **Quantitative** criteria concern, for all companies included according to the qualitative criteria, correspondence to a **minimum value over 90% of the entire scope of consolidation** with reference to specific economic data (turnover, CapEx and OpEx) and socio-economic data[17] (customers and CO_2 emissions). In-depth analyses were also carried out on the water business, given its increasing strategic and environmental importance, verifying the sector's coverage on relevant data (drinking water supplied, waste water treated, waste processed), noting, again in this case, minimum coverage values of 89%.

Compared to the companies included in the scope of consolidation of the Parent Company in 2021 (see Table no. 2) the analysis led to a proposal of scope, initially shared with Top Management, the Board of Statutory Auditors and the relevant board committees. After further verification of the data, the **scope was defined** and, having heard the opinion of the Head of the Legal and Corporate Affairs Department and the CFO, was **shared with the Chief Executive Officer and the Chairperson** and finally **explained to the Ethics** and Sustainability and Control and Risk Committees, in the presence of the supervisory body.

In light of the factors set out above, the **scope for the Acea Consolidated Non-Financial Statement (NFS) 2021**, starting with that of the NFS 2020 whose Companies are all reconfirmed, allows new Companies to enter the Environment sector: **Bio Ecologia Srl**, merged by incorporation into Acea Ambiente in 2021, **Berg SpA**, both operating in the chemical/physical and biological treatment of liquid waste, and **Demap Srl** operating in the recovery, selection and recycling of plastic packaging and plastic/metal from municipal separate collection; as well as other PV Companies[18]: **Acea Solar**, **Fergas Solar**, **JB Solar Srl**, **M2D Srl**, **PSL Srl**, **Solarplant Srl**, **Acea Green Srl**, **Acea Renewable Srl**[19], see Table no. 3.

Table no. 2 – Companies included in the Parent Company's full consolidation area (2021)

COMPANY	REGISTERED OFFICE
Acea Ambiente Srl	Via G. Bruno, 7 – Terni
Aquaser Srl	P.le Ostiense, 2 – Rome
Iseco SpA	Loc Surpian, 10 – Saint Marcel (AO)
Berg SpA	Via delle Industrie, 38 – Frosinone
Demap Srl	Via Giotto, 13 – Beinasco (TO)
Acque Industriali Srl	Via Bellatalla, 1 – Ospedaletto (PI)
Deco SpA	Via Vomano, 14 – Spoltore (PE)
AS Recycling Srl	Via dei Trasporti, 14 – Carpi (MO)
Ecologica Sangro SpA	Strada Provinciale Pedemontana km 10 snc – Lanciano (CH)
Meg Srl	Via 11 Settembre no. 8 – San Giovanni Ilarione (VR)
Ferrocart Srl	Via Vanzetti, 34 – Terni
Cavallari Srl	Via dell'Industria, 6 – Ostra (AN)
Acea Energia SpA	P.le Ostiense, 2 – Rome
Cesap Vendita Gas Srl	Via del Teatro, 9 – Bastia Umbria (PG)
Umbria Energy SpA	Via B. Capponi, 100 – Terni
Acea Energy Management Srl	P.le Ostiense, 2 – Rome
Acea Innovation Srl	P.le Ostiense, 2 – Rome
Agile Academy Srl	P.le Ostiense, 2 – Rome
Acea Dominicana SA	Avenida Las Americas – Esquina Mazoneria, Ensanche Ozama – Santo Domingo, Dominican Republic
Aguas de San Pedro SA	Las Palmas, 3 Avenida 20 y 27 calle – San Pedro, Honduras
Acea International SA	Avenida Las Americas – Esquina Mazoneria, Ensanche Ozama – Santo Domingo, Dominican Republic
Acea Peru SAC	Calle Amador Merino Reyna – 307 Miraflores – Lima, Peru
Consorcio Acea-Acea Dominicana	Avenida Las Americas – Esquina Mazoneria, Ensanche Ozama – Santo Domingo, Dominican Republic

17 The verification of coverage on the socio-environmental data of the Group and of the sector was carried out on data from 31/12/2020, the most up-to-date available at the time of defining the scope.

18 It should be noted that at the end of December 2021, Acea Produzione signed an agreement with Equitix aimed at the sale of a majority stake in the newco that will manage the photovoltaic assets.

19 In light of the applied criteria, the following companies are outside of the scope of the 2021 Consolidated Non-Financial Statement: Iseco, Deco, AS Recycling, Ecologica Sangro, Meg, Ferrocart, Cavallari, Cesap Vendita Gas, Umbria Energy, Acea Energy Management, Agile Academy, Acea Dominicana, Aguas de San Pedro, Acea International, Acea Peru, Consorcio Acea-Acea Dominicana, Consorcio Servicios Sur, Consorcio Agua Azul, Consorcio Acea, Consorcio Acea Lima Norte, Acque Blu Arno Basso, Acque Blu Fiorentine, Acea Molise, Ombrone, Sarnese Vesuviano, Umbriadue Servizi Idrici, Adistribuzionegas, Servizi Idrici Integrati, Notaresco Gas, Acea Liquidation and Litigation, SIMAM, Technologies for Water Services.

COMPANY	REGISTERED OFFICE
Consorcio Servicios Sur	Calle Amador Merino Reyna – San Isidro – Lima, Peru
Consorcio Agua Azul SA	Calle Amador Merino Reyna – 307 Miraflores – Lima, Peru
Consorcio Acea	Calle Amador Merino Reyna – 307 Miraflores – Lima, Peru
Consorcio Acea Lima Norte	Calle Amador Merino Reyna – 307 Miraflores – Lima, Peru
Acea Ato 2 SpA	P.le Ostiense, 2 – Rome
Acea Ato 5 SpA	Viale Roma, snc – Frosinone
Acque Blu Arno Basso SpA	P.le Ostiense, 2 – Rome
Acque Blu Fiorentine SpA	P.le Ostiense, 2 – Rome
Acea Molise Srl	P.le Ostiense, 2 – Rome
Acquedotto del Fiora SpA	Via A. Mameli, 10 – Grosseto
Gesesa SpA	Corso Garibaldi, 8 – Benevento
GORI SpA	Via Trentola, 211 – Ercolano (NA)
Ombrone SpA	P.le Ostiense, 2 – Rome
Sarnese Vesuviano Srl	P.le Ostiense, 2 – Rome
Umbriadue Servizi Idrici Scarl	Strada Sabbione zona ind.le – Terni
Adistribuzionegas Srl	Via L. Galvani, 17/A – Forlì
Servizi Idrici Integrati ScPA	Via I Maggio, 65 – Terni
Notaresco Gas	Via Padre Frasca, s.n. – Chieti
Areti SpA	P.le Ostiense, 2 – Rome
Acea Produzione SpA	P.le Ostiense, 2 – Rome
Acea Liquidation and Litigation Srl	P.le Ostiense, 2 – Rome
Ecogena Srl	P.le Ostiense, 2 – Rome
KT4 Srl	Viale SS. Pietro e Paolo, 50 – Rome
Solaria Real Estate Srl	Via Paolo da Cannobio, 33 – Milan
Acea Solar Srl	P.le Ostiense, 2 – Rome
Acea Sun Capital Srl	P.le Ostiense, 2 – Rome
Trinovolt Srl	Via T. Columbo, 31 d – Bari
Marche Solar Srl	Via A. Grandi, 39 – Concordia sulla Secchia (MO)
Fergas Solar Srl	Via Pietro Piffetti, 19 – Turin
Euroline 3 Srl	P.le Ostiense, 2 – Rome
IFV Energy Srl	P.le Ostiense, 2 – Rome
PF Power of Future Srl	P.le Ostiense, 2 – Rome
JB Solar Srl	P.le Ostiense, 2 – Rome
M2D Srl	P.le Ostiense, 2 – Rome
PSL Srl	Via Ruilio,18/20 - Catania
Solarplant Sr	P.le Ostiense, 2 – Rome
Acea Green Srl	P.le Ostiense, 2 – Rome
Acea Renewable Srl	P.le Ostiense, 2 – Rome
Acea Elabori SpA	Via Vitorchiano, 165 – Rome
SIMAM SpA	Via Cimabue, 11/2 – Senigallia (AN)
Technologies for Water Services SpA	Via Ticino, 9 – Desenzano del Garda (BS)

Table no. 3 – Scope of the Acea Group Consolidated Non-Financial Statement for 2021 (pursuant to Legislative Decree no. 254/2016 and the GRI Standards)

COMPANY	REGISTERED OFFICE
Acea SpA	P.le Ostiense, 2 – Rome
Acea Ambiente Srl (*)	Via G. Bruno, 7 – Terni
Aquaser Srl	P.le Ostiense, 2 – Rome
Berg SpA	Via delle Industrie, 38 – Frosinone
Demap Srl	Via Giotto, 13 – Beinasco (TO)
Acque Industriali Srl	Via Bellatalla, 1 – Ospedaletto (PI)
Acea Energia SpA	P.le Ostiense, 2 – Rome
Acea Innovation Srl	P.le Ostiense, 2 – Rome
Acea Ato 2 SpA	P.le Ostiense, 2 – Rome
Acea Ato 5 SpA	Viale Roma, snc – Frosinone

Acquedotto del Fiora SpA	Via A. Mameli, 10 – Grosseto
Gesesa SpA	Corso Garibaldi, 8 – Benevento
Gori SpA	Via Trentola, 211 – Ercolano (NA)
Areti SpA	P.le Ostiense, 2 – Rome
Acea Produzione SpA	P.le Ostiense, 2 – Rome
Ecogena Srl	P.le Ostiense, 2 – Rome
KT 4 Srl	Viale SS Pietro e Paolo, 50 – Rome
Solaria Real Estate Srl	Via Paolo da Cannobio, 33 – Milan
Acea Solar Srl	P.le Ostiense, 2 – Rome
Acea Sun Capital Srl	P.le Ostiense, 2 – Rome
Trinovolt Srl	Viale T. Columbo, 31/D – Bari (BA)
Marche Solar Srl	Via A.Grandi 39 – Concordia sulla Secchia (MO)
Fergas Solar Srl	Via P. Piffetti, 19 – Torino
Euroline 3 Srl	P.le Ostiense, 2 – Rome
IFV Energy Srl	P.le Ostiense, 2 – Rome
PF Power of Future Srl	P.le Ostiense, 2 – Rome
JB Solar Srl	P.le Ostiense, 2 – Rome
M2D Srl	P.le Ostiense, 2 – Rome
PSL Srl	Via Ruilio,18/20 - Catania
Solarplant Srl	P.le Ostiense, 2 – Rome
Acea Green Srl	P.le Ostiense, 2 – Rome
Acea Renewable Srl	P.le Ostiense, 2 – Rome
Acea Elabori	Via Vitorchiano, 165 – Rome

(*) In May 2021, the company Bio Ecologia Srl was merged by incorporation into Acea Ambiente.
NOTE: for Berg, Demap and for companies with PV plants, mainly environmental data will be reported.

The scope of the *Acea Group's 2021 Sustainability Report*, albeit wider, guarantees **continuity and comparability** with the year before, as well as coverage of the companies **that ensure full understanding of the Group's activities** and **most significant sustainability performance**.
Lastly, in compliance with the principle of completeness required under **GRI Standards**, the *2021 Sustainability Report* includes qualitative and quantitative information regarding corporate and environmental matters of certain companies that are **not included within the scope of the Consolidated Non-Financial Statement**. Specifically, this concerns foreign activities and the following companies operating in the water area: Acque, Publiacqua and Umbra Acque, which were **included in some Group data** and **described in a dedicated chapter** (*Water companies data sheets and overseas activities*), **giving clear evidence of their individual contribution**.

DOCUMENT STRUCTURE AND DISSEMINATION

The *2021 Sustainability Report*, in line with previous years, is divided into three main sections: ***Corporate identity*** – which also integrates the information required by Regulation 852/2020 – ***Relations with the stakeholders*** and ***Relations with the environment***, supplemented by the ***Environmental Budget***. The latter **comprises about 500 items and parameters** monitored which quantify the physical flows generated by the activities: the products, factors used (resources), outbound outputs (rejects and emissions) and some performance indicators.
References to the main economic-financial data and corporate governance are consistent with those given in the *Consolidated Report* and the *Corporate Governance Report* and which may derive from the latter.
The published data and information are provided by the Industrial Areas, Companies and responsible Functions (*data owner*), they are processed – and possibly reclassified in compliance with the reference Standards – by the internal workgroup which draws up the document and then submitted it once again to the Areas/ Companies/ Functions responsible for final validation, formalized by the issuing of a specific certificate.
Downstream of the audit activities by the appointed independent auditor, the report is distributed by means of storage on SDIR 1Info, **publication on the institutional website** – www.gruppo.acea.it – **and the company intranet**, as well as **the other formats provided under Legislative Decree no. 254/2016** and the implementing Consob Regulation (implemented by Resolution no. 20267 of 19 January 2018). It is also distributed together with the consolidated financial statements to the shareholders during the annual Shareholders' Meeting upon closure of the financial year.

For further information about the Sustainability Report and its contents, it is possible to write to the following email address: RSI@aceaspa.it.

Irene Mercadante
SUSTAINABILITY PLANNING & REPORTING UNIT

Stefano Raffaello Songini
INVESTOR RELATIONS & SUSTAINABILITY DEPARTMENT

JOINING THE UNITED NATIONS GLOBAL COMPACT

In 2007, Acea joined the **United Nations Global Compact** (UNGC) and actively collaborates with the initiatives of the Italian network, convinced of the **consistency between the ten principles** of the "Global Pact", launched and supported by the United Nations[20], **the UN's Sustainable Development Goals** ("Agenda 2030", to which the UNGC expressly refers), **the value guidelines**, **expressed in the Acea Code of Ethics and the Group's strategic guidelines**.

La ***advanced level Communication on Progress*** (CoP), is included in this *Sustainability Report (consolidated non-financial statement)*, through a **combined statement of the GRI Standards' indicators and the principles of United Nations Global Compact**, pursuant to the understanding reached between the two organisations.

Table no. 4 – The Ten Principles of the United Nations Global Compact

HUMAN RIGHTS	1	Companies are required to support and respect the protection of internationally proclaimed human rights
	2	Companies should ensure that they are not partners, even indirectly, in human rights abuses
WORK	3	Companies are required to uphold the freedom of association and the effective recognition of the right to collective bargaining
	4	Companies should uphold the elimination of all forms of forced and compulsory labour
	5	Companies should uphold the effective abolition of child labour
	6	Companies should uphold the elimination of discrimination in respect of employment and occupation
ENVIRONMENT	7	Companies are required to support a precautionary approach to environmental challenges
	8	Companies are required to take initiatives to promote greater environmental responsibility
	9	Companies are required to encourage the development and dissemination of environmentally friendly technologies
FIGHTING CORRUPTION	10	Companies should work against corruption in all its forms, including extortion and bribery

ADVANCED LEVEL COMMUNICATION ON PROGRESS AND ITS CORRELATION WITH GRI STANDARDS

The *Sustainability Report* contains **elements that respond to the *advanced* level of the *Communication on Progress***, envisaged by the United Nations Global Compact.
The table below shows these elements according to the 21 criteria defined by the United Nations Global Compact and states their **correlation[21] with the GRI Standards** GRI 102 – General Disclosures for 2016 and Topic-Specific Standards, series GRI 200: Economic, GRI 300: Environmental, GRI 400: Social, **identified as material**), applied in the sustainability reporting according to the "Comprehensive level of compliance". The *GRI Content Index* specifies the pages of the document where the relevant data and information can be found.

20 The United Nations Global Compact is an initiative launched by the Secretary General of the United Nations upon the conclusion of the World Economic Forum of 1999. In its appeal, it invites the leaders of the world economy to uphold and circulate nine universal principles related to human rights, labour and the environment, added to which was the tenth in 2004: anti-corruption.

21 Acea has autonomously updated the proposed scheme, linking elements of the Communication on progress and GRI Standards, maintaining the approach of the document referred to the previous version of the GRI G4 Guidelines, the result of the collaboration of GRI and UNGC. See *Making the Connection: Using the GRI G4 Guidelines to Communicate Progress on the UN Global Compact Principles*, on the website www.unglobalcompact.org.

Table no. 5 – The elements of Advanced CoP and GRI Standards

UNGC advanced criteria	**UNGC matching scopes**	**Correlation with GRI Standards** (GRI 102 – General Disclosures and Material Topic-Specific Standards GRI 200: Economic, GRI 300: Environmental, GRI 400: Social)
CRITERIA 1-2 implementation of the ten principles in the strategies and operational management of the business	integration of sustainability in corporate functions and business units	from GRI 102-18 to GRI 102-39
	implementation of sustainability in the value chain	GRI 102-9 – GRI 102-10 – GRI 102-25 – GRI 204-1 – GRI 103 (1-3) by GRI 308 *Supplier Environmental Assessment* – GRI 302-2 – GRI 305-3 – GRI 308-1 – GRI 308-2 – GRI 403-9 (2018) – GRI 103 (1-3) by GRI 414 *Supplier Social Assessment* – GRI 414-1 and GRI 414-2
CRITERIA 3-5 robust human rights policies and procedures management	**HUMAN RIGHTS** commitments, strategies or policies; management systems; monitoring and evaluation mechanisms	The Human Rights aspect and indicators related to it, as proposed by the GRI Standards, are relevant for multinational enterprises. Acea has therefore considered such aspects non-material. Whereas, in the meaning that the United Nations Global Compact gives to aspects relating to human rights (such as employment protection, freedom of association, non discrimination, health and safety in the workplace, training and education and supplier social assessment), they are included in other GRI Topic-Specific Standards, deemed material, as well as in the material topics identified by Acea, and are therefore listed herein.
CRITERIA 6-8 robust labour policies and procedures management	**WORK** commitments, strategies or policies; management systems; monitoring and evaluation mechanisms	GRI 103 (1-3) and indicators of the following specific standards (series GRI 400: Social 2016/2018): *Employment* (from GRI 401-1 to GRI 401-3) *Labour/Management Relations* (GRI 402-1) *Occupational Health and Safety* 2018 (from GRI 403-1 to GRI 403-6; from 403-6 to 403-10) *Training and Education* (from GRI 404-1 to GRI 404-3) *Diversity and Equal Opportunities* (GRI 405-1 and GRI 405-2) *Non discrimination* (GRI 406-1) *Supplier Social Assessment of suppliers* (GRI 414-1 and GRI 414-2)
CRITERIA 9-11 robust environmental policies and procedures management	**ENVIRONMENT** commitments, strategies or policies; management systems; monitoring and evaluation mechanisms	GRI 103 (1-3) and indicators of the following specific standards (series GRI 300: Environmental 2016/2018/2020): *Material* (301-1 and 301-2) *Energy* (from GRI 302-1 to GRI 302-4) *Water and Effluents* 2018 (from GRI 303-1 to GRI 303-5) *Biodiversity* (from GRI 304-1 to GRI 304-4) *Emissions* (from GRI 305-1 to GRI 305-7) *Waste* (from GRI 306-1 to GRI 306-5) *Environmental compliance* (GRI 307-1) Supplier Environmental Assessment (GRI 308-1 and GRI 308-2)
CRITERIA 12-14 robust anti-corruption policies and procedures management	**FIGHTING CORRUPTION** commitments, strategies or policies; management systems; monitoring and evaluation mechanisms	GRI 102-16 – GRI 102-17 GRI 103 (1-3) and indicators of the following specific standards (series GRI 200: Economic and series GRI 400: Social): *Anti-corruption* (from GRI 205-1 to GRI 205-3) *Public Policy* (GRI 415-1)
CRITERIA 15-18 actions aimed at upholding wider development objectives of the United Nations	strategies, business activities, actions of promotion and engagement with the stakeholders to uphold the Sustainable Development Goals (SDGs)	GRI 103 (1-3) of all the material specific standards included in series GRI 200: Economic, GRI 300: Environmental 2016/2018/2020 and GRI 400: Social 2016/2018 (except for the topic *Customer privacy*)
CRITERIA 19-21 Governance and leadership of sustainability	commitment of the CEO	GRI 102-14 – GRI 102-15
	engagement of the BoD	from GRI 102-18 to GRI 102-39
	involvement of the stakeholders	from GRI 102-40 to GRI 102-44
high level of transparency and reporting	use of GRI Standards	from GRI 102-1 to GRI 102-10
external audit		GRI 102-56

1

CORPORATE IDENTITY

GROUP PROFILE

ACEA'S HISTORY

Acea was founded in 1909 as Azienda Elettrica Municipale (AEM) to manage and develop Rome's essential public service infrastructure, in the electricity sector then water, required for the growth, social progress and environmental balance of the city. Since it was founded, the Company has seized the opportunities provided by the market, the regulatory and social context, by expanding and developing its activities and managerial skills, as well as its legal set-up with the listing on the Stock Exchange in 1999, and by opening itself up to qualified strategic partners.
Acea is now a nationwide industrial group, active in integrated water management, electricity and gas production, distribution and sales, environmental services and activities to enable smart communities. The current development guidelines set out in the strategic plans are characterised **by the consolidation** of its **leadership position** in the water industry and **the expansion** of **the territorial area of interest**, which is mainly focused on Central Italy, and of its **businesses**, which range from generation from renewable sources to the circular economy and from energy efficiency services and sustainable mobility to gas distribution.
In this context, **digitalisation**, **technological innovation and sustainability** are the levers that enable us to increase the efficiency and high quality of our services, improving the **development of modern network infrastructures** so that they are resilient, integrated and able generate value that is shared among all of Acea's stakeholders.

BUSINESSES AND FUNCTIONS OF THE MAIN GROUP COMPANIES

Today Acea is **one of the main Italian multi-utility companies** operating in the areas of **energy** (production, distribution, including public lighting, and sales), **water** (integrated cycle) and **environmental** services (waste and materials recovery, treatment and composting). It is the operator of reference in the Rome area for water and energy services; in the water sector, the Group is also present as an industrial partner of local management companies in some areas of Central and Southern Italy (from Tuscany to Campania). Development operations, in line with strategic guidelines, are concentrated in particular on the circular economy and gas sectors. In some sectors, Acea is also positioning itself geographically along the Adriatic coast of Central Italy and in Northern Italy.

Table no. 6 shows some representative data of the Group, while the business areas and geographical reach of the main companies are briefly detailed in Chart no. 2.

Table no. 6 – Acea Group in numbers – 2021

PERSONNEL (number, by % consolidation)	9,348
NET REVENUE (million €)	3,972
INVESTED CAPITAL (million €)	6,504.9
net equity debt	*3,988.2*
shareholders' equity	*2,516.4*
TOTAL BALANCE SHEET ASSETS (million €)	**10,628.9**
ELECTRICITY	
generation (GWh) (gross)	1,009
of which from renewable sources (GWh) (gross)	*698.2*
hydroelectric	*434.7*
photovoltaic	*78.6*
waste-to-energy	*153.5*
biogas	*31.4*
network demand (GWh)	9,827
sales (GWh) (free and protected market)	7,768
electricity and gas customers (number)	1,416,524
WASTE-TO-ENERGY (WTE)	
electricity generation (GWh) (gross total)	356.4
waste burnt (t)	407,121
SRF	*307,391*
pulper	*99,730*
PUBLIC LIGHTING	
bulbs managed in Rome (number)	227,635
WATER (INTEGRATED WATER SERVICE)	
drinking water supplied and billed (Group) (Mm^3)	632
of which (Acea Ato 2, Acea Ato 5, AdF, GORI and Gesesa)	*481*
analytical checks on drinking water (Group) (number)	1,472,131
of which (Acea Ato 2, Acea Ato 5, AdF, GORI and Gesesa)	*738,470*
wastewater treatment (Group) (Mm^3)	981
of which (Acea Ato 2, Acea Ato 5, AdF, GORI and Gesesa)	*779*
inhabitants served (Group) (million)	8.5
of which (Acea Ato 2, Acea Ato 5, AdF, GORI and Gesesa)	*6*

Chart no. 2 – The businesses of the main Acea companies in the territory

WATER

AdF manages the integrated water service in 55 municipalities of the Optimal Territorial Conference 6 Ombrone, covering the province of Grosseto and part of the municipalities of the province of Siena.

Acea Ato 2 manages the integrated water service in 97 municipalities of ATO 2 Lazio Centrale - Rome.

Acea Ato 5 is the operator for the 86 towns of the ATO 5 Lazio Meridionale - Frosinone.

GORI manages the service for 76 towns located in the Sarnese Vesuviano ATO between the metropolitan city of Naples and the province of Salerno.

Gesesa operates in the Calore Irpino ATO covering 22 municipalities in the Province of Benevento.

ENGINEERING AND SERVICES

Acea Elabori provides laboratory services, research and development and engineering services (design and project management) mainly in water and environmental activities for Acea Group Companies.

GENERATION

Acea Produzione manages the production of energy and heat with a power plant consisting of hydroelectric, thermoelectric and photovoltaic systems.

Acea Sun Capital Acea, a subsidiary of Acea Produzione, handles the acquisition of photovoltaic power plants.

Ecogena designs and manufactures cogeneration and trigeneration plants and works as an ESCo (Energy Service Company) providing energy efficiency services to internal customers (increased efficiency obligations pursuant to Ministerial Decree of 20 July 2014), and monitors technological innovation for energy savings.

ENERGY INFRASTRUCTURE

Areti plans, designs and executes the actions of modernizing and developing electricity infrastructures and manages its distribution services in the towns of Rome and Formello. In Rome it manages and develops public, artistic and cemetery lighting systems.

ENVIRONMENT

Acea Ambiente, with plants in Latium, Tuscany and Umbria, handles environmental management (treatment and disposal) and the production of energy from waste, waste recovery and composting.

Aquaser works in the recovery, treatment and disposal stages for sludge resulting from the treatment phase of the integrated water service.

Acque Industriali provides brokerage and liquid waste treatment services, as well as activities related to the integrated water cycle, mainly consisting of biological sludge recovery and disposal.

Berg operates in the Frosinone area and is works in the chemical/physical and biological treatment of solid and liquid, hazardous and non-hazardous waste.

Demap carries out recovery and selection of plastic and plastic and metal packaging at the plant in the province of Turin.

COMMERCIAL AND TRADING

Acea Energy manages the sale of electricity and gas on the market (free and more protected), smart services (efficiency improvement and e-mobility).

Acea Innovation manages the activities of technological innovation and the commercialisation of the related services and products for the Acea Group.

CONTEXT ANALYSIS AND BUSINESS MODEL

CONTEXT ANALYSIS

Acea monitors the reference scenario, identifying and analysing the factors that could take on a significant role in terms of the Group's operations, such as **competitiveness**, **sustainability** and **regulatory areas that** can affect the achievement of strategic goals. In addition to these external factors, **there is also the internal context** of the Group, to be considered both in **organisational** terms and in relation to the **energy and environmental impacts**, the **development of human capital**, the **protection of workers' health and safety**, the protection of company assets, and the sustainable and responsible management of the **supply chain**.

THE ENERGY MARKET AND COMPETITORS

Following the conversion into law of Decree Law 183/2020 (1000 Extensions) through Law 21/2021, the termination of the price protection regimes for domestic and micro-enterprise customers was postponed to 1 January 2023, while with the conversion law for Decree Law 152/2021, implementing the NRRP, which occurred afterwards, the schedules and methods for the management of the transition to a free market, through a gradual protection regime, were defined. In particular, **micro-enterprises** will be served through gradual protection as of 1 January 2023, by suppliers identified through auctions to be held during 2022, while **domestic customers** will be served through gradual protection by suppliers identified through auctions which must be held by 10 January 2024. **Vulnerable and energy poor customers** will be served under greater protection until an ad hoc offer is made available by all the sellers, which ARERA will define by 1 January 2023.

With regard to energy sales, once the greater protection service is no longer applicable, there will be an increase in **competition** among operators and the search for **distinctive added-value elements**, which are achievable through investments in technological innovation, digitalisation and sustainability. In this area, in 2021 Acea Energia proposed new services and offers, marking its entry into the electric mobility sector and energy efficiency services that benefit from tax bonuses and launching new environmentally sustainable energy and gas offers.

THE INTEGRATED WATER SYSTEM AND GAS DISTRIBUTION

Water and gas distribution are market areas in which Acea intends to play an active role, evaluating and participating in the new tenders called for the **concession of the Integrated Water Service and gas distribution service**, by the various contracting authorities (Regions, Municipalities, Area Authorities) throughout the country. In fact, Acea Group can easily compete with other operators in the sector as it fulfils the necessary economic, financial, organisational, experience and certified system requirements. In the water industry, in particular, the Group has planned works on strategic infrastructure of interest for the National Recovery and Resilience Plan and has implemented a digitalisation process of the commercial procedures as well as the greater application of technological innovation in the management of infrastructure.

THE WASTE MANAGEMENT MARKET

The market in which the Acea Group operates through Acea Ambiente involves the collection, selection, treatment, recovery and disposal of **waste through the management of plants** located in Latium, Umbria, Tuscany, Marche, Piedmont, Abruzzo, Veneto and Val d'Aosta.

Each operating centre has its own authorisation regime that also governs the reference market, enabling it to conclude service contracts with public or private entities.

In some plants, the processing of waste produces electricity to be fed into the grid and raw materials to be sold. Many activities carried out by companies in the Environment segment are classified as essential public services.

The Group intends to more frequently seize the growing opportunities in the field of the circular economy.

THE ENGINEERING AND SERVICES MARKET

With regard to the non-captive market, the company Acea Elabori aims to expand its activities by continuing to participate in tenders for **districting**, **surveys and measurements**, **modelling and plans for water and sewer systems**, **and plant design and works**. The Principals have mainly been integrated water service operators who require specialised services to support the plans for rationalisation and upgrading integrated water cycle networks and plants. To date Acea Elabori has been awarded two tenders, while others are in the process of being awarded. Participation is done through temporary joint ventures with other companies, implementing the organisational regulations for anti-trust compliance and prevention of unfair commercial practices. In particular, Acea Elabori has developed design activities, achieving in 2021 BIM (Building Information Modelling) certification, a digital methodology that makes it possible to acquire and manage all the design information in an integrated manner for the cycle phases of a project, creating economic, time and environmental efficiencies, and explores increasingly more advanced areas in terms of research and technological innovation and the laboratory monitoring sector, with an approach that values partnerships and sharing knowledge.

THE ENERGY EFFICIENCY MARKET

The energy efficiency market is influenced by updates made to the regulatory framework of incentives. Italian Decree Law 34/2020, no. 34 (Relaunch Decree), converted with Law 77/2020, which introduced **tax subsidies (110% superbonus)** with the possibility of financing and discounts for beneficiaries who carry out energy efficiency and seismic projects on their buildings has led to an increase in demand which offers the Acea Group, through the companies Ecogena, Acea Innovation and Acea Energia, opportunities for business development in the residential sector.

However, this sector is dependent on a regulatory context which means progress will not be linear: in 2021, the activities first experienced a slowdown before growth resumed in August 2021, after the publication of the so-called "Simplification Decree" bis. Additional acceleration will be seen due, among other things, to the expansion of those able to benefit from the measures, introduced in the 2022 Budget Law.

Some operational issues in this growing market are linked to the increase in materials prices (influenced by commodities prices and increased demand), limited availability of companies with qualified workers and the difficulty of obtaining supplies (unavailability of services and delays in the delivery of materials).

INSTITUTIONAL INVESTORS

Global stock markets in 2021 saw overall positive performance, thanks to the economic recovery supported by expansive measures implemented by central banks and the vaccine campaign, despite discontinuities associated with the spread of the Delta and Omicron variants of Covid-19. The vaccine campaign allowed a progressive reduction in the restrictions imposed by governments as well as a consequent recovery in economic and industrial activity.

Institutional investor interest has strengthened in ESG issues, which are increasingly integrated into investment decisions. In particular, an increase has been seen in the financial community's sensitivity to social and environmental issues, with a growth in investor awareness of the interesting risk/return profile that can be offered by sustainable investments.

SUSTAINABLE DEVELOPMENT

2021 saw the **start of the revival of economic-productive systems**, **the resumption of social relations** towards the "new normal" that follows the discontinuity generated by the health crisis. The pandemic emergency has joined the climate-environmental crisis, in a reciprocal relationship of causes and effects, with repercussions on the social context that still condition the scenario of future sustainability.

This contextual situation is also the key to interpreting numerous **international and national** events. On the political level, it is worth noting the inauguration of the 46th President of the United States of America, Joe Biden, and the re-admission of the USA into the Paris agreements to combat climate change. In the Italian context, with the formation of the new Draghi government, **the NRRP for the post-emergency relaunch of Italy was prepared and initiated**. Through the NRRP, and the related funds provided by the EU (Next Generation), a strategic plan is proposed that revolves around the strategic axes of **digitalisation and innovation**; **ecological transition**; **social inclusion**. In Europe, a **climate law** was passed setting the goal of carbon neutrality by 2050, with a milestone of a 55% GHG reduction by 2030 compared to 1990. Together with the "Fit for 55" legislative initiatives proposed by the von der Leyen Commission, the measure is part of the strategic framework of the European Green Deal. The **G20 in Rome** affirmed commitments to food security and adequate nutrition (Matera Declaration) and to gender equality, empowerment and leadership of women and girls at all levels for inclusive and sustainable development. 2021 was characterised by the **careful management of the pandemic** through vaccination campaigns, the continuation of remote work, the introduction of prevention and population monitoring systems to maximise safety while returning to work and social activities. At the environmental level, **extreme events** (hurricanes, floods, fires) have been recorded, with loss of life and economic impacts all over the planet, from the north-west coast of the USA to Europe, from the Henan region in China to India, from Canada to South Sudan.

At the end of the year, new criticalities emerged, health, with the spread of new variants of Covid, and social, with the rise in energy prices due to the cost of gas, and environmental, with the recording of increased levels of climate-changing emissions.

In Italy, the Asvis report indicates that progress towards sustainable development is still uneven, despite several important initiatives, such as the project to integrate the **protection of the environment**, **biodiversity and ecosystems**, **also in the interest of future generations**, into the fundamental principles of the Constitution and the regulation at national level in relation to **equal pay for men and women**.

In this context, essential service companies, close to the dynamics experienced by the territory, feel the solicitations and suggestions emerging from regulatory frameworks, such as the European Environmental Taxonomy, and managerial frameworks, with the spread of concepts such as *stakeholder capitalism* or "sustainable success" for listed companies.

ENVIRONMENTAL AND ENERGY IMPACTS

The natural environment is the scenario where the activities of the Group are performed and is to be preserved with a responsible and efficient use of resources, protecting sources, safeguarding the natural areas where the plants and service networks encroach, mitigating the physical and the external impacts generated in the ecological context of the operating processes. Despite the global adoption of periods of economic downtime or slowdown to limit the spread of Covid-19, **Overshoot Day**, when the Earth depletes its available renewable resources for the current year, arrived on 29 July in 2021, as it did in 2019, compared to a later arrival in 2020 (22 August). Nationally, this limit was reached on 13 May 2021, one day earlier than the previous year.

The global environmental outlook was the subject of **COP26** in Glasgow. In this meeting, in which Italy served as a guide and co-leader, critical issues were examined and important decisions were taken. The 196 countries adhering to the UN Convention on Climate Change, although with results lower than expected, shared important goals, such as **keeping the temperature increase to within 1.5° compared to the pre-industrial period**, new and binding commitments towards decarbonisation, the cessation of deforestation by 2030 and the reduction of methane losses by 30%. It was also decided to double international funding for adaptation projects, especially in countries most vulnerable to the impacts of climate change, and a programme to define the "Global Goal on Adaptation" was approved, which will identify indicators to monitor the adaptation projects of individual countries. The European Union has continued its work to regulate, through Regulation 852/2020, the **Taxonomy of eco-compatible activities** with the aim of guiding private investment towards the promotion of an environmentally sustainable economy.

In 2021, the work of the **Taskforce on climate-related financial disclosure** (hereafter TCFD) continued, which promotes companies' reporting on climate change-related risks and opportunities and the description of impacts that these have on the company, so as to meet the expectations and needs of investors. Of particular importance in this context are the scenario analyses that companies are called upon to perform in order to assess the future impacts that the climate-related risks/opportunities generate on the company's business.

STANDARDS IN THE REFERENCE MARKETS AT A LOCAL, NATIONAL AND SUPRA-NATIONAL LEVEL

The regulatory context of the Acea Group is wide-ranging and articulated according to the specificity of the businesses handled and the variety of the frameworks within which the legal and regulatory disciplines intervene, which affect the business operations, from administrative authorisation profiles to those protecting the market and competition. Added to such aspects is the peculiarity of the nature of listed Company, with the related legal impacts, for example, in terms of regulating communications to the market. The regulatory scenario is therefore analysed from a multidisciplinary viewpoint, applying a 360° overview and continuous interpretative analysis, in order to detect developments of particular significance, thus identifying and assessing risks and opportunities in terms of strategy and operating management.

Among the issues worthy of mention, note should be taken of the measures introduced through Italian Decree Law 77/2021, the so-called "Simplification Decree Bis", containing "**governance for the National Recovery and Resilience Plan (NRRP) and initial measures to strengthen administrative structures and accelerate and streamline procedures**", converted by Italian Law 108/2021. This is a package of structural reforms and investments for 2021-2026, intended to accelerate the implementation of the work called for in the Recovery Plan, strengthening administrative structures, streamlining procedures and establishing governance rules for the same.

The Decree also makes **changes with regards to public tenders**, in that the provisions do not exclusively affect the ordinary regulatory framework for public contracts (Code of Public Contracts, Italian Legislative Decree 50/2016), but also amend **the emergency derogation rules** such as "Reopen Building Sites" (Italian Decree Law 32/2019) – and the "Simplification Decree" (Italian Decree Law 76/2020), established to respond to the crisis caused by the pandemic. Finally, special attention was paid to Decree Law 2469 "Draft 2021 annual market and competition law" with provisions to promote the development of competition, remove obstacles to opening markets and guarantee consumer protection.

REGULATION OF THE SECTOR AUTHORITY

The Regulatory Authority for Energy, Networks and the Environment (ARERA) intervenes in Acea's business sectors (energy, water and environment) regulating their operation by defining technical and commercial service standards and regulating investment mechanisms.

For **energy distribution**, ARERA defines quality standard parameters for the electricity service at the national level, for each regulation cycle. These parameters are commercial (estimates, work, supply activation/deactivation, complaint response) and technical (continuity of service supply We are currently in the V regulation period for the quality of distribution, metering and transmission services for the years 2016-2023. In 2021, resolution 566/2021/R/eel was published on the application of the new capacity price for **electricity market** customers, which applies from 1 January 2022 with the aim of remunerating the capacity market (the system to make available electricity generation capacity) to ensure adequate production capacity is achieved and maintained to guarantee coverage of national demand as well as the necessary reserve margins.

Regarding the **two-year limit** on the seller's right to payment for the electricity consumption of customers, with resolution 603/2021/R/com, the Authority amended resolution 569/2018/R/com on the invoicing of amounts for amounts dating back two years, clarifying that the two year limitation did not apply if the distributor had communicated the existence of obstructive conditions pursuant to the primary regulations.

In the **water sector**, the evolutionary drivers of regulation push operators towards efficiency in the commercial and technical quality and place greater emphasis on environmental sustainability issues. In 2021 the Authority released the fifth edition of the **IWS Contractual Quality Data Collection**, which provides information and analysis of the data underlying future regulatory activities. From 2022, a system of bonuses and penalties on operator performance will be launched and, in light of the payment of incentives, the Authority, in late 2021, issued its guidelines for consultation on the update of the methods for verifying contractual quality data and provided for related checks on operators. With resolution 639/2021 on the "Criteria for the biennial update (2022-2023) of the tariff arrangements for the Integrated Water Service", the Authority introduced elements of flexibility into the **contractual and technical performance** assessment mechanisms, such as the cumulative two-year analysis (2022-2023) of the quality targets. With resolution 311/2019, ARERA identified at national level the measures to contain **arrears** in the sector with respect to user rights and taking into account the economic/financial balance of management. In addition to identifying end users who cannot be disconnected, the resolution governs the process of classifying non-paying users as in arrears, regulating limitation, suspension and supply deactivation procedures, establishing conditions, methods and schedules. On this matter, in amendment of resolution 311/2019, in 2021 resolution 610/2021 was passed, which also impacts contractual quality (RQSII) and the transparency of invoicing documents.

DEVELOPMENT AND TECHNOLOGICAL INNOVATION

In ACEA, the Innovation, Technology & Solutions Function reports directly to the CEO and has the task of ensuring **a model of innovation for the Group through the adoption of processes and approaches typical of open innovation**, with the involvement of internal and external stakeholders as defined by the Industrial Plan. The search for innovative solutions to achieve long-term goals for **a decarbonised economy and smart urban infrastructures** continues to be a central theme in the general technological scenario. In this context it is worth mentioning the participation of Acea in **Zero Accelerator**, created from the collaboration of key operators, to support innovative startups and SMEs engaged in reducing greenhouse gas emissions, optimisation of the waste cycle etc., and the ***Casa delle Tecnologie Emergenti*** in Rome, the first permanent living lab for ideas relating to the future Rome Smart City. Collaborative networks and partnership development to explore **innovative solutions**, **business and technology opportunities** and attract talent are a focal driver for Acea's positioning **in the innovation ecosystem**. To this end, it has adhered to initiatives such as **InnovUp** (formerly Italia Startup), **SEP** (Startup Europe Partnership), the Open Innovation programme that connects European scaleups with corporations, and **Open Italy**. Acea also works with the academic world and

with **specific Observatories**, such as the Observatories for Digital Innovation, Startup Intelligence and Space Economy, all belonging to the Politecnico di Milano. The Group's industrial areas are committed to identifying innovative and technological approaches to **improve industrial processes with a view to social and environmental sustainability**. This commitment is also recognised at European level, there is already access to **Horizon 2020 funding** programmes for the PlatOne project, in the area of power grids, to develop cutting-edge technological solutions capable of enabling energy flexibility mechanisms, and in 2021 for the **Promisces** project aimed at removing very persistent, mobile and potentially toxic substances in the soil-sediment-water system (identified within the European REACH Regulation) and contributing to the goal of zero pollution and improving the protection of human health.

DEVELOPMENT OF HUMAN CAPITAL

For every organisation people represent a fundamental asset to remain competitive in a changing economic and social context. During the period in which the pandemic continued to represent the most complex challenge, the ongoing commitment of people allowed the Group to manage its services at a high level, providing continuity to the business with zero interruptions and in complete safety. Acea listens to the needs of its people and develops a **People Strategy** based on projects and initiatives that, by enhancing the main assets of the Business Plan, meet the needs of technological innovation, corporate culture, data analysis and monitoring, full utilisation of skills and development of well-being. The issues of **Diversity & Inclusion** has become increasingly important for organisations and Acea promotes greater sensitivity at all organisational levels through projects, initiatives and tools for the integration of these issues in the modus operandi of the Company and its stakeholders: in 2021 it defined a **Diversity & Inclusion Plan** and a Dashboard in relation to people strategy. Through **training**, the main lever for personal growth, Acea values the skills and talents of every individual and is continuously improving managerial and digital skills. Taking care of people's **well-being** forms part of the Company's awareness of its responsibilities towards its employees, especially within contexts, such as those still ongoing, of specific health and social emergencies. With reference to this, Acea has developed an integrated corporate **welfare system**, based on listening to employees and their needs and divided into six areas: health, psycho/physical well-being, family, reconciliation measures, income support measures and complementary social security.

SUSTAINABLE MANAGEMENT OF THE SUPPLY CHAIN

Aware of the positive contribution that **sustainable supply chain management** can offer to protecting the environment, ACEA is committed to defining purchasing methods that include intrinsic characteristics of the products and aspects of the process that limit environmental impact and foster initiatives aimed at minimising waste, reusing resources and protecting the social aspects involved in the procurement of goods, services and works. In tackling this **green procurement** issue, Acea has been using the **minimum environmental criteria** in force for several years, including non-compulsory bonus aspects in its tenders. In order to monitor the supply chain, Acea continued to develop the **Group's Vendor Rating system** aimed at analysing, assessing and monitoring the performance of suppliers of goods, services and works to increase the quality of the services rendered. Each company can contribute to promote **sustainability along the supply chain**, to this end Acea has undertaken a collaboration with Ecovadis, to carry out a performance assessment on specific sustainability criteria of its partners, with the prospect of integrating the sustainability indicator within the Vendor Rating model.

SAFETY AND HEALTH IN THE WORKPLACE

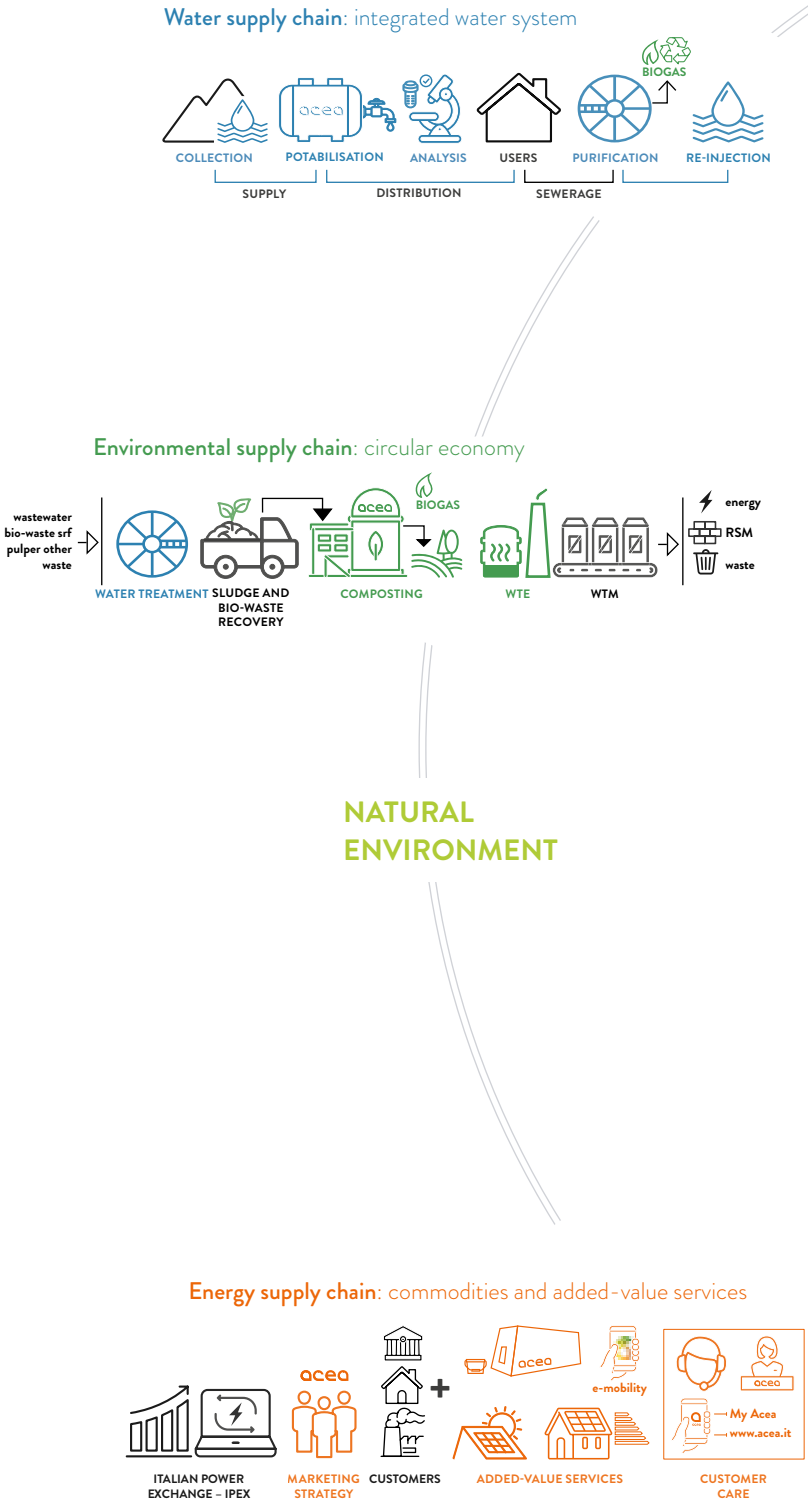
Safety as a strategy, not to be observed only for compliance purposes, is based on the desire to promote the widespread dissemination of a safety culture, involving all employees, and on the possibility of **measuring and monitoring results**. To this end, Acea runs awareness-raising campaigns on the issue and has adopted an advanced risk assessment model and implemented control and mitigation measures. The Group's contractors and sub-contractors, who are key partners in the implementation of its businesses, are also involved in awareness-raising and safety initiatives. Acea promotes **active participation in analysing indicator trends**; this aspect is often considered to be suggestive of the level of maturity of the safety culture and the culture of improvement in an organisation. An **RSPP Coordination Committee** is active within the Group. Its purpose is to share the results of safety performance, experiences, good practices and sustainable solutions to prevent accidents in the company. Safety is at the centre of numerous innovative experiments. Projects aimed at making operations in the field increasingly safe continued in 2021, such as the development of personal protective equipment with sensors that can signal proper usage (**Smart PPE**). During the year, comprehensive monitoring continued for the **prevention and protection from the risk of infection by Covid-19**, through: reorganisation of work activities and smart working, training courses, definition of specific protocols, dedicated communication channels, revision of risk assessment documents and health emergency plans, vaccination and screening campaigns for Acea personnel and activation of dedicated insurance coverage.

THE BUSINESS MODEL

The organisational structure (Chart 3) means that the Holding performs the role of steering and coordination of the Companies that make up the Group.

Acea SpA offers managerial support by means of management and legal, logistic, technical, financial and administrative services. Acea SpA's **organisational macro-structure** consists of **corporate functions**, **departments and operating segments** the operating companies report to (see Chart 4).

Chart no. 3 – Acea's Business Model



SCENARIO:
national policies, market, economy, innovation, sustainability, ...

GOVERNANCE POLICY STRATEGY

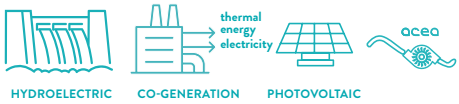
BOARD OF DIRECTORS

- BoD'S SECRETARY
- CHAIRPERSON
- BoD'S SECRETARIAT
- RISK & COMPLIANCE
- SPONSORSHIP AND VALUE
- INSTITUTIONAL RELATIONS
- INTERNAL AUDIT
- CHIEF EXECUTIVE OFFICER
- ADMINISTRATION, FINANCE AND CONTROL
- COMMUNICATIONS
- INVESTOR RELATIONS & SUSTAINABILITY
- LEGAL AFFAIRS
- HUMAN RESOURCES
- CORPORATE AFFAIRS
- TECHNOLOGY & SOLUTIONS
- COMMERCIAL AND TRADING
- CHIEF OPERATING OFFICER
- BUSINESS DEVELOPMENT, PRODUCTION AND FOREIGN STRATEGIES
- PROCUREMENT AND LOGISTICS
- REGULATORY
- WATER
- NETWORKS
- ACEA AMBIENTE
- ENGINEERING AND SERVICES

functional reporting

hierarchical reporting

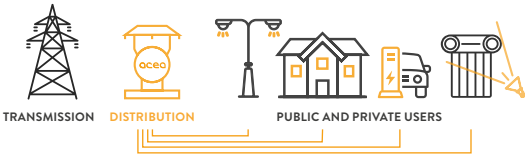
Energy supply chain: generation



HYDROELECTRIC CO-GENERATION PHOTOVOLTAIC

STAKEHOLDERS

Energy supply chain: distribution

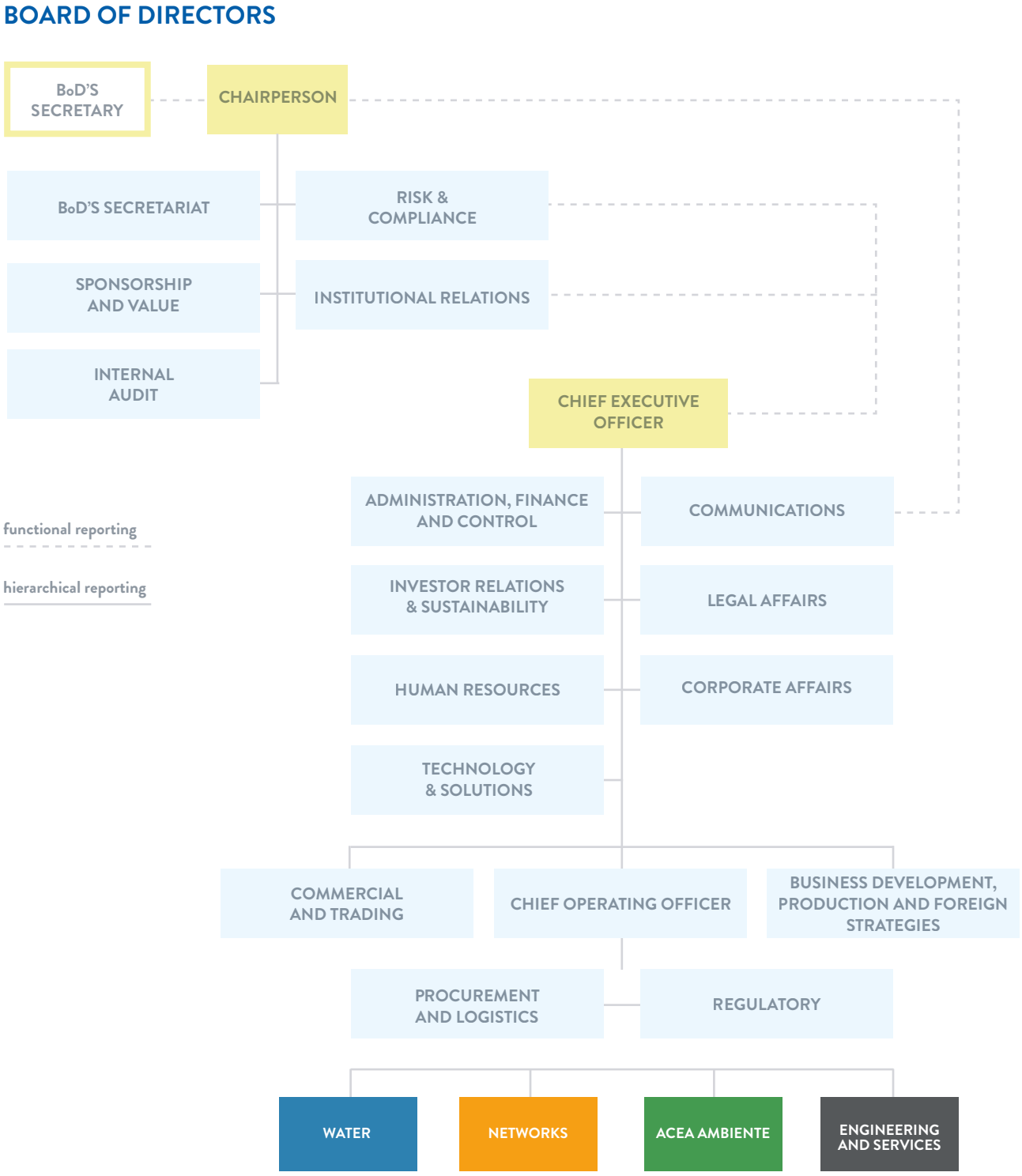


TRANSMISSION DISTRIBUTION PUBLIC AND PRIVATE USERS

COMPLIANCE OF RISK ASSESSMENT

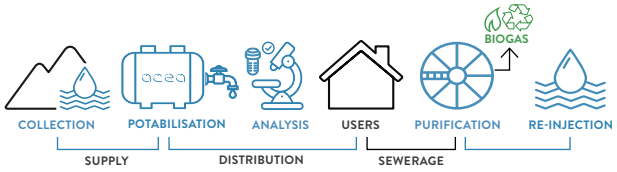
regulatory changes, regulatory framework, mega trends (social trends, environmental situation), ...

Chart no. 4 – Acea SpA organisation chart as at 31/12/2021



Through Companies that it has equity investments in and for which it plays the role of industrial entity of reference, the Acea Group is involved in the chains of activities shown below. The business activities are broken down in the Strategic Plan (see the section titled *Strategy and Sustainability*), which defines corporate development guidelines based on the assessments of **opportunities offered by the market**, the **regulatory and social context** of reference, the **governance system** and a thorough **identification and weighting of the risks** that can impede the achievement of the goals. Acea Group pursues corporate management that is consistent with the principles of sustainable development and pays the utmost attention to **interactions with the natural environment** and **stakeholder relations**.

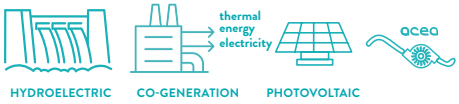
WATER SUPPLY CHAIN: INTEGRATED WATER SERVICES



The water supply chain: starting from a careful analysis of springs and groundwater and the potential impacts of operational processes thereupon – for example, by defining and monitoring water districts and preparing water balances to protect resources and balance their vital flows with the needs of human consumption, Acea checks and guarantees the quality of water during collection and distribution in compliance with the regulatory standards envisaged for end uses.

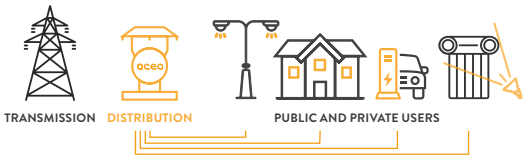
The same care is devoted to wastewater collection and treatment phases and returning the resource to the environment in the best possible conditions for its natural cycle to resume. A huge effort has been made to increase the resilience of the water infrastructure, technological innovation applied to management (e.g. remote control, sensors, satellite monitoring, etc.) and the digitalisation of processes.

ENERGY SUPPLY CHAIN: GENERATION



Electricity production: Through the business unit dedicated to production, Acea generates energy at hydroelectric power plants, thermoelectric power plants (high-yield cogeneration) and photovoltaic plants. In particular, Acea is strategically developing its position in the solar generation segment, including through partnership agreements with major financial operators to support the investment plan, with the aim of achieving an installed capacity of 750 MW in the medium term.

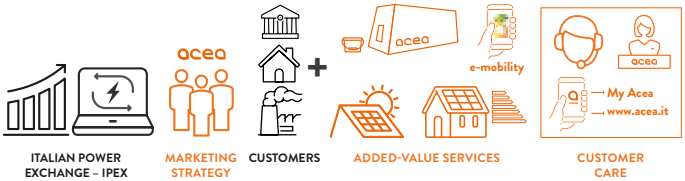
ENERGY SUPPLY CHAIN: DISTRIBUTION



Electricity distribution: Acea supplies users with electricity thanks to a widespread distribution network that is constantly maintained, updated and developed according to resilience logics that support the growing electrification of consumption.

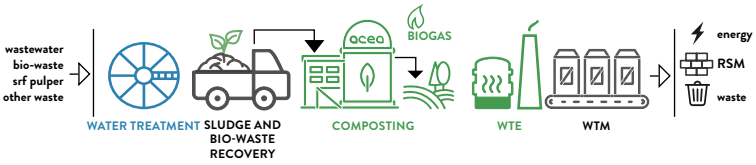
The digital and innovative development in the services, stimulated and required by a constantly evolving market, commits the Distributor to opt for smart city solutions, adopting a *demand side management* and energy efficiency outlook.

ENERGY SUPPLY CHAIN: COMMODITIES AND ADDED-VALUE SERVICES



Sale of energy, gas and added-value services: commodities (energy and gas) are purchased via bilateral contracts or exchanges on market platforms (Electronic stock exchange) where Acea Energia supplies itself in order to resupply clients according to its commercial policies. The Company develops relations with customers, based on their type, through contact channels that are increasingly more innovative and digital. The promotion of commercial offers takes place through pull channels (shop, website, branches) as well as through sales agencies that are selected, trained and their commercial practices monitored. One area of incremental development of the sector companies involves the creation of smart services, such as electric mobility, residential energy requalification and widespread composting.

GENERATION AND NETWORKS: CIRCULAR ECONOMY



Efficient use of waste and the circular economy: the environmental supply chain is active in efficiently using waste by reducing waste volumes, treatment, conversion into biogas, transformation into compost for agriculture and floriculture, waste-to-energy production and recycling into material that is reusable in production processes. In particular, with a view to circular economy, Acea exploits the integration into water activities to recover sludge from water purification and send it for treatment to become compost, also committing itself to the growth of its market position and operational capacity. The ongoing development involves the expansion of volumes and operating capacity, from selection to storage and treatment, as well as the types of material managed in the circuit of the circular economy (paper, iron, wood, liquid waste, plastic and metals) through the acquisition of new companies.

OWNERSHIP STRUCTURE AND GENERAL ECONOMIC INDICATORS

Acea SpA is listed on the Italian Stock Exchange organised and managed by Borsa Italiana. The Company is included in the FTSE Italia Mid Cap index. **Roma Capitale** is Acea SpA's majority shareholder, holding **51% of its share capital**. As at **31/12/2021**, other significant direct or indirect equity interests were held by **Suez SA** with over 23.3% and **Francesco Gaetano Caltagirone** with approximately 5.5% (see Chart 5).
The portion of floating capital on the market is worth 20.2%, with **institutional investors** controlling approximately 14% of the share capital, with a geographical distribution indicating a predominance of North American shareholders, followed by Italian, English and Northern European interests (see Chart 6). **Retail** investors hold approximately 4% of the share capital.

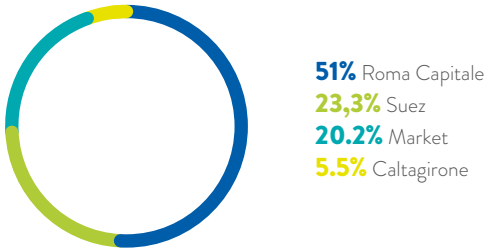
In spite of a complex scenario due to the continuing pandemic and the volatility of the energy markets, the 2021 results recorded growth. The strategy implemented by Acea, supported by the financial structure, allowed the Group to seize the economic recovery. The positive performance in all business areas generated constantly improving results, as documented by the EBITDA that surpassed the guidance, previously revised upward during the reporting year. 2021 was characterised by important industrial operations, with the acquisition of new treatment plants in the environment segment and the signing of an agreement with Equitix in the renewables sector. The **gross operating margin** reached **€ 1,256 million** (+9% on 2020) and the **operating profit** was **€ 581 million** (+9% on 2020). **Group profit** totalled **€ 313 million** (+10% on 2020).

Consolidated revenues in 2021 totalled **€ 3,972 million** (€ 3,378.9 million in 2020), up by 17.6%. **External costs** increased by around 24% to approximately **€ 2.46 billion** (€ 1.98 billion in 2020) mainly due to the purchase of energy (procurement, transportation and metering), materials and services, in line with the increase in revenues and the growth in the corporate scope.
The **gross operating margin** (EBITDA) of **€ 1,256.1 million** is **up** compared to € 1,155.5 million last year (+8.7%), with regulated activities contributing 82%. The Industrial Segments contributed to the overall value of EBITDA, as follows:

- the **water** industrial segment at 52%, with € 655.3 million, a 6.7% increase respect to the data from 2020 (€ 614.4 million). This growth is the result of greater operating efficiencies and the change in the scope of consolidation;
- the **energy infrastructure** industrial segment for 30%, with € 371.6 million, up by 1.1% compared to the previous year (€ 367.6 million) thanks to the performance of the networks arising from the resilience plan and the partnership with Open Fiber;
- the **generation** industrial segment for 6%, with € 79.5 million, a 75.1% increase compared to the previous year (€ 45.4 million). This result is affected by the increase in volumes produced in particular by hydroelectric and photovoltaic and the price effect on the market;
- the **commercial and trading** segment for 6%, with € 80.5 million, up by 11% (€ 72.4 million in 2020), driven by the increase in margins on the free market and the improvement in the margin on the gas market;
- the **environment** segment for 5%, with € 63.7 million, up by 26.6% on the previous year (€ 50.3 million), which benefits from higher margins in Waste-to-Energy and the waste delivery activities. The companies recently acquired in the industrial segment also made a positive contribution.

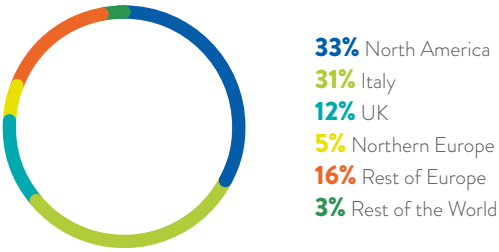
The following areas also contribute to the Group's EBITDA **Foreign** area, the **Engineering and Services** area and the **Parent Company**, by 1% cumulatively.

Chart no. 5 – Ownership structure as at 31/12/2021



Source: CONSOB

Chart no. 6 – Geographical representation of Acea institutional investors



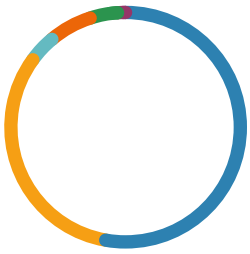
NOTE: The percentages shown in the table represent the weight of Shareholders, by geographical area, in relation to the total number of Institutional Investors.

Table no. 7 – The main economic and equity data of the Acea Group (2020-2021)

(in € million)	2020	2021
net revenues	**3,379.4**	**3,972**
operating costs	2,254.6	2,737
staff costs	*267.7*	*275.8*
external costs	*1,986.9*	*2,461.2*
income/(expense) from non-financial investments	30.3	21
gross operating margin (EBITDA)	**1,155.5**	**1,256.1**
operating profit (EBIT)	**535.0**	**581.1**
financial management	(88)	(85.9)
investments management	14.2	7.8
profit/(loss) before tax	**461.2**	**503**
income tax	134.6	150.7
net profit/loss	**326.6**	**352.3**
profit/loss attributable to third parties	41.6	39
net profit/(loss) of the Group	**284.9**	**313.3**

Chart no. 7 – Contribution of the industrial segments to overall EBITDA (2020-2021)

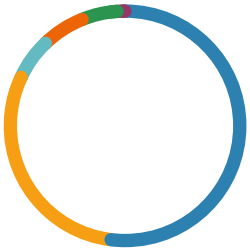
% OF EBITDA **2020**



INDUSTRIAL SEGMENTS

53% Water
32% Energy Infrastructure
4% Generation
6% Commercial and Trading
4% Environment
1% Engineering, Overseas, Holding

% OF EBITDA **2021**



INDUSTRIAL SEGMENTS

52% Water
30% Energy Infrastructure
6% Generation
6% Commercial and Trading
5% Environment
1% Engineering, Overseas, Holding

The **operating result (EBIT)** was **€ 581 million** (+8.6% on 2020). The increase was offset by the growth in amortisation, including as a result of the change in scope and a limited increase in receivable write-downs.

INFORMATION REQUIRED BY THE EUROPEAN TAXONOMY

As anticipated in *Disclosing sustainability: methodological note*, to which reference should be made, 2022 is the first year of application, in the context of non-financial reporting for FY 2021, of the provisions of Regulation 852/2020[22] "*on the establishment of a framework to facilitate sustainable investment*", also known as the European Taxonomy.
The Taxonomy – centred around six environmental objectives, of which the first two, relative to climate change mitigation and climate change adaptation, have already been governed through the adoption of a specific Delegated Act[23] – introduces a **single classification system** at international level **for the identification of environmentally sustainable economic activities**, namely those which contribute to the growth of sectors with low carbon emissions and to the decarbonisation process of the highest emitters. The objective of the Taxonomy is to identify the "degree of environmental sustainability" of an investment[24], increasing the transparency of the market to the benefit of consumers and investors.
In relation to FY 2021, the companies subject to the regulation must publish a report[25] relative to the **percentage of economic activities eligible and ineligible for the Taxonomy** and the **quantitative economic performance indicators (KPIs)** – in particular the portions of turnover, capital expenditure (CapEx) and operating expenses (OpEx) – **attributable to them**[26].

ELIGIBILITY ANALYSIS AND ECONOMIC/FINANCIAL KPIS

During the year, Acea carried out a **cross-sectional project**, which involved the Administration, Finance and Control Department and the Investor Relations & Sustainability Department of the Parent Company and the Companies included within the scope of the *Consolidated Non-Financial Statement*[27], aimed at the **eligibility analysis** of the activities managed by such Companies and the **identification of the related KPIs**, in compliance with the regulation, according to the provisions of the *Disclosure Delegated Act*.
Furthermore, despite not being explicitly required by the Regulation, the Group also wished to calculate the portion of **EBITDA**[28] **eligible** for the Taxonomy. In this way, Acea sought to return an additional financial metric at consolidated level which will make it possible to illustrate the actual economic performance of an integrated multi-utility company as fully as possible.
During the eligibility analysis, intended to verify whether the activities performed matched the description of the activities listed in annexes I and II of the *Climate Delegated Act*, dedicated to the climate mitigation and adaptation objectives respectively, Acea adopted **as inclusive an approach as possible**, going beyond the

22 Official Journal of the European Union, Regulation (EU) 852/2020 of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088. The Regulation is implemented through the gradual adoption of Delegated Acts. Publication of the Delegated Acts that will govern the remaining 4 environmental objectives is currently expected by 2022.

23 In particular, the *Climate Delegated Act*, European Commission, C (2021) 2800 final, 2021, adopted on 4 June 2021 and entering into force on 1 January 2022.

24 See also Assonime Circular no. 1 of 19 January 2022, *the European Regulation on the taxonomy of environmentally sustainable activities: disclosure requirements for companies.*

25 The *Disclosure Delegated Act*, European Commission, C (2021) 4987 final, 2021, adopted in July 2021 and entering into force on 30 December 2021, defined the reporting methods that must be adopted by parties falling within the scope of application of the Regulation.

26 The full application of the Regulation, as of 1 January 2023, provides not only for the Taxonomy eligibility assessment of the economic activities managed by the undertaking but also the assessment of the alignment of such activities with the Taxonomy, namely compliance with the technical screening criteria, indicated by the Regulation, for each economic activity, in the relevant Delegated Acts.

27 See *Disclosing sustainability: methodological note* for the process of defining the scope and the list of companies therein. Note that these Companies, identified for their adequate representation of the performance and the impacts generated by the Group (pursuant to Italian Legislative Decree no. 254/2016), cover, with reference to the KPIs set out by Regulation (EU) 852/2020, 91% of the turnover, 97% of the CapEx and 94% of the OpEx of the full list of consolidated companies.

28 EBITDA: Earnings Before Interest, Tax, Depreciation and Amortisation.

verification of correspondence between the NACE codes of reference, retrieved for each activity within the Regulation, and their ATECO equivalents, by entering into the detailed description of each activity alongside the Companies involved.
In particular, to date, the **Taxonomy** has identified **13 sectors**[29] that include, in total, **103 economic activities**, **80 of which can make a substantial contribution to the mitigation and adaptation objectives**, 8 to mitigation only and 15 to adaptation only.

Following the eligibility analysis of Acea's business, operating mainly in public water services (integrated water service), energy (generation, distribution, sales and public lighting) and environment (energy development, recovery of material, treatment and composting), it was found that the Companies included in the scope manage, within **7 of the 13 sectors** identified by the Regulation[30], a total of **27 eligible activities**, **22 of which** can contribute to the climate objectives of **both mitigation and adaptation**, **4 for mitigation only** and **one for adaptation only**.
In particular, the **water** and **environment** segments are especially eligible for activities that fall under the sector of "Water supply, sewerage, waste management and remediation" such as the construction, extension, management and renewal of water collection, treatment and supply systems and the anaerobic digestion of bio-waste. The environment segment is also eligible for the "Energy" sector, which includes generation from solar photovoltaic technology and from bioenergy. In the same way, the **generation** segment, responsible for most of the Group's electricity production, is eligible for the activities of generation from hydropower, from solar photovoltaic technology and for district heating distribution.
The **energy infrastructure** segment, again within the "Energy" sector, is mainly eligible due to the transmission and distribution activity. The **engineering and services** segment, also committed to research and innovation, design and laboratories, with many activities serving the Group companies[31], is eligible due to the activities of the "Professional, scientific and technical activities" sector. Lastly, the **energy (commercial and trading)** segment, which mostly manages the sale of electricity, worth 49% of the Group's turnover in 2021, is only partially eligible, since, as we know, the European Commission does not currently include sales among the eligible activities for the first two climate objectives. Despite this, the segment corresponds with the Taxonomy for the activities of the "Construction and real estate" sector, such as the installation, maintenance and repair of energy efficiency equipment or, for the "Transport" sector, the construction, modernisation, maintenance and operation of infrastructure that is required for zero tailpipe CO_2 operation of zero-emissions road transport.

Based on the analysis performed, as mentioned, 22 of the 27 activities identified as eligible **are able to contribute to both climate objectives** (mitigation and adaptation), the description of which in the *Climate Delegated Act* (in 20 of 22 cases) is fully aligned. In these cases, only the technical screening criteria, functional thresholds for assessing the alignment of the activities with the Taxonomy (obligation which will come into force from 2023) – not just their eligibility – highlight differences between the activities, based on the objective in question. Therefore, in this first year of reporting, **Acea decided to attribute the eligible activities to the mitigation objective only**, **with the exception of the sole activity attributable to the adaptation objective**. This evaluation, which brings with it a clear imbalance in allocation of the KPIs in relation to the climate change mitigation objective, arising from the impossibility to attribute them to both, is to be considered provisional and subject to a different outcome for the next analysis cycle.
In line with the indications of the Regulation and on the basis of the accounting standards defined by Acea (see section *Accounting standards and supplementary information pursuant to Regulation 852/2020*), the Group has calculated the percentages of **turnover**, **CapEx** and **OpEx related to the eligible activities**.
It is important to note that these percentages do not represent a summary of the sustainability performances described in the *Sustainability Report* but correspond exclusively to a specific interpretation required by the Taxonomy – in relation to a number of specific environmental objectives – to support the implementation of the European Action Plan for Sustainable Finance and should therefore be confined to such purposes, which differ from the wider context of sustainability initiatives promoted by the Group.
Looking at the financial results achieved by the Group as at **31/12/2021**, the portion of **eligible turnover** is equal to **41%** of the total. In terms of **CapEx**[32], the Group is eligible for **78%** of the total, while for **OpEx** the percentage of eligibility comes to **69%** of the operating expenses that can be considered for Taxonomy purposes. It should be taken into account that a residual part of the three KPIs (9% of turnover, 3% of total CapEx and 6% of OpEx that can be considered for Taxonomy purposes and attributable to the companies outside the scope of the NFS) is to be considered not subject to assessment.

29 European Commission, C (2021) 2800 final, 2021, Annex 1 and 2.

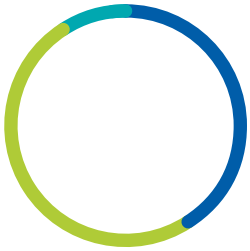
30 In particular, the activities managed by the Group, considered eligible, fall under the following sectors: Environmental protection and restoration activities; Energy; Water supply, sewerage, waste management and remediation; Transport; Construction and real estate; Information and communication; Professional, scientific and technical activities.

31 Intragroup activities are removed from the accounting of the KPIs, in accordance with the Regulation.

32 Note that, for the first year of application of the Regulation, limited to the eligibility analysis and not the assessment of their alignment, it is not possible to take account of the specifications relative to the CapEx Plan (under points 1.1.2.2 and 1.1.3.2 in Annex I of the Disclosure Delegated Act) since these are subject to the verification of compliance with the technical screening criteria. This verification will be taken into consideration for the disclosure relative to tax year 2022.

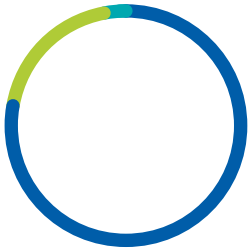
Chart no. 8 – Total eligible, ineligible and non-assessed turnover, CapEx and OpEx

Turnover
€ 3,972 million



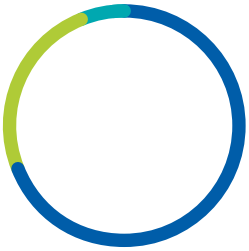
41% Eligible turnover
50% Ineligible turnover
9% Non-assessed turnover

CapEx
€ 970 million



78% Eligible CapEx
19% Ineligible CapEx
3% Non-assessed CapEx

OpEx
€ 181 million



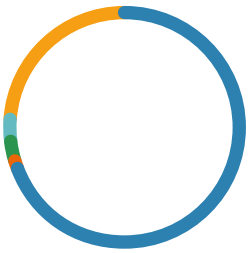
69% Eligible OpEx
25% Ineligible OpEx
6% Non-assessed OpEx

As mentioned, for this year, Acea decided to attribute the eligible activities to the mitigation objective only, with the exception of the sole activity attributable to the adaptation objective.

In 2021, this activity only generated OpEx, making 100% of the turnover and the CapEx eligible for the mitigation objective only.

Chart no. 9 – Total eligible turnover, CapEx and OpEx by industrial segment

Eligible turnover
€ 1,624 million

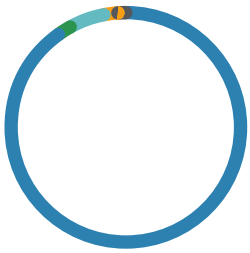


0% Holding
70% Water
1% Commercial and Trading
3% Environment
3% Generation
24% Energy Iinfrastructure
0% Engineering and Services

Eligible CapEx
€ 755 million

0% Holding
61% Water
1% Commercial and Trading
2% Environment
4% Generation
32% Energy Infrastructure
0% Engineering and Services

Eligible OpEx
€ 125 million



0% Holding
90% Water
0% Commercial and Trading
2% Environment
5% Generation
2% Energy Infrastructure
1% Engineering and Services

The interpretation of the data by Industrial Segment shows the unique contributions to the Group's eligibility, in particular:

- of the Group's total **turnover** for 2021, equal to **€ 3,972 million**, **€ 1,624 million** is eligible. The two business areas that contribute the most are **Water** with **69%** of the value (1,129 million) and **Energy Infrastructure** with **24%** (385 million);
- of the total **CapEx**, equal to **€ 970 million**, **€ 755 million** is eligible, of which **61%** is attributable to investments by companies in the **Water** segment (464 million) and **32%** to **Energy Infrastructure** (238 million);
- of the total **OpEx** that can be considered for Taxonomy purposes, equal to **€ 181 million**, **€ 125 million** is eligible. Again in this case, approximately **90%** derives from activities performed in the **Water** segment (112 million), following by the **Generation** segment which contributes to **5%** of the total (6 million).

As an additional indicator, in the year in question, an EBITDA value of **€ 1,256 million** is noted, of which **€ 1,076 million** is eligible, equal to **85%** of the total. As shown in the following chart, the greatest contribution to the eligible EBITDA value comes from the **Water** segment with **63%** of the eligible total (802 million), followed by **Energy Infrastructure** for **19%** (247 million) and the **Generation** segment with **3%** of the eligible total (36 million).

Chart no. 10 – Total eligible EBITDA by industrial segment

Total EBITDA
€ 1,256 million

85% Eligible EBITDA
15% Non-assessed EBITDA

Eligible EBITDA
€ 1,076 million

63% Water
19% Energy Infrastructure
3% Generation

ACCOUNTING STANDARDS AND SUPPLEMENTARY INFORMATION PURSUANT TO REGULATION 852/2020

This section explains the **accounting policy**, i.e. the method for constructing the **portions of turnover**, **CapEx and OpEx** associated with the eligible activities that the Group has defined on the basis of the indications shown in Annex 1 to Delegated Act 2178/2021.
For the purposes of allocating the amounts of **turnover**, **CapEx** and **OpEx** to the eligible activities, Acea has defined a clear and viable hierarchy of sources, used with respect to the quantitative and qualitative reporting requirements. Specifically, Acea has reconstructed the indicators by using the information present in the general, industrial and regulatory accounts. The methods for constructing the KPIs shown below and applied for the first year of entry into force of the European Regulation could undergo changes and amendments in coming years in light of legislative developments or consolidated or sector practice.
For the calculation of the **eligible turnover** the numerator used was the portion of consolidated net revenue generated by the sale of products or services, including intangible, associated with economic activities eligible for the Taxonomy, and the denominator was the total net revenues[33].
The **net revenues** were identified by using the data of the consolidated financial statements prepared according to international accounting standards and refer to the provisions of IAS1, point 82, lett. a).
Specifically, to create the indicator, the items "Revenue from sales and services" and "Other revenue and proceeds" of the consolidated income statement were used as reference; no amounts connected to economic activities included in the Taxonomy conducted for the Group's internal consumption are present.
For the calculation **of the eligible CapEx** the numerator used was the portion of capital expenditure posted to the assets of the consolidated financial statements associated with eligible activities and defined based on the criteria under point 1.1.2.2. of the Delegated Act and the denominator was the total capital expenditure quantified on the basis of the criteria under point 1.1.2.1. of the Delegated Act.
In particular, the denominator includes the increases to the tangible and intangible assets during the year considered before amortisation, write-down and any revaluation, including those deriving from recalculations and reductions of value and excluding fair value changes.
For the purpose of creating the indicator, the capital expenditure was identified using data from the consolidated financial statements, with reference to the provisions of *a) IAS 16 "Property, plant and equipment"; b) IAS 38 "Intangible assets"* and *c) IFRS 16 "Leasing"*. The values reported do not include amounts associated with economic activities included in the Taxonomy relative to expenditure capitalised according to *d) IAS 40 "Investment property"* and *e) IAS 41 "Agriculture"* since these are not applicable for the Group.
For the **calculation of the eligible OpEx**, the numerator used was the portion of operating expenses associated with the eligible activities and defined on the basis of criteria under point 1.1.3.2 of the Delegated Act and the denominator was the total operating expenses quantified on the basis of the criteria under point 1.1.3.1. of the Delegated Act.
The latter includes direct non-capitalised costs that relate to research and development, building renovation measures, short-term lease, maintenance and repair, and any other direct expenditures relating to the day-to-day servicing of assets of property, plant and equipment by the undertaking or third party to whom activities are outsourced that are necessary to ensure the continued and effective functioning of such assets.
For the creation of the indicator, the operating expenses were identified using data from the consolidated financial statements, prepared according to international accounting standards. Specifically, the items "Personnel costs" and "External costs" included in the Consolidated Income Statement were used as reference (pro rata). With respect to the provisions contained in the Delegated Act, when defining the eligible operating costs, Acea considered all daily maintenance and necessary costs to ensure the continued and effective functioning of the assets, meaning that the operating expenditure included all maintenance expenses of the assets, including the portions of costs for the purchase of materials, services and personnel costs directly attributable to the maintenance activity.
Despite not being envisaged by the legislation, the **EBITDA** was identified using data from the consolidated financial statements prepared according to international accounting standards, determined by adding the item "Amortisation, depreciation, provisions and impairment charges" to the Operating Result, as the main non-cash items. For the calculation of the eligible **EBITDA** the numerator used was the portion of consolidated net revenue and all operating expenditure[34] associated with the eligible activities as indicated above. In addition to the provisions of the legislation, the Group also decided to calculate and represent the "normalised" turnover, CapEx and OpEx KPIs, i.e. using as denominator the consolidated values net of the non-assessed portion, attributable to the Companies not included in the NFS scope (equal to 9% of the turnover, 3% of the CapEx and 6% of the OpEx).

33 Pursuant to art. 2, point 5 of Directive 201334/EU.

34 Therefore, without limiting itself to the OpEx components only relative to non-capitalised costs that relate to research and development, building renovation measures, short-term lease, maintenance and repair, and any other direct expenditures relating to the day-to-day servicing of assets of property, plant and equipment by the undertaking or third party to whom activities are outsourced that are necessary to ensure the continued and effective functioning of such assets.

The following tables represent the eligible activities for the Acea Group and the value of the related KPIs (portion of turnover, CapEx, OpEx), respectively, according to the provisions of the legislation and, in addition, according to the normalised allocation.

List of eligible activities, relevant climate objective and activity description

Eligible activity (*)	Climate change mitigation	Climate change adaptation	Activity description
2.1	✓		Restoration of wetlands
4.1	✓		Electricity generation using solar photovoltaic technology
4.5	✓		Electricity generation from hydropower
4.8	✓		Electricity generation from bioenergy
4.9	✓		Transmission and distribution of electricity
4.13	✓		Manufacture of biogas and biofuels for use in transport and of bioliquids
4.15	✓		District heating/cooling distribution
4.16	✓		Installation and operation of electric heat pumps
4.20	✓		Cogeneration of heat/cool and power from bioenergy
5.1	✓		Construction, extension and operation of water collection, treatment and supply systems
5.2	✓		Renewal of water collection, treatment and supply systems
5.3	✓		Construction, extension and operation of waste water collection and treatment systems
5.4	✓		Renewal of waste water collection and treatment systems
5.5	✓		Collection and transport of non-hazardous waste in source segregated fractions
5.6	✓		Anaerobic digestion of sewage sludge
5.7	✓		Anaerobic digestion of bio-waste
5.8	✓		Composting of bio-waste
5.9	✓		Material recovery from non-hazardous waste
6.6	✓		Freight transport services by road
6.15	✓		Infrastructure enabling low-carbon road transport and public transport
7.3	✓		Installation, maintenance and repair of energy efficiency equipment
7.4	✓		Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)
7.5	✓		Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings
8.2	✓		Data-driven solutions for GHG emissions reductions
9.1	✓		Close to market research, development and innovation
9.1		✓	Engineering activities and related technical consultancy dedicated to adaptation to climate change
9.3	✓		Professional services related to energy performance of buildings

(*) For the denomination and full description of the activities, referred to herein with their number, please refer to Annexes 1 and 2 (Climate Delegated Act) of Regulation 852/2020.

KPIs associated with the eligible activities

	KPIs pursuant to Regulation 2020/852		KPIs (net non-assessed portion)	
KPI 2021	**Portion of eligible economic activities**	**Portion of ineligible economic activities (*)**	**Portion of eligible economic activities**	**Portion of ineligible economic activities**
Turnover	41 %	59 %	45 %	55 %
CapEx	78 %	22 %	81 %	19 %
OpEx	69 %	31 %	74 %	26 %

(*) Includes the percentages of turnover, CapEx, OpEx attributable to the companies outside of the NFS scope

STRATEGY AND SUSTAINABILITY

INTEGRATED STRATEGY OVERVIEW

Acea's strategic planning seizes the opportunities offered by the evolution of the reference framework and the new economic, social and environmental challenges, reconciling the industrial dimension and the sustainability aspects with the business objectives. The Business Plan and the Sustainability Plan for 2020-2024 were approved in 2020 by the Board of Directors and will be subject to further revision in 2022.

Business management towards the pursuit of "sustainable success" is also subject to further research by Acea through **discussion with the institutional world**, **experts and other companies**, of which the Company itself is a promoter, creating opportunities for dialogue and exchange of experiences, such as the **Sustainability Day**, which reached its third edition in 2021 (see box).

Acea's commitment is appreciated by external observers, analysts specialised in ESG and the market. In this sense, Acea's good positioning in the Integrated Governance Index (see the chapter *Corporate governance and management systems*) is demonstrated by the improving trend in the Group's rating by the Gender Equality Index of Bloomberg (see the chapter *Personnel*), the "innovation" awards received (see the chapter *Institutions and business*), the positioning in the ratings of the CDP - Carbon Disclosure Project (see box below), the further improvement in the rating given by Standard Ethics, as well as the feedback that the market wanted to give to the first Green Bond issued by the Company and the assessments issued by ESG analysts (see the chapter *Shareholders and investors*).

In 2021, Acea once again took part in the Top Utility Award, the initiative established by the Althesys research centre with the intention of promoting excellence among the 100 biggest companies that manage public services, for their contribution to the economic and industrial development and collective well-being of the country. The rewards given as part of the initiative involved the following 8 categories: Absolute, Sustainability, Communication, Research & Innovation, Consumers & Territory, Operating Performance, Diversity, South. **Acea** was **in the top five best in class** for the **Sustainability** and **Research and Innovation** categories; The Acea Group company **GORI was awarded the price** for the **South category**.

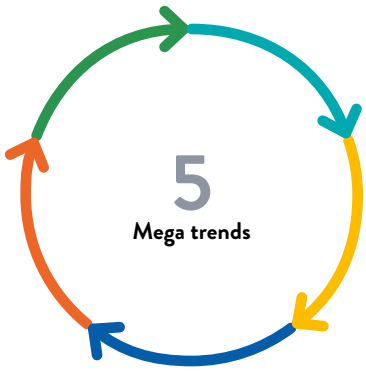
SUSTAINABILITY DAY ACEA 2021

The 2021 edition of the Acea Sustainability Day was held on 26 November with a blend of in-person and digital attendance, at **La Lanterna Rome**. The event, in response to the desire to offer **an opportunity for discussion among the main institutional and business players on sustainability topics**, was developed around the theme of the **Fair and sustainable transition**. Many subjects were addressed, which highlighted the various forms of the concept of sustainability, underlining the need not only to consider the environmental aspect but also to integrate the social aspect in order to allow for the "Just Transition" to be exactly that.

Moderated by Antonella Baccaro, a journalist from Il Corriere, the debate took place across four different events, which, starting from a scenario analysis for a Just Transition, covered the responses and projects put into place by Acea, the implementing aspects of the transition, the challenges and the opportunities from the industrial perspective of the financial markets and the regulations. These subjects were analysed thanks to discussion among reputed members from the institutional world, such as the Minister for Equal Opportunities and Family, Elena Bonetti, and the ARERA Commissioner, Clara Poletti, from institutions involved in research, such as the President of Utilitatis, Prof. Stefano Pareglio, and the Director of TIRESIA, Prof. Mario Calderini, and lastly from organisations and businesses, such as the President of the Young Ambassador Society, Alberta Pelino, the Head of Large Caps, Investment Vehicles & Market Intelligence at Euronext, Patrizia Celia, and the Enav President, Francesca Isgrò. The event was **live streamed** on the dedicated platform and on CorriereTV attracting over **900,000 video views**.

The **2020-2024 Business Plan**, which guides the Group, was defined by taking into consideration **5 mega trends** which mark the evolution of utilities: sustainability and circular economy; customer focus; energy transition; innovation and digitisation; increased competitiveness on the market.

Chart no. 11 – – The 5 mega trends for utilities



Sustainability & the Circular Economy
- **Central role** for utilities in sustainability with a focus on the **circular economy**
- **Protection of water resources** and recycling; transformation of waste into new resources

Energy transition
- Push for **decarbonisation**, coal phase-out vs **strong push for RES**
- **Electrification** with new energy consumption linked to new needs in line with the **European New Green Deal**

Customer focus
- "Change of paradigm" with **customer value** becoming **more important**
- Transition from "Commodity-Based" to **"Service-Based"**

Innovation and Digital
- **Digital and Innovation** along the entire value chain, as an **enabler of development**
- Technological enabling of **new advanced services** (e.g. predictive maintenance, smart meters)

Consolidation of target markets
- **Competition consolidated** in certain target markets (e.g. Waste, Water)
- Opportunities for positioning utilities as **geographical or supply chain leader**

Source: Acea Business Plan 2020-2024

In particular, the **Business Plan** has divided the **Group's growth guidelines** into **5 strategic pillars summarised** by the acronym **GRIDS**:
- **Growth**: growth driven by the regulated market;
- **Renewables**: investment in renewables;
- **Innovation**: investment in new innovative services;
- **Delivery**: results exceeded targets;
- **Sustainability**: increasing focus on the environmental impact and circular economy.

The total business investments envisaged in the Plan amount to **€ 4.3 billion**.

MAIN ACTIONS AND STRATEGIC OBJECTIVES OF THE 2020-2024 BUSINESS PLAN BY BUSINESS AREA

business area	strategy
WATER *Development of a Smart Water Company for sustainable use of water by improving the quality and efficiency of the service Expansion through participation in new tenders in other territories.*	• installation of **smart water meters** and **districting** of the network • virtuous path of **water resource protection with reduction of losses** • **rationalisation of small treatment plants** • **optimisation of network performance** through the **Water Management System** • **securitisation of supply** with work on the **strategic Peschiera and Marcio aqueducts**
NETWORKS *Major player in the energy transition with enabling projects for increased electrification and integration of distributed generation.*	• investments for **network resilience** with interventions on specific substations • **network digitisation** through remote control and IoT solutions • network maintenance to improve **service continuity** • **2G smart meter** installation • new **Network Service** Management Centre

ENVIRONMENT

Consolidation of the market towards the circular economy including in a "one-stop-shop" logic.
Accelerated closing of the waste cycle in Central Italy.

- **consolidation of core business** in energy recovery (WtE) and disposal of unsorted waste and organic fraction
- strengthening **Waste to Material (WtM) supply chains in view of the circular economy** (e.g. plastic, paper)
- further **development in the special waste sector**, also in **synergy with the Group's** water (e.g. sludge) and WtE (e.g. ash) activities
- development **of industrial synergies**

ENGINEERING AND SERVICES

Development of a building oriented company for turnkey management of construction and engineering activities

- focus on **core engineering activities**
- construction of plants through the **internalisation of construction activities** in an EPC perspective
- **reducing construction time** and strengthening **laboratory activities**
- development of a **research centre**

ENERGY (COMMERCIAL AND TRADING)

Commercial growth in central and southern Italy, also supported by the elimination of greater protection and "digital" offers.
Development of a Services-Based Company to strengthen customer relations and enhance Acea Group brands

- reinforcement in the **reference territories** and **growth in Central and Southern Italy**
- **cross-selling and up-selling opportunities** from full market liberalisation and **a push for dual fuel offerings**
- commercial strategy focused on **digital channels**, **including through a new customer management platform**
- developments of the **segment and mobility** with installation of **columns** and **value-added services**
- **energy efficiency services** offer
- **Smart Comp** installation with system managed remotely through an IoT platform developed by Acea
- installation of residential **photovoltaic** and **solar thermal** systems

GENERATION

Growth of the PV portfolio to seize opportunities from the energy transition and decarbonisation process

- growth in **generation from renewable sources** to seize opportunities offered by the **decarbonisation process**, whether through the construction of **new PV plants** in industrial and agricultural areas and through M&A transactions

In line with the industrial development guidelines, **the 2020-2024 Sustainability Plan**, divided **into a governance level**, intended to consolidate the integration of sustainability into the Company's governance, **and into five operating macro-objectives**, split into **127 targets by 2024** and their KPIs, shows the **unique traits assumed by sustainability** for the Group, in the practical management of production and organisational processes and in relations with stakeholders (see dedicated boxes and charts 12 and 13).
The update to the 2020-2024 Plan, carried out with the **involvement of the organisational structures** (Parent Company Functions and Operating Companies) and taking into account the **material issues** defined by listening to stakeholders, maintaining consistency with the objectives of the **European Green Deal** and the **Agenda 2030 Sustainable Development Goals** that are relevant to Acea's businesses, brought about the definition of 125 targets and their related KPIs. **In 2021** a number of Group companies proposed **integrations to the targets** defined with the latest sustainability planning leading to the **upgrade/reformulation of 4 targets already present in the Plan** (aspects pertaining to energy efficiency, the remote control of infrastructure, etc.) and **the insertion of 2 new targets** (the installation of drinking water supply infrastructure in the territory and an important restoration project for the Sarno river's ecosystem)[35]. Therefore, **following the integrations**, **the 2020-2024 Sustainability Plan is structured**, at operating level, **into 127 targets**.
The investments envisaged in the 2020-2024 Business Plan **related to sustainability targets** totalling **€ 2.1 billion**. In 2021, **the progress of the targets**, illustrated in detail in the following section, **as well as the amount of investments made in the year** was monitored, which, as at 31/12/2021, **was around € 408 million**; on a whole, in the 2020-2021 two-year period, the Business Plan investments related to sustainability targets totalled **around € 740 million**.

35 In particular, this includes the upgrade to 2 AdF targets pertaining to energy efficiency and the reduction of energy consumption and the insertion of 1 new target on the installation of drinking water supply infrastructure (Water Kiosks); the upgrade to 1 Areti target on the remote control of the MV/LV lines and 1 Acea Innovation target relative to the installation of electric charging points in which the development of an electric mobility platform has been integrated by Acea Energia, and the insertion of 1 new GORI target on the interventions required to remove pollution from the hydrographic basin of the Sarno river, through the completion of the sewerage water system.

THE GOVERNANCE LEVEL OF THE SUSTAINABILITY PLAN 2020-2024: CROSS-CUTTING OBJECTIVES FOR INTEGRATION

Governance areas	Strategy
SUSTAINABILITY IN THE RISK ASSESSMENT	• consideration of material ESG topics in the **risk management** model; • assess **risks and impacts** on **safety and the environment** and **mitigate them**, including by adopting **certified management systems**
SUSTAINABILITY IN THE STRATEGY	• highlighting the **total value generated by the Group** with an integrated reading of economic and sustainable development
SUSTAINABILITY IN THE REMUNERATION POLICY	• enhancing the **objectives aimed at promoting sustainability impacts** by integrating them into the **performance management models**
SUSTAINABILITY CULTURE SPREAD	• involving internal and external stakeholders in the matter by disseminating the "**sustainability culture**"
SUSTAINABILITY FOR SHAREHOLDERS AND INVESTORS	• integrating financial with **ESG elements** in communications and **relations with shareholders and stakeholders**
SUSTAINABILITY IN THE REGULATION SECTOR	• identifying **sustainability topics** in the **evolving trends** of national and European **regulations**
SUSTAINABILITY IN THE MANAGEMENT OF PEOPLE	• developing an **advanced**, **collaborative labour-management relations model** that meets new social needs
SUSTAINABILITY IN PROCUREMENT	• promoting sustainability along the **supply chain**, while being mindful of the relevant best practices

THE OPERATIONAL LEVEL OF THE 2020-2024 SUSTAINABILITY PLAN: SPECIFIC FEATURES OF THE 5 MACRO-OBJECTIVES

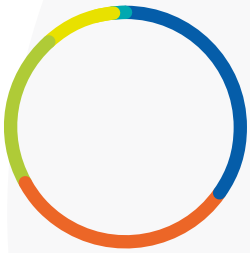
Macro objective	Strategy
PROMOTING A FOCUS ON THE CUSTOMER	• increasing the **technical and commercial quality** of the **services**,**while consolidating digital services**; • improving the **customer experience** and the **contact channels** so that they fully meet customers' needs
ENHANCING STAFF FOR THE GROUP'S GROWTH	• **training**, **employee involvement** and increasing **organisational well-being**, including the protection and promotion of **diversity** • enhancing sustainability in **performance management systems**
QUALIFYING PRESENCE IN THE REGIONS AND PROTECTING THE ENVIRONMENT	• increasing **resilience of water and electricity infrastructure** to ensure security of supply, adaptation to climate change and support for energy transition; • **limiting impacts** on the natural environment, protecting the land and biodiversity and using resources more efficiently; • streamlining and **contributing** to the **decarbonisation of the energy system**, with the increase of production from renewable sources and the consequent reduction of CO_2 emissions; • reducing the **city's** environmental **impacts** through smart green services for customers and the **development of circular economy initiatives**; • promoting sustainability along the **supply chain**, raising awareness of customers and students on sustainability issues, with a structured approach to **stakeholder involvement**
PROMOTING HEALTH AND SAFETY ALONG THE VALUE CHAIN	• **disseminating the culture of safety and prevention along the internal and external value chain**; • increasing **verification and control activities** and actions to ensure the health and safety of customers
INVESTING IN INNOVATION FOR SUSTAINABILITY	• applying **innovative technologies** for network management (digitisation, remote control, IoT) in a **smart city** perspective and in other production and organisational processes; • developing synergies in **research** and **innovation** for **knowledge sharing** as well as **project implementation**, including in association with start-ups and scientific partnerships

Chart no. 12 – The 2020-2024 Sustainability Plan in numbers

127 targets

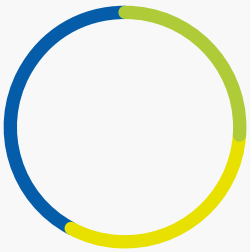
PROMOTING A FOCUS ON THE CUSTOMER	ENHANCING STAFF FOR THE GROUP'S GROWTH	QUALIFYING PRESENCE IN THE REGIONS AND PROTECTING THE ENVIRONMENT	PROMOTING HEALTH AND SAFETY ALONG THE VALUE CHAIN	INVESTING IN INNOVATION FOR SUSTAINABILITY
18 targets (14%)	15 targets (12%)	58 targets (46%)	14 targets (11%)	22 targets (17%)

€ 2.1 billion
invested from 2020-2024
related to sustainability targets



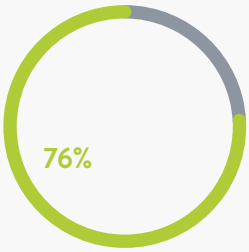
€ **723.5** million Acea Ato 2
€ **670.5** million Areti
€ **444.9** million Acea Ambiente
€ **212.0** million Acea Produzione
€ **29.3** million Acea Innovation

100% of the material topics
covered (high and medium relevance)
19 material topics

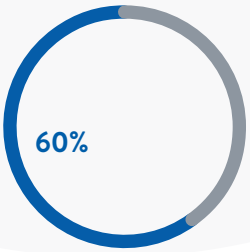


5 Environmental
6 Social
8 Governance

96/127 targets
related to the SDGs



76/127 targets
in line with the Green Deal



(16) **1.** Guaranteeing the supply of clean, economical and secure energy
(34) **2.** Mobilising the industry for a clean and circular economy
(2) **3.** Building and renovating with a focus on energy and resource efficiency
(4) **4.** Accelerating the transition to sustainable and intelligent mobility
(19) **5.** Preserving and restoring ecosystems and biodiversity
(12) **6.** Working towards "zero pollution" for a toxin-free environment

NOTE: Each target can be related to multiple material topics, SDGs and Green Deal objectives

Chart no. 13 – The sustainability strategy guidelines

127 targets

17 targets	RESILIENCE AND MODERNISATION
18 targets	CUSTOMER CARE
4 targets	CIRCULAR ECONOMY
17 targets	SUSTAINABLE WATER MANAGEMENT
3 targets	DECARBONISATION OF THE ENERGY SYSTEM
9 targets	SUSTAINABILITY ALONG THE SUPPLY CHAIN
14 targets	REDUCING THE ENVIRONMENTAL IMPACT
9 targets	SMART CITY CONTRIBUTION AND IMPACT CONTAINMENT
7 targets	INNOVATION
21 targets	CARING FOR PEOPLE
8 targets	ENGAGEMENT IN THE TERRITORY

Sustainable Growth

The **Management and Sustainability Systems Policy**[36] adopted by Acea also sets out the **principles**, **values** and **commitments** made by the Group, and is an **integral part of the Management Systems** in accordance with ISO 9001, ISO 14001, ISO 45001 and ISO 50001 (see also the section *Management Systems*). The Policy sees the following values as **fundamental elements for sustainability**:

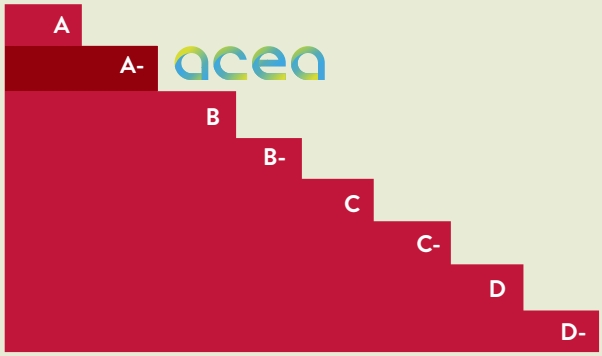
- promotion of a **culture of quality**;
- **respect** for **the environment** and **preservation of ecosystems**;
- **fighting climate change**:
- the **development of people** and **safety at workplace**;
- the **efficient management of resources**;
- the **assessment of** the **risk and the economic**, **social and environmental impacts**;
- participation in the **well-being of the community** and the development of an **ongoing dialogue with stakeholders**;
- the promotion of creativity and **technological and organisational innovation**.

The **2021** edition of the **Global Risk Report**, albeit centred around the social effects caused by the pandemic, continues to indicate **climate change** and the failure to take action to counter it as some of the most probable and highest impact risks. Acea monitors this area and the initiatives undertaken have once again received the positive assessment of the CDP (see box); furthermore, in order to expand on the analysis of the risk factors generated by climate change and their impacts on the businesses managed, the Group has concluded an initial process of alignment with the Recommendations defined by the Task Force on Climate-related Financial Disclosures – TCFD, which will also continue in 2022 (for more details see *The relations with the environment*, section *Environmental and climate risks: analyses and disclosure*).

ACEA CONFIRMED IN THE LEADERSHIP CATEGORY OF THE CARBON DISCLOSURE PROJECT – CDP

The independent organisation CDP is the main reference for investors who are interested in understanding the commitment of companies to **climate change**. The CDP promotes worldwide attention on the management of climate change risks and impacts, inviting companies to provide timely information about their governance, strategy, actions undertaken and performance. Based on the data received, each year the CDP publishes a ranking of its assessments for each organisation. In 2021 **more than 13,000 companies**, **with over 64% capitalisation of the world market**, including 1,100 public administrations, disclosed environmental data via CDP, making the CDP platform one of the richest sources of information in the world about the commitment of companies and governments to limit climate change. Again in 2021 Acea was confirmed in the **"leadership" category** of the Carbon Disclosure Project (CDP) ranking, **with a score of "A-"**. The rating (scale D-/A) is based on the assessment of areas such as the presence of targets and initiatives undertaken to reduce emissions, risk analysis and management, the assessment of financial impacts due to climate change and reporting.

- **+ 13,000 companies** from around the world responded to CDP Climate Change
- The average score for utilities is B



Leadership (A/A): implementing current best practices
Management (B/B-): taking coordinated action on climate change issues
Awareness (C/C-): knowledge of impacts on, and of, climate change issues
Disclosure (D/D-): transparent about climate change issues

For more information, go to www.cdp.net

36 The Policy, updated in November 2020, can be found on the institutional website, www.gruppo.acea.it.

THE 2020-2024 SUSTAINABILITY PLAN AND THE OPERATIONAL GOALS

The **2020-2024 Sustainability Plan**, as already mentioned, **acts on governance and operational levels**, identifying 8 cross-cutting objectives aimed at incorporating sustainability into the governance of the company and 5 macro-objectives for the Group.

The **5 operational macro objectives** are broken down into **15 frameworks for action**, **25 operational objectives and 127 objectives for 2024 and related KPIs** that allow the **progressive achievement thereof to be monitored**. Details of the Plan, the KPIs and the actions during the year are shown below; these are described briefly and where necessary described in more detail in the document. It is envisaged that **the Plan will be updated periodically**, especially at an operational level, so that consistency with changes to the management and strategic industrial guidelines of the Group is ensured.

GOVERNANCE LEVEL
THE 8 OBJECTIVES

Acea is committed to the adequate integration of sustainability in corporate governance by:

- the consideration of material ESG issues in its business risk management model; the assessment of safety and environmental risks and impacts of its activities with the aim of keeping them under control and reducing them also through the adoption of certified management systems;
- the integrated reading of economic, financial and sustainability data so as to highlight the overall value generated by the Group;
- the enhancement of corporate sustainability objectives within management performance models;
- the dissemination of a "sustainability culture" through initiatives of awareness and engagement of internal and external stakeholders;
- the integration of financial aspects with the Group's sustainability objectives and ESG (Environmental, Social, Governance) aspects in its communication and relations with shareholders and investors;
- the reading of evolutionary trends of regulations both at a national and European level with respect to issues related to sustainability in the areas the company works in;
- the development of an advanced labour-management relations model able to meet new social needs and focused on the well-being of the company and employees;
- sustainable supply chain management, implementing the best procedures in the fields of supply management and circular procurement.

OPERATING LEVEL
THE 5 MACRO-OBJECTIVES (*)

1 PROMOTING A FOCUS ON THE CUSTOMER

Improving communication with customers
- Developing web presence and digital channels in compliance with the Group's communication and positioning needs

Improving the quality of services
- Improve the sales quality of services
- Improving the technical quality of services

2 ENHANCING STAFF FOR THE GROUP'S GROWTH

Professional enhancement, training and development of skills
- Enhancing and boosting Human Capital skills
- Investing in the development and improvement of the staff assessment and recruitment system

Involving people in the Group's identity
- Boosting the level of engagement of the company population
- Defining and promoting an employer branding plan

Organisational inclusion and well-being
- Identifying and improving the organisational well-being of the entire company population
- Enhancing diversity and promoting inclusion

3 QUALIFYING PRESENCE IN THE REGIONS AND PROTECTING THE ENVIRONMENT

Reducing the environmental impact
- Planning and implementing actions aimed at fighting climate change (mitigation and adaptation)
- Promoting an efficient use of resources, thus facilitating circular economy
- Taking initiatives to protect the territory and limit impacts on the natural environment
- Enhancing certified environmental and energy management systems

Improving sustainability along the supply chain
- Implementing sustainability logics in procurement procedures

Contributing to the well-being of the community
- Promoting activities with positive impact on the collectivity and on the territories where the company works

Consolidating relations with the territory
- Contributing to create awareness on social and environmental matters
- Facilitating the engagement of stakeholders in company projects with the aim of creating shared values

4 PROMOTING HEALTH AND SAFETY ALONG THE VALUE CHAIN

Health and safety at workplace for Group workers
- Promoting a culture of health and safety at workplace

Health and safety at workplace for contractors and subcontractors
- Creating awareness among contractors on health and safety at workplace

Health and safety of the communities with which the Group operates
- Ensuring the health and safety of the customers of the reference territory for the various services provided

5 INVESTING IN INNOVATION FOR SUSTAINABILITY

Organisational innovation
- Promoting "smart" processes and working methods

Technological and process innovation
- Promoting the resilience of the urban territory and innovation from a smart city perspective
- Implementing remote control systems and remote interventions
- Applying new technologies in leak detection and other operations

Creating and promoting knowledge
- Developing research projects in partnership with other relevant departments

(*) Each objective is divided into multiple targets and KPIs in the detailed Plan to which reference is made.

THE DETAILED OBJECTIVES OF THE 2020-2024 SUSTAINABILITY PLAN AND THE ACTIONS OF THE YEAR

MACRO-OBJECTIVE NO. 1 PROMOTING A FOCUS ON THE CUSTOMER

OPERATIONAL OBJECTIVES	TARGET FOR 2024 - FUNCTIONS/OWNER COMPANIES OF THE PROCESS	KEY PERFORMANCE INDICATORS	2021 ACTIONS
SCOPE OF ACTION 1: IMPROVING COMMUNICATION WITH CUSTOMERS			
Developing web presence and digital channels in compliance with the Group's communication and positioning needs	Ensuring alignment between the structure of the website and corporate communication needs in terms of effectiveness, transparency and quality of content, recognised through prominent positions in sector rankings. **ACEA SpA – COMMUNICATION (digital and corporate media)**	Acknowledgements in sector analyses/rankings during the year: Yes/No= **Yes**	Through the Group website, Acea described the main projects and initiatives, in the stories and news sections, and the developments related to the services provided, as well as content related to the Covid-19 health emergency. Acea was included in the top 10 of Webranking Italy by Lundquist, coming eighth place (two places higher than in 2020) and joining the category of companies with "5 stars". The Acea Innovation mini-site was also put online.
	Creation of a website for Areti with effective, useful information intended for users of electricity distribution (intermediate target for 2021). **ACEA SpA – COMMUNICATION (digital and corporate media)**	Site realisation: Yes/No= **Yes** **Target for 2021 achieved**	Carried out activities for the creation of the site: the design of the content strategy, the implementation of a new look and feel in line with the brand, the definition of clear and immediate structure for fluid and intuitive browsing intended to promote interaction with the customer and the optimisation of the reserved area. The site is kept constantly updated.
	Consolidation of presence on social channels with increased brand awareness through effective and engaging communication. **ACEA SpA – COMMUNICATION (digital and corporate media)**	No. of followers of social channels reporting year > no. of followers of social channels reporting year -1= **77,001>60,733**	Publication of content, varied for each channel, aimed at highlighting Acea's commitment to the territory, to sustainability topics, innovation and people development, in particular in the context of the Covid-19 health emergency. Emphasis was placed on events and the main sponsorships through ad hoc editorial plans and influencer marketing projects. Also launched the operating management of the Acea Energia social channels, in line with the commercial strategy and the brand proposition, and Areti's LinkedIn page.
	Encourage customers to use digital channels and reach, every year, 25% of Acea Energia's consumer and micro-business customer base with at least 1 access per year to the reserved area. **ACEA ENERGIA**	Customers who have logged in at least 1 time in the last 12 months/"consumer" and "micro-business" customer base= **400,428/1,035,227= 38.7% (42.3% ML and 36.4% SMT)**	In 2021, Acea Energia upgraded its digital channels as a tool for improvement, simplification and optimisation of the customer experience, introducing the new CRM and expanding the functionalities available to the customer in the dedicated area. The Acea e-mobility app was also launched, dedicated to the electric car charging market and introduced the digital consultant service which supports customers via video call.
	Creating at least one communication campaign per year intended for customers regarding the use of the MyAcea and online payment of bills app (reducing the impact of producing paper bills, reducing times, reducing movements, etc.). **ACEA SpA – COMMUNICATION (communication planning & portfolio management)**	Implementation of a communication campaign: Yes/No= **Yes**	In early 2021, the campaign to promote Acea Ato 2 and Acea Ato 5's digital service point and the new MyAcea services continued. In July, the campaign for the new interactive digital billing for those Companies was featured in the press, radio and online.
SCOPE OF ACTION 2: IMPROVING THE QUALITY OF SERVICES			
Improve the sales quality of services	Improving the real time measurement of the customer experience through the Net Promoter Score (NPS) based on indicators of courtesy/professionalism and perceived service quality. NPS annual target: courtesy/professionalism indicator > 70%; perceived service quality indicator > 50%. **ACEA ENERGIA**	NPS courtesy/professionalism indicator= **81.2% (average between the two markets; in detail SMT 86.4% and ML 77.7%)** NPS perceived service quality indicator= **60.6 % (average between the two markets; in detail SMT 71.6% and ML 53.1%)**	Optimised the contact channels and created a dashboard for the continuous monitoring of contact KPIs, to share performances with internal operations management and with the external providers that oversee the service. The final result, in overall terms, represented a 2% increase in Service Levels.

	Ensure access to the digital service point within 5 working days of booking. **ACEA ATO 2 and ACEA ATO 5**	Average waiting days for branch appointment (< of 5 days) = **Acea Ato 2: 3 days**; **Acea Ato 5: 4.8 days**	During 2021 the Digital Service Point was consolidated. Acea Ato 5 carried out various information campaigns about the service point and Acea Ato 2 launched the first 6 Waidy Points, at 4 territorial service points. These are digital workstations where less digitalised customers can manage any business, via video call, with the support of a digital facilitator.
Improve the sales quality of services	Improving the quality of metering systems by replacing 21,000 meters per year. **ACEA ATO 5**	No. of meters replaced/No. of meters to be replaced = **27,021/21,000**	Over 27,000 meters were replaced, giving priority to the oldest meters.
	Replacing some 317,000 meters to improve the quality of measurement systems. **GORI**	No. of meters replaced/No. of meters to be replaced = **67,688/317,000**, **i.e. 21% (54,431 in 2020 and 13,257 in 2021)**	In late 2021, around 13,250 meters were replaced; the slowdown in replacement was influenced by the rescheduling of a number of projects.
	Improvement in the management of appointments with the end customer for technical/commercial services and reduction of unfulfilled appointments by 20% (2019 figure: 11%), with the introduction of new operating methods (single freephone number and additional services) that facilitate direct and personalised contact. **ARETI**	Missed appointments/total appointments reporting year < missed appointments/total appointments year 2019 = **2,599/26,863 i.e. 9.68% < 11.45% in 2019 (reduction of 15.5%)**	Launched the new estimates process with the establishment of dedicated dispatchers and the availability of jolly resources, the internalisation of the report that reports off-standard appointments. By virtue of the changes made to the process, an ad hoc training refresher was carried out for the estimators.
	Implementing in the design of strategic water infrastructure works (Marcio - Peschiera Aqueducts) of devices, criteria, recognised protocols for the maximization of benefits in sustainable terms (benefits for the protection of the territory, landscape, economic development). Getting Envision certification on at least one strategic works project. **ACEA ATO 2 and ACEA ELABORI**	Preliminary assessment of the Marcio and Peschiera aqueducts projects with positive results: **Yes/No= Yes on Peschiera Aqueduct (in 2020)** Envision certification obtained on the design of at least one strategic work (Marcio and/or Peschiera Aqueducts) = **No**	The project activities intended to obtain the environmental authorisations and the achievement of the Envision Certification continued on the new upper section of the Peschiera Aqueduct. For the Marcio Aqueduct, the Sustainability Report was prepared in compliance with Regulation (EU) 852/2020 on the European Taxonomy and with the regulations of reference of the NRRP. For both infrastructures, the prospective indications for sustainable engineering and for the application of the Minimum Environmental Criteria (MEC) are being studied.
	Increase the Group's operational capacity in the execution of works (from design to construction), implementing the contracts managed by Acea Elabori in EPC Contract up to amounts > € 55M to 2024, with the consequent improvement in the quality of works (centralised coordination of the entire process, reduction in time, optimisation of costs, standardisation of processes). **ACEA ELABORI**	Obtaining SOA certification for Acea Elabori: Yes/No= **Yes** Annual amount of construction activities managed under EPC Contract = **€ 6 M**	16 tender contracts and 25 tenders for the supply of goods/services were signed. Construction/renovation works launched on 7 projects (treatment plants of Acea Ato 2).
Improving the technical quality of services	Increase in treatment capacity in 13 municipalities by building 8 new treatment plants and upgrading 5 existing ones: +6.9 times more population equivalent (PE) treated than in 2019. **ACEA ATO 5**	Purification potential in PE/ purification potential in PE in 2019 (target scope) = **10,800/8,000**, **equal to an increase of +1.4 times PE**	Completed the works on the Anagni San Bartolomeo treatment plants and those at Roccasecca Scalo are ongoing; works being launched on the plant in the Municipality of Monte San Giovanni Campano-Colli; for another plant, authorisations from the competent bodies are pending (Municipality of Villa Latina).
	Increase in the capacity and efficiency of Acea Ato 2's purification plants through upgrades at 10 plants (+39% of population equivalent treated compared to the 2019 figure, equal to 164,175 PE) and the decommissioning/centralisation of 36 treatment plants, which will affect approximately 188,000 PE. **ACEA ATO 2**	Purification potential in PE/ purification potential in PE in 2019 (target scope) = **170,171/164,175**, **equal to an increase of 3.7%** Decommissioned/centralised treatment plants= **13 (7 in 2020 and 6 in 2021)** PEs affected by the centralisation of treatment plants= **42,270 (15,730 in 2020 and 26,540 in 2021)**	Works to decommission 6 treatment plants were completed – Valle Focicchia (Rocca di Papa), Guado Tufo (Sacrofano), La Botte (Guidonia Montecelio), Lucrezia Romana (Ciampino), Grotte Portella (Frascati) and Valle Vergine (Rocca di Papa) – and upgrade activities are ongoing on 10 target plants.
	To expand the treatment capacity and cover the sewage service through 21 interventions on the plants (17 to expand the treatment capacity and 4 to cover the service): + 6% of population equivalent treated and + 6% of users covered by the purification service compared to 2019 data (equivalent to 314,422 PE treated and 184,882 users covered by the service, respectively). **AdF**	Purification capacity in PE/ purification capacity in PE in 2019 % users covered by sewage service/% users covered by sewage service 2019	Project planning continued during the year leading to the conclusion of 6 final designs and one executive plan; other reports are being prepared or completed. Launched works on the Montiano plant in the Municipality of Magliano in Tuscany.

	Replacing 40 of the current 361 thermal substations serving the remote-heating network (11%), for greater service efficiency and service reliability. **ACEA PRODUZIONE**	No. of thermal substations replaced/total district heating substations= **35/361**, **i.e. 10% (of which 30 in 2020)**	5 obsolete thermal exchange substations were restored and replaced with an equal number of pre-assembled systems.
Improving the technical quality of services	Replacement/installation of 18 valves on the district heating distribution network to perform out-of-service interventions, thus reducing the impact on serviced utilities. **ACEA PRODUZIONE**	No. of valves replaced or installed/No. valves to be replaced or installed= **12/18 (of which 8 in 2020)**	Replaced 4 shut-off valves on the primary network of the district heating distribution network with ball valves equipped with electric actuator.
	Compared to 2019 base levels, reducing the troubleshooting times of Public Lighting systems in line with the zonal prioritisation defined considering the relevance of the area (e.g. aggregation sites): critical - 6 h; high - 15 h; average - 19 h; low - 23 h. Base levels measured in 2019 by relevance: CRITICAL - 1 day and 12 h, HIGH - 1 day and 7 h, MEDIUM - 1 day and 11 h and LOW - 1 day and 11 h. **ARETI (Public Lighting)**	CRITICAL relevance= **1 day and 4 h** HIGH relevance= **1 day and 4 h** MEDIUM relevance= **1 day and 2 h** LOW relevance= **1 day and 4 h**	Revised the fault management processes and implemented the intervention prioritisation system according to the risk indexes that make it possible to "label" the plants with a high, medium or low critical relevance.

MACRO-OBJECTIVE NO. 2 EMPOWERING PEOPLE FOR THE GROUP'S GROWTH

OPERATIONAL OBJECTIVES	TARGET FOR 2024 - FUNCTIONS/OWNER COMPANIES OF THE PROCESS	KEY PERFORMANCE INDICATORS	2021 ACTIONS
SCOPE OF ACTION 1: PROFESSIONAL ENHANCEMENT, TRAINING AND DEVELOPMENT OF SKILLS			
	Unroll at least one training initiative per year on sustainability issues (e.g. circular economy, SDGs, Green Deal) aimed at 100% of the company population, with the aim of increasing the number of people involved each year. **ACEA SpA – HUMAN RESOURCES (Talent acquisition & people development)**	No. initiatives activated/initiatives to be activated per year = **3/1** No. of employees involved reporting year > no. of employees involved reporting year - 1= **3,249 > 70 in the first year**	Concluded the first course and launched the second edition of "Agire Sostenibile" [Act Sustainable] intended to disseminate the culture of sustainability, which involved 20 Sustainability Ambassadors and another 63 employees. Launched the "Azienda 2030" e-learning course on the UN sustainable development goals (Agenda 2030).
Enhancing and boosting Human Capital skills	Raise the level of digitisation through the implementation of at least 1 awareness/ skills orientation campaign per year targeting 100% of the company's population, with the aim of involving at least 10% of employees per year (about 500 employees arc Plan). **ACEA SpA – HUMAN RESOURCES (Talent acquisition & people development)**	No. of campaigns run= **1** No. of persons involved/ total persons informed = **6,466/6,466**	The first edition of "Accademia digitale" [Digital academy] training concluded, which involved 12 training courses and the participation of around 1,200 employees. Carried out a new survey to assess the evolution of the Group's digital mindset, which involved around 6,000 people, and new digital courses are being designed.
	Support Active Ageing policies by carrying out at least two initiatives a year that stimulate the transfer and enhancement of skills between the different generations in the company, involving a greater number of people each year than the previous year. **ACEA SpA – HUMAN RESOURCES (Talent acquisition & people development)**	No. of initiatives to be launched/total initiatives launched= **3/2** No. of people involved reporting year > no. of people involved reporting year – 1= **590 > 434**	In addition to providing training on digitalisation, among the vocational courses centred around culture and digital evolution, coaching and mentoring courses are being created to transfer skills from people with more experience (mentors) to "students" (mentees).
Investing in the development and improvement of the staff assessment and recruitment system	Promote in external selection processes the use of tools dedicated to a structured evaluation of the candidate (tests, screening through artificial intelligence and machine learning, virtual tests) enhancing talent and promoting inclusion. **ACEA SpA – HUMAN RESOURCES (Talent acquisition & people development)**	No. of external selection processes activated through dedicated tools/total external selection processes activated = **113/113**	In line with the new personnel selection procedure, Acea used various channels and tools for selection such as participation in Career Days (8 in 2021) and in challenges. Upgraded selection support tools, such as digital mindset tests, personality tests related to the Acea leadership model and video interviews.
	Progressive extension of objectives aimed at promoting sustainability impacts to the entire population with respect to MBO assessed with performance management systems. **ACEA SpA – HUMAN RESOURCES (Talent acquisition & people development)**	No. of resources with sustainability target in MBO/total resources in MBO = composite target: **= 495/495**, **equal to 100%**	In the MBO incentive system, a composite sustainability objective with 4 parameters was placed alongside the Group's economic objectives. A composite sustainability objective was also inserted into the Long-Term Incentive Plan.

SCOPE OF ACTION 2: INVOLVING PEOPLE IN THE GROUP'S IDENTITY

Boosting the level of engagement of the company population	Ensuring that 100% of the company population is informed of the strategic choices, mission and policies of the Group, and increasing the feeling of aggregation and belonging to the Group, implementing at least 6 initiatives/year to this end. **ACEA SpA – COMMUNICATION** **(Media relations and internal communications)**	% of the company population reached by the information= **100%** No. of initiatives carried out during the year/no. of initiatives to be carried out= **at least 25/6**	Numerous initiatives were organised; for example, *Connessi con Acea* [Connected with Acea] and Acea Green Cup, both related to sustainability. Webinars were organised on prevention, health and well-being, welfare; the campaign on employee serological tests, Covid-19 vaccination and the launch of the vaccination hub continued.
	Increase the sense of belonging to the company by carrying out at least 2 initiatives per year with a social impact on the territory involving the Group employees concerned and informing 100% of the employees about these initiatives. **ACEA SpA – HUMAN RESOURCES** **(Talent acquisition & people development)**	No. of initiatives launched/ total initiatives to be launched= **2/2**	Acea joined the Inspirational Talks initiative, with the involvement of 15 Role Models, who bring their personal experience to schools and encourage female students to embark on STEM training courses; the initiative was described in a story on the website. The *GenerAzione Digitale* [Digital GenerAction] project was also carried out, involving 400 students.
Defining and promoting an employer branding plan	Implement at least one initiative per year, identified through internal surveys and aimed at strengthening the employer brand identity, involving 100% of the company population. **ACEA SpA – HUMAN RESOURCES** **(Talent acquisition & people development)**	Implementation of internal investigations: Yes/No= **Yes** No. of initiatives launched/no. of initiatives to be launched= **1/1** No. of employees who responded to surveys and/ or joined initiatives/no. of employees involved = **1,889/6,466**	Following the analysis of the results of the Diversity & Inclusion survey, the Corporate Family Responsibility project was launched, centred around the role of families and caregivers, with a webinar dedicated to improving intergenerational relationships, attended by over 500 people.

SCOPE OF ACTION 3: ORGANISATIONAL INCLUSION AND WELL-BEING

Identifying and improving the organisational well-being of the entire company population	Designing and developing a training course related to organisational well-being, also aimed at mitigating any effects of work-related stress (Legislative Decree 81/01), addressed to a significant sample of Acea SpA employees, equal to about 10% of the Acea SpA corporate population. **Acea SpA – HUMAN RESOURCES** **(Workplace safety)**	Designing the training course: Yes/No= **Yes** No. trained employees/total employees (Acea SpA target perimeter)= **100/703**, **i.e. 14%** **Target for 2024 achieved**	The "I Care per il benessere individuale e professionale" [I Care about individual and professional well-being] project aimed at female unit managers was carried out; "Azioni e reazioni" [Actions and reactions] project aimed at men took place; "WE-Care", an evolution of the two previous projects in preparation for launching the training phase aimed at professionals.
	Involve the entire company population in at least 2 information initiatives, also envisaging periodic follow-ups (surveys) and/or prevention campaigns aimed at promoting primary and secondary prevention, correct lifestyles and psychophysical well-being. **ACEA SpA – HUMAN RESOURCES** **(Talent acquisition & people development)**	No. information actions with periodic follow-up (surveys) and/or prevention campaigns carried out/No. information actions and/or prevention campaigns to be carried out = **3/2** No. of participating employees /total company population= **1,901(*)/6,466** **(*) the figure may include employees who took part in several initiatives**	3 initiatives were carried out: • the wellness programme, to promote mental and physical well-being; • "Insieme per la parità di genere e contro la violenza sulle donne" [Together for gender equality and against violence against women], an awareness campaign via webinars, short videos, a listening service and a video; • the "Previeni con Acea" [Prevent with Acea] campaign formed of 2 webinars in collaboration with the Fondazione Policlinico Gemelli and the Bambin Gesù Hospital and 3 days dedicated to free screening for employees.
	Improving welfare services in the area of health care and supplementary pensions and developing at least 2 information campaigns per year aimed at 100% of employees to increase awareness of the services offered by the company. **ACEA SpA – HUMAN RESOURCES** **(Talent acquisition & people development)**	No. of information campaigns carried out/No. of information campaigns to be carried out = **3/2** No. of employees participating in welfare services/ company population = **1,449(*)/6,466** **(*) the figure may include employees who took part in several initiatives**	An information campaign was carried out to promote the importance of supplementary pensions as part of the Welfare Plan, a number of telemedicine services, international telepharmacy services and conventions for dental check-ups and treatments were integrated. In addition, a specific communication campaign was launched, jointly with the CRC, on telemedicine and medical check-ups.
	Improving work-life balance for parents and care givers by promoting 3 initiatives per year to support employees with children and elderly parents. **ACEA SpA – HUMAN RESOURCES** **(Talent acquisition & people development)**	No. of initiatives launched/ total initiatives to be launched = **4/3**	Following initiatives launched: "Taxi Solidale" [Solidarity Taxi] to support the community where the company operates; "Acea MyCamp", the summer camp for children and young people aged between 6 to 14 years; "Orientiamoci" [Let's guide ourselves], the webinar for guiding future professional decisions, aimed at the parents of young people aged between 17 and 22 years and "Mi prendo cura di te" [I'll take care of you], the assistance and treatment service for family members, to support the management of education and/or care taking needs.

Enhancing diversity and promoting inclusion	Inform 100% of employees about 2 initiatives/year aimed at raising awareness of diversity and inclusion issues. **ACEA SpA – HUMAN RESOURCES (Talent acquisition & people development)**	No. of informed employees/no. of employees to be informed= **5,149/6,466** No. of initiatives launched/total initiatives to be launched = **3/2**	A survey was launched on D&I, which received responses from around 1,900 employees. An ad hoc intranet section on diversity and inclusion was published. Acea took part in the Inclusive Job Day, the career day dedicated to graduates from protected categories, hiring one candidate.
	Designing and developing a training action consisting of in-depth studies on specific diversity-related topics. The aim of the project is to share knowledge aimed at the cultural growth of resources. **ACEA SpA – HUMAN RESOURCES (Talent acquisition & people development)**	Training action planning: Yes/No= **Yes** No. of employees involved in training project/no. of employees to be involved= **5,190/6,466, of which 304 participants in the first training event**.	Following the D&I survey, an Unconscious Bias course was launched, aimed at increasing the awareness of managers and promoting an inclusive management of work relations for team members. The first online event of the course looked at cognitive bias, widespread prejudice and the impact that these topics have on organisations.
	Ensure supervision of the process of integration and reintegration of sensitive resources with congenital and acquired disabilities in the company. **Acea SpA – HUMAN RESOURCES (Workplace safety)**	Cases handled by the disability unit: Yes/No= **No**	To protect sensitive resources, due to the particular situation of the pandemic, their access to work premises was not authorised. Acea SpA offered the training course "La Gestione delle Emergenze – Conoscenze e Consapevolezza" [Emergency Management – Knowledge and Awareness] which addressed the topic of "Emergency and Disabilities" in relation to adequate assistance for people with special needs. The 232 participants were taught the most efficient evacuation assistance measures for the various "categories" of disabilities (motor, sensory, cognitive), while raising their awareness of temporary disabilities.

MACRO-OBJECTIVE NO. 3 QUALIFYING PRESENCE IN THE REGIONS AND PROTECTING THE ENVIRONMENT

OPERATIONAL OBJECTIVES	TARGET FOR 2024 - FUNCTIONS/OWNER COMPANIES OF THE PROCESS	KEY PERFORMANCE INDICATORS	2021 ACTIONS
SCOPE OF ACTION 1: REDUCING THE ENVIRONMENTAL IMPACT			
Planning and implementing actions aimed at fighting climate change (mitigation and adaptation)	Acquisition/construction of photovoltaic plants for a total of 747 MW of installed power with consequent expected reduction of the emission intensity index of plants managed by Acea Produzione up to 40 g CO_2/kWh (-55% compared to 89 g CO_2/kWh in 2019). **ACEA PRODUZIONE**	MW installed/MW to be installed= **72.5 MW/747** gCO_2/kWh produced (and percentage reduction compared to 2019)= **83 gCO_2/kWh (- 6.7%)**	Purchased 4.5 MW and built another 16 MW of photovoltaic plants, reaching 72.5 MW of installed power, which allowed for a decrease in the emission intensity index of Acea Produzione and savings of around 42,000 tonnes of CO_2.
	Reducing energy (electricity and gas) consumption of the company headquarters and other offices through energy efficiency measures with expected savings of over 900 MWh (232 MWh for the headquarters and 700 MWh for the Data Center) compared to pre-construction consumption (equal to 3,320 MWh/y for the headquarters and 4,115 MWh/y for the Data Center) and, for the company headquarters, savings of 13,800 Sm^3 compared to pre-construction consumption (equal to 118,500 Sm^3/y). **ACEA SpA (Energy Manager)**	MWh pre-construction – MWh post-construction= **7,435 - 6,667 = 768 MWh saved (*)** Sm^3 pre-construction – Sm^3 post-construction= **118,500 - 121,354 = -2,854 (*)** **(*) estimated figures**	Completed a number of projects in the central company office such as the replacement of window fixtures in the stairwell, the replacement of light fixtures with LED technology in part of the same office and the modernisation of the lift motors. During the year, the projects allowed for increased energy efficiency but no reduction of gas consumption.
	Implementing energy leakage reduction interventions on the grid (voltage change, low-leakage transformers, etc.) and other efficiency enhancement interventions that will enable achieving around 8,500 MWh energy savings, around 2,677 tonnes of reduction of CO_2 emissions and saving around 1,589 TOE over the course of the Plan. **ARETI** **NOTE: the target has been revised in light of the reduction in consumption in both 2020 and 2021 following the pandemic**	MWh saved/MWh net distributed= **1,127 MWh saved/9,206,108 (*) (for a total 2,897 MWh saved of which 1,770 in 2020)** t of CO_2 not emitted= **1,043 (637 in 2020 and 406 in 2021) (*) (**)** TOE saved= **542 (331 in 2020 and 211 in 2021) (*)** (*) the 2021 figures are estimated; the figures for 2020 have been restated after the consolidation (**) calculation made with the 2019 location-based conversion factor, the same one used to define the target	The main energy efficiency measures carried out in 2021 concerned: the installation of 257 transformers with very low leaks and the upgrading of approximately 23 km of the grid from 8.4 to 20 kV.

	Reduction by around 200 tonnes of CO_2 emissions through vehicle fleet renewal with the introduction of electric cars. **ARETI**	t of CO_2 not emitted= **31.8 (5.2 in 2020 and 26.6 in 2021) (*)** (*) value net of energy consumed, calculated with the 2019 location-based conversion factor, the same one used to define the target	Increased the electric fleet assigned to 24h operating personnel and consolidated the car sharing of electric vans (40 in circulation in late 2021).
	Increasing the resilience of the electrical system through maintenance/network development projects with a consequent reduction of the intervention risk index (IRI) by 40% and the involvement of approximately 2,600 secondary substations by 2022. **ARETI**	No. of substations involved in the interventions= **1,734 (635 in 2020 and 1,099 in 2021)** Change in the annual percentage of the IRI (post-intervention value/pre-intervention value)= **- 24%, i.e. - 46% accumulated with the value from 2020 (*)** (*) ratio between the change in the IRI associated with the projects concluded in 2020-2021 included in the Resilience Plan (presented to ARERA in June 2021) and the pre-intervention IRI on the network involved	Completed numerous interventions to improve the resilience of the grid on 26 lines due to the critical factor flooding and 87 lines due to the critical factor heat waves, for a total of almost 1,100 substations involved.
	Developing biogas cogeneration (14,600 MWh of energy generated from biogas/year) in 3 compost plants, with consequent increase in green energy produced, and converting the Aprilia plant for the production of biomethane. **ACEA AMBIENTE**	MWh/year from renewable sources of biogas = **31,389 MWh** Conversion of Aprilia Plant: Yes/No= **No**	The Orvieto, Monterotondo Marittimo and Aprilia plants, the latter after the completion of testing, produced a total of around 31 GWh of electricity from biogas. For the Aprilia plant, planning is continuing on the upgrade intended for the production of biomethane.
Planning and implementing actions aimed at fighting climate change (mitigation and adaptation)	Increasing the resilience of the aqueduct system serving Rome and the Metropolitan City through new strategic works on the Peschiera and Marcio Aqueducts: achievement of 28% progress of the works on the Peschiera Aqueduct and completion (100%) of the authorisation phase for the works on the Marcio Aqueduct. **ACEA ATO 2**	% of progress of Peschiera Aqueduct construction work= **0%** % of progress of Marcio Aqueduct design/authorisation phase= **60%**	For both works, the Government Extraordinary Commissioner has been appointed. For the Peschiera Aqueduct, activities for the design integration are ongoing, in line with Italian Decree Law no. 77/2021 on the Governance of the NRRP; for Marcio, the reports for the technical and economic feasibility project were completed according to the same regulations. Concluded for Peschiera and launched for Marcio the tenders for the excavation earth and rocks, which must occur according to sustainability criteria.
	Designing and constructing 11 strategic works in order to increase the water supply safety and the resilience of the aqueduct system serving ATO 2 Central Latium and the surrounding OTAs. **ACEA ATO 2**	No. of works initiated: **1**	Completed at various design levels, the planning reports for 9 works; 3 of these received funding as part of the National Recovery and Resilience Plan (NRRP). Launched works for the restoration and renovation of the Monte Mario Water Centre.
	Developing a quality-quantity assessment programme for at least 60% of the sewerage system serving the City of Rome to orient actions and mitigate the effects of parasitic water/rainwater and improving the resilience of systems to exceptional weather events. **ACEA ATO 2**	km verified sewerage system/km total managed sewerage system= **842/2,646, equal to approximately 32% (of which 271 in 2020)**	Completed the study of hazardous substances at the Rome North treatment plant and the monitoring of the Tiber collectors at the Rome South treatment plant. Installed meters at Rome North, carried out the measurement campaign to analyse the sewage and finalised the study of parasitic waters in the basin of the same treatment plant.
	Defining an annual water supply plan to cover 10 Municipalities (equal to 48% of inhabitants served) which includes climate and regional development predictions in order to identify needs more quickly and improve the service: maximum difference between the volume actually supplied and the volume predicted by the model less than 30%. **AdF**	No. of municipalities covered by the water supply plan= **2** % of inhabitants served covered by the water supply plan/inhabitants served 2019= **22,382/386,132, equal to 5.8%** Water supplied in the Municipalities within the scope of the Plan (Mm^3)/ requirements identified thanks to the prediction models (Mm^3)	Tools, in testing and preproduction, were defined for the development of the Plan: a monthly supply model for the municipality, classed by categories of users; a rainfall and source data monitoring dashboard; a remote data reading dashboard for users for the consumption curves and a model for forecasting flows released.

	Contributing to the decarbonisation of the energy system through upgrades to the anaerobic digestion sections of the treatment plants in Rome North and Rome East, necessary for the transformation of the biogas produced on site into biomethane for subsequent feeding into the gas network of 1 MSm3 of biomethane. **ACEA ATO 2**	% of progress of upgrading works in Rome North and Rome East= **50%** Sm3 of biomethane fed into the network	Completed the design of the biogas to biomethane upgrading plant and the interconnection for feeding into the network. The project was reviewed by the Fire Department, which is expected to issue the Fire Prevention Certificate.
	Increasing efficiency of the Company's electricity consumption through the completion of management and structural interventions in the integrated water service plants, with expected increased energy efficiency equal to 12 GWh, 5% of which certified by Energy Efficiency Certificates (white certificates). **ACEA ATO 2**	% of target achieved= **36%, equal to around 4.4 GWh (1.9 in 2020 and 2.5 in 2021)** GWh certified EEC/GWh total greater efficiency	Concluded 5 energy efficiency improvement projects (replacement of inverters at the Torrenova water centre, the control panels at the Spinaceto water centre, exchange of diffusers and installation of screw blowers in two treatment plants). The energy efficiency data includes the estimation of the electricity consumption avoided thanks to the recovery of water losses in Rome.
	Overall 2% reduction in total electricity consumption by Acea Ato 5 (2019 figure: 77,707 MWh) through greater efficiency of 10 plants related to the water network and 1 to the water treatment network. **ACEA ATO 5**	kWh saved estimated from efficiency improvement/ consumption 2019= **867,263/77,707,000, equal to 1.12% (410,600 in 2020 and 456, 663 in 2021)**	New pumps were installed on the Campoli Appennino Carpello and Cassino Appia wells.
Planning and implementing actions aimed at fighting climate change (mitigation and adaptation)	Increasing customer awareness of the sustainability of electricity consumption through specific initiatives aimed at promoting and increasing the purchase of "green" energy. **ACEA ENERGIA**	Awareness-raising activities: Yes/No= **Yes** MWh of green energy sold to customers on the free market (reporting year) > MWh of green energy sold to customers on the free market (previous year)= **2,300,000 > 1,197,508 (*)** (*) the 2021 figure is estimated; the 2020 figure was rectified following consolidation	Since June 2021, Acea Energia has offered its new domestic and SME customers the 100% ECO offer, which envisages the supply of electricity certified with a "guarantee of origin" and gas with emissions that are offset by purchasing VER (Verified Emission Reduction) certified carbon credits.
	Reducing the consumption of primary energy sources by business customers through the manufacture of combined electrical and thermal energy production plants for a total electrical power of 6 MW and expected savings of approximately 1,500 TOE/year. **ECOGENA**	MW installed TOE saved	Closed one contract for the construction of a 2 MW cogeneration plant; presented various offers to potential customers for around 14 MW of installed power between cogeneration and trigeneration plants. Scouting activities continued.
	Maintaining full use of "green" energy to meet the internal electricity needs of the main Group Companies, equal to around 400,000 MWh/year and over 140,000 tonnes of CO_2/year avoided. **ACEA ENERGY and ACEA ENERGY MANAGEMENT**	MWh (internal consumption) supplied with green energy= **420,196 (*)** t CO_2 avoided= **151,271 (*)(**)** (*) estimated figures; (**) the calculation was made with the 2019 location-based conversion factor, the same one used to define the target	For their consumption, the main companies of the Group procured GO green energy for a total of around 420 GWh (equivalent to around 151 thousand tonnes of CO_2 avoided).
	Carrying out energy efficiency improvements at the "Saltatoi" and "Luco" water pumping stations, which are particularly energy intensive, with the aim of reducing the specific consumption of electricity by 30% and 4% respectively compared to the pre-construction consumption in 2019 (Saltatoi 1.92 kWh/m3; Luco 1.28 kWh/m3). **AdF**	Consumption of kWh/m^3 in reporting year /consumption of kWh/m^3 pre-construction at Saltatoi plant (from 2022) Consumption of kWh/m^3 in reporting year /consumption of kWh/m^3 pre-construction at Luco plant (from 2023)	Efficiency improvement works were completed at the Saltatoi plant and monitoring began of the EnPI [kWh/m^3] post-intervention indicator. Prepared the executive plan for the works on the "Luco" pumping station.
	Design of a quali-quantitative monitoring network of the main local aquifers, hydrogeological analysis, measurements and physical modelling of them and installation of 5 flow gauges, aimed at sustainable resource management and improved prediction of deficits due to climatic variations. **GORI**	% of progress of network design= **100%** % of progress of aquifer hydrogeological analysis, measurements and physical modelling= **50%** No. of flow gauges installed/ no. of flow gauges to be installed = **5/5**	Following the design of the monitoring network, the piezometers were installed to measure the water levels upstream and downstream of the collection infrastructure, using the gauge readings in the ongoing hydrogeological and modelling analyses with the support of the Department of Earth Sciences, Environment and Resources of the Federico II University of Naples.

	Reducing lost volumes of water by 27% compared to 2019 (2019 figure: 308.5 Mm^3 in lost volume) including through the installation of 2,500 pressure and flow gauges for remote monitoring of the water districts. **ACEA ATO 2**	% reduction in lost volume of water compared to the 2019 value = **13.8%**, **reaching 266.1 Mm^3 of lost volume (*) (**)** No. of pressure and flow gauges installed= **995 (354 in 2020 and 641 in 2021) (*)** (*) estimated figures (**) the 2019 baseline value has been updated according to ARERA indications received in 2021 on the calculation scope of the water balance	District planning completed for 3,049 km of water network and installed 641 pressure and flow gauges; the actions to counter abusive practices allowed for the administrative regularisation of over 1,700 users
	Reducing lost volumes of water by 29.5% compared to 2019 (2019 figure: 92.8 Mm^3 in lost volume). **ACEA ATO 5**	% reduction in lost volume of water compared to the 2019 value= **17%**, **reaching 77.1 Mm^3 of lost volume (*)** (*) estimated figures	District planning completed in 9 Municipalities, completed efficiency improvements in another 18 and inspected 137 km of supply network.
	Reduction in lost volumes of water by around 26% compared to 2019 (2019 figure: 27.4 Mm^3 in lost volume) through district planning interventions and systematic water leak searches. **AdF**	% reduction in lost volume of water compared to the 2019 value = **13%**, **reaching 23.8 Mm^3 of lost volume (*)** (*) estimated figures	Performed works on over 300 km of network for the creation of new remote-controlled water districts; installed or replaced meters to identify water losses and replaced user meters; inspected around 1,750 km of network.
Promoting an efficient use of resources, thus facilitating circular economy	Reducing lost volumes of water by 20% compared to 2019 (2019 figure: 10 Mm^3 in lost volume) **GESESA**	% reduction in lost volume of water	An analysis was performed of the most inefficient municipalities, installed 24 production meters at the source and 1,986 user meters; performed district planning for the network serving Benevento, with a water recovery equivalent to around 13 l/s on average per year. Across the entire territory managed, though no reduction in lost volume was recorded, the M1b indicator (water losses in %) decreased for the first time with respect to previous years.
	Reducing lost volumes of water by 33% compared to 2019 (2019 figure: 101.0 Mm^3 volume lost) including by replacing 148 km of deteriorated pipelines. **GORI**	% reduction in lost volume of water= **14%**, **reaching 87.3 Mm^3 of lost volume** km of pipelines replaced/km of pipelines to be replaced= **63/148 (49 in 2020 and 14 in 2021)**	Restoration of 246 km of network and replacement of another 14 km; carried out 96 interventions on water districts and installed 8 pressure measurement valves.
	Constructing plants for electricity/thermal energy production (1 cogeneration from biogas, 2 photovoltaic, 1 mini-hydroelectric) at Integrated Water Service sites to cover internal consumption for around 2,700 MWhe of electricity and 2,500 MWht of thermal energy produced per year, equal to around 1,550 tCO_2 avoided in total per year. **AdF**	Plant Construction: Yes/No kWhe electricity produced and consumed on site kWht thermal energy produced and consumed on site tCO_2 avoided	Concluded the review of the executive plan and obtained the permits for the construction of the plant for biogas production from anaerobic digestion of sludge and prepared the energy authorisation request for the cogenerator. Launched the preparatory stages for planning for other plants.
	Carrying out projects to recycle purified wastewater mainly for irrigation or for production processes up to 8 Mm^3/year of reused wastewater. **ACEA ATO 2**	Mm^3/year of reused wastewater= **1.7**	Following the integration and modernisation of the industrial water line at 3 major treatment plants (Rome South, Rome North and Cobis), in 2021 the industrial water circuit came into operation at the Ostia treatment plant.
	Manufacturing a treatment plant for the sand from the treatment processes and from the sewage network cleaning, which will make it possible to recover up to 80% of the solid input material. **ACEA ATO 2**	Progress of work execution schedule/ expected completion times Recovered material/incoming material	The procedure was launched for the Environmental Impact Assessment of the plant; the progress is in line with the time schedule.

Promoting an efficient use of resources, thus facilitating circular economy	Increasing the overall waste treatment capacity to around 2,900,000 tonnes (equivalent to around 120% more with respect to the 2019 data). **ACEA AMBIENTE**	authorised overall t capacity in reporting year/overall t capacity expected by 2024= **2,448,120/2,900,000**, **equal to 84%** t of treated waste/overall t of treated waste (2019 figure)= **1,514,554/1,145,526** (*), equal to 32% more (*) data from scope of consolidation, net of waste output	In 2021, the companies DECO and Ecologica Sangro were acquired, which operative in the Special Waste chain, plus MEG, which operates in Recycling. Acea Ambiente acquired the company AS Recycling, the holder of an authorisation for the operation of a plastic waste treatment plant. The company Cavallari, which oversees waste recovery, also acquired another 2 plants.
	Facilitating the circular economy process and strengthening the waste-to-material chain thanks to the recovery of raw and secondary materials from the waste input of dedicated plants (target by 2024: 88% RSMs recovered) **ACEA AMBIENTE**	t RSMs recovered/t waste input= **182,615/246,236 equal to 74% (*)** **(*) figure from scope of consolidation**	Formalised the acquisitions of MEG, already operating in the Recycling chain, and the company AS Recycling, which holds an authorisation for the construction and operation of a plant under construction. The company Cavallari acquired two waste recovery plants. It should be noted that the Demap plant was affected by a fire which temporarily reduced its treatment capacity.
Taking initiatives to protect the territory and limit impacts on the natural environment	Raising customer awareness about the use of the digital channels, with the objective of reaching 60% of active users associated with MyAcea and increasing the adoption of web bills: around 400,000 users with digital billing (equal to around 60 t/year of paper saved). **ACEA ATO 2**	No. of utilities registered on MyAcea/total active utilities of Acea Ato 2 = **345,335/705,639**, **equal to 49%** No. of active web bills= **358,707** t paper saved per year= **63.6**	Launched the advertising campaign on MyAcea, on the digital service point and the new interactive web billing. New functionalities were introduced within the MyAcea Customer Area, such as the digital mailbox where contractual documents and payment reminders can be checked at any time.
	Increasing the adoption of web bills, reaching around 50,000 users who have chosen the digital bill option (over 250% more compared to the 2019 data, equal to 14,218) with expected paper savings of around 9 t/year. **ACEA ATO 5**	No. of active web bills= **47,623** t paper saved per year= **5.7**	Released the new version of the interactive web bill, an easy-to-use mini-site organised into thematic areas for easy and digital access to bill information. A communication campaign was also carried out involving 10 press releases, over 10 million digital impressions and more than 1,500 radio posts.
	Promoting the digitisation of processes and raising customer awareness about the use of the digital channels with the objective of increasing the number of users with web billing by 229% compared to 2019: around 368,000 digital bills (equal to around 11.04 t/year of paper saved) in relation to 92,000 users. **AdF**	No. of users with web billing/no. of users with active web billing in 2019 = **83,277/28,192**, **equal to 195% more** No. of users with active web billing= **83,277** t paper saved per year= **9.9**	Carried out promotion of the digital channels and web billing: video messaging for target users; a systematic and recurring campaign using traditional channels (print and TV) and innovative media (online newspapers – interactive banners on websites); promotion on social channels with periodic posts. Launched an incentive campaign, offering a discount to everyone who keeps their web billing and direct debit active for over one year.
	Increasing the number of web bills to 25% of total users (57,142 users in 2019), for around 3 t of paper saved. **GESESA**	No. of active web bills = **8,206**, **equal to 14% of users** t paper saved per year= **1.4**	During the year, the switch to web billing was encouraged through an email communications campaign and direct telephone calls.
	Increasing the use of web bills: around 150,000 users with digital billing (over 150% more than the 2019 figure of 58,500 users) equal to around 21 t of paper saved per year. **GORI**	No. of active web bills= **197,790** t paper saved per year= **17 t**	In 2021, the "Un click per il Sarno" [One click for the Sarno] campaign continued through mass emails sent to users not signed up to the service. In addition, the use of web billing was promoted for all users signed up to MyGori and through social networks and call centres. The registration form remains active on the site, which allows anyone to sign up.
	Increasing the use of web bills: 400,000 users with the digital bill option (equivalent to around 60 t of paper saved/year). **ACEA ENERGIA**	No. of active supplies with web bill option= **394,655 (226,941 ML and 167,714 MST)/400,000** t paper saved per year= **54.4**	Acea Energia launched specific campaigns to promote web billing through the use of social and digital channels.
	Increasing the digitisation of processes, specifically in sales relations on the free market: 80% of contracts digitised, equal to 14 t/year of paper saved. **ACEA ENERGIA**	% of contracts digitised= **38.7%** t paper saved per year= **8.8**	Digitised contracts, equal to 38.7%, allowed for a saving of around 9 tonnes of paper, a slight decrease compared to the 2020 figures due to the recovery of sales activities via the physical network.

	Removing 200 pylons by modernisation of the electrical supply system as well as high voltage transmission. **ARETI**	No. of pylons removed/no. of pylons to be removed= **70/200 (22 in 2020 and 48 in 2021)**	Demolished 48 pylons, of which 22 high-voltage supports, 24 on the Flaminina-Smistamento Est line, 6 on the Collatina-Tiburtino O. and 5 on the Laurentina-Vitinia.
	Contributing to the recovery of the ecosystem and the protection of biodiversity, through functional interventions to remove pollution from the hydrographic basin of the Sarno river, including the construction and/or restoration of function of the sewerage network and the consequent collection and treatment of the area's inhabitants (around 70,500) and the elimination of 78 illegal discharges into the environment. **GORI**	No. of illegal discharges eliminated/ no. of illegal discharges to be eliminated= **6/78** Inhabitants covered by the sewerage and treatment service/inhabitants in the target scope	6 illegal discharges were eliminated, during planning or during awarding of the works and/or execution of the interventions intended to eliminate free terminals into the environment and complete the sewerage and purification system of the hydrographic basin territory.
	Increasing purification efficiency by 6.2% in terms of reduction of BOD5 on 7 treatment plants being upgraded (purification efficiency of the BOD5 in 2019 equal to 86.7%). **ACEA ATO 5**	[(BOD5in-BOD5 out/ BOD5in) reporting year - (BOD5in-BOD5 out/ BOD5in) 2019]* 100= **[((300-32)/300)-((300-40)/300)]*100=2.6%**	Completed revamping works on the Colfelice Mandrelle and Ceccano - Via Gaeta plants; works ongoing on the Serrone La Mola treatment plant.
	Increasing purification efficiency by 4% with respect to the 2019 figure (year of acquisition of treatment plants > 100,000 inhabitants equivalent treated) in terms of reducing SST of all plants managed (equal to 85% in 2019). **GORI**	(SSTin - SSTout / SSTin) x 100 = **86%, 1% more than 2019**	Carried out targeted interventions to improve purification efficiency.
Taking initiatives to protect the territory and limit impacts on the natural environment	Reducing waste from the thermal renewal processes (Terni and San Vittore del Latium plants) by building a treatment and recovery plant for 100% of the ash produced. **ACEA AMBIENTE**	Plant construction: Yes/No= **No** t of ash recovered/t of ash produced	Obtained authorisation from the Latium Region for two trial (prototype) plants and signed the agreement with the scientific project partner that holds the patents for the tested applications.
	Reducing the annual amount of dehydrated/dried sludge leaving the treatment plants managed by Acea Ato 2 by 45% (compared to 2019 volumes equal to 70,505 tonnes) by means of actions aimed at improving the efficiency and industrialisation/ innovation of sludge lines. **ACEA ATO 2**	% of reduction= **5.8**	In 2021, the fixed thermal dryer at the Ostia purification plant was put into operation.
	Design and installation, following a feasibility study, of a sludge dryer at a treatment plant, in order to reduce the amount of dehydrated/dried sludge produced by the treatment plants managed by Acea Ato 5 by 75% (compared to 2019 volumes, equal to 11,352 tonnes). **ACEA ATO 5**	Design progress (0-100%)= **5%** Construction progress (0-100%) % reduction	The design phase of the dryer is ongoing.
	Reduction of the annual amount of sludge disposed of by the treatment plants managed by AdF by 40% (compared to 2019 volumes, equal to 8,975 tonnes) through the construction of the sludge centralisation plant in Grosseto San Giovanni. **AdF**	Plant construction: Yes/No= **Yes** % of reduction= **30.5**	Completed the construction of the new sludge reception/delivery section and the hydrolysis treatment plant. Opened in May, the plant has received sludge from the San Giovanni treatment plant and from the "minor" plants of Ponte a Tressa and Follonica.
	240 t reduction of non-dehydrated sludge, equal to 35% of the volumes recorded in 2019 (700 t), thanks to the use of centrifuges for sludge dehydration. **GESESA**	Reduction % of non-dehydrated sludge= **-30%**	Installed centrifuges/belt presses at the Santa Lucia Morcone, San Biase di Telese and Cagni treatment plants in the Municipality of Forchia.
Enhancing certified environmental and energy management systems	Obtaining and maintaining ISO 14001 certification for companies with an environmental impact in the scope of the NFS Obtaining and maintaining ISO 50001 certification for energy-intensive companies (>10,000 TOE equivalent) in the scope of the NFS. **ACEA SpA – RISK & COMPLIANCE (Integrated certification systems)**	ISO 14001 certified Companies/Companies in scope= **14/16 (*)** ISO 50001 certified companies/energy-intensive companies in scope= **8/10** (*) the denominator excludes the 16 companies in the photovoltaic sector and Acea Innovation, not included in a certification process	Of the 16 main operating companies that represent the biggest impacts of the Group, 14 companies have maintained the environmental certification by passing checks by external auditors. 8 "energy-intensive" companies maintained their certified energy management system.

SCOPE OF ACTION 2: ENCOURAGING SUSTAINABILITY ALONG THE SUPPLY CHAIN

	Achievement of an average of 26 points (20 points for Acea Ato 5) of technical scores referring to green/sustainable criteria (i.e. certifications, high efficiency engines, reuse/ recycling/recovery of materials used, plastic reduction, eco-friendly product design, eco-friendly packaging, etc.) in tenders carried out with the most competitive bid for the procurement of supplies and services. **ACEA ATO 2; ACEA ATO 5; ARETI**	Sum of green/sustainable score awarded*tender starting amount/total tender amount for calls carried out with the most competitive bid for the supply of supplies and services = **Acea Ato 2: 26.99**; **Areti: 28.75**; **Acea Ato 5: 27.30**	Green/sustainable criteria were included in the tenders published with the most competitive bid. For example, the criteria concern the possession of environmental certifications, the use of eco-friendly vehicles and energy efficiency requirements.
	Guaranteeing self-assessment in terms of quality, environment, safety, energy and social responsibility (QESESR), where relevant, for 100% of the suppliers registered in the qualification systems relating to the Single Regulations for Goods and Services and Works. **ACEA SpA - PROCUREMENT AND LOGISTICS**	No. of suppliers with QESESR self-assessment/ total suppliers qualified by qualification systems related to the Single Regulations for Goods and Services and Works = **386/386**	100% of suppliers registered with qualification systems pertaining to the Single Goods, Services and Works Regulations filled out a QASER self-assessment questionnaire in 2021.
Implementing sustainability logics in procurement procedures	Dissemination of good practice in terms of green purchases through the inclusion of environmental sustainability criteria in the Technical Specifications approved by the A&L Department and used for the purchase of materials by the centrally managed Group companies. **ACEA SpA - PROCUREMENT AND LOGISTICS**	No. of technical specifications approved with sustainability criteria/no. of technical specifications approved= **122/122**	122 technical specifications were validated for materials regarding the supplies of the Group companies and sustainability criteria were introduced in all of them (recycling, reuse, correct WEEE disposal, repairability).
	Implementing the Vendor Rating model on the Group's new tender portal which will involve around 1,000 suppliers over the course of the Plan, integrating it with the Sustainability aspect; a portion of the suppliers will also be assessed and monitored on environmental performance (Ecovadis project). **ACEA SpA - PROCUREMENT AND LOGISTICS**	Vendor Rating model implementation: Yes/No= **Yes** No. of suppliers assessed by vendor rating/no. of suppliers in target scope= **781/1,000** No. of suppliers involved in the Ecovadis project/ no. of suppliers assessed by vendor rating= **148/781**	Specific communications were sent to the suppliers registered with the qualification systems by inviting them to undergo the Ecovadis assessment. Furthermore, a page was created dedicated to the initiative on the Acea Group's website (supplier area) with a direct link to the Ecovadis platform.
	Application of rewarding criteria of sustainability (health and safety, energy and environment, where applicable) in 80% of the calls for tenders and contracts for Works, Goods and Services, assigned with the most competitive bid. **ACEA SpA - PROCUREMENT AND LOGISTICS**	No. of calls for tenders and contracts with rewarding criteria of sustainability/no. of calls for tenders awarded with the most competitive bid = **90/400**, **equal to 23%**	In 2021, around 23% of the tenders and contracts stipulated, of the total 400 effectively eligible (excluding consultancy), were awarded on the basis of sustainability criteria.

SCOPE OF ACTION 3: CONTRIBUTING TO THE WELL-BEING OF THE COMMUNITY

Promoting activities with positive impact on the collectivity and on the territories where the company works	Consolidation and improvement of relations with the local community through the creation of a museum dedicated to Acea and the organisation of at least 5 cultural events/communications initiatives related to the core business, which also envisage the development of industrial sites and facilities of the Group's companies. **ACEA SpA – COMMUNICATION (Historical Archive, Communication Planning & Portfolio Management, Event Management)**	Museum Construction Acea: Yes/No= **Yes** No. of events held= **15** No. of industrial sites/plants developed= **no visits were made to the plants due to the pandemic**	The go live of the Acea Digital Museum (ADM) was launched at the Montemartini power station; initiatives were planned for the dissemination and growth of electric mobility across the country and the renovation of the company buildings is under way with the objective of offering further services to employees and customers. In collaboration with Roma Capitale, renovations continued on the artistic and functional lighting systems. No visits were made to the plants due to the pandemic.
	Installing 55 Water Kiosks in the territory managed by AdF for dispensing chilled natural or sparkling water to the public and tourists, favouring the reduction of plastic bottle use and CO_2 emissions. **AdF**	No. of Water Kiosks installed= **5** Litres of water dispensed in the year= **35,200** t of plastic saved= **1** t of CO_2 not emitted= **2**	During the year, 5 water kiosks were installed and another two are being activated; activities were launched for the installation of other kiosks.

SCOPE OF ACTION 4: CONSOLIDATING RELATIONS WITH THE TERRITORY

Contributing to create awareness on social and environmental matters	Support or management of at least 10 awareness initiatives per year and promotion of socially useful campaigns (prevention of cancer, women's rights, promoting diversity) or of socio-environmental importance (including the promotion of sport). **ACEA SpA - SPONSORSHIP AND VALUE LIBERALITY**	No. of initiatives supported and/or managed = **24/10**	Numerous initiatives were supported, including, in terms of sport, the Rome Marathon and the Rome-Ostia Marathon; renewed contributions in favour of hospitals as support for the Covid-19 health emergency. In terms of culture, among other things, the agreement with the Rome Opera House was renewed. Support payments were also made to associations, including the Banco dell'Energia, to support families in financial difficulty.

Contributing to create awareness on social and environmental matters	Planning and implementing awareness campaigns aimed at compulsory school age students present in the territory where the companies of the Group work, as concerns responsible use of natural resources (at least 10,000 students and other users per year). **ACEA SpA – COMMUNICATION (Event Management)**	No. of students and other users involved per year/no. of students and other users to be involved= **around 25,000**	The Acea Scuola Digital project was centred around the world of energy and energy savings and was given the title "Siamo energia! Spegni la luce accendi la tua fantasia" [We are energy! Turn off the light and turn on your imagination]. The teaching activity, online in June, reached over 10 million impressions and around 25 thousand users on the dedicated platform.
	Creating at least 1 campaign per year or awareness initiatives addressing saving water, energy and environmental protection targeting the collectivity. **ACEA SpA – COMMUNICATION (communication planning & portfolio management) and Group Companies**	No. of campaigns or initiatives carried out during the year= **1**	In June 2021, the "100% Eco" campaign was featured in the press, online, radio, TV and posters to promote the launch of sustainable product offers by Acea Energia.
Contributing to create awareness on social and environmental matters	Undertaking the "Acea Group Stakeholder Engagement Project" (stakeholder mapping, methods and operating tools) intended to improve the integration of stakeholder engagement into business processes and activities and to disseminate the stakeholder engagement culture by organising at least 1 initiative per year, including in support of stakeholder engagement of the companies/areas. **ACEA SpA – SECRETARY OF THE BOARD OF DIRECTORS Stakeholder Engagement in collaboration with the main operating companies**	Group stakeholder mapping status (0/100%)= **95** Method and tool definition (0/100%)= **97** No. of stakeholder engagement initiatives carried out during the year= **2**	The "Stakeholder Engagement Principles and Values" and the "Stakeholder Engagement" Group Procedure were defined and distributed. A versatile and interfunctional team was created formed of Representatives identified within the Departments, Corporate Functions and Group companies to disseminate the principles of Stakeholder Engagement and a dedicated section was activated in the company intranet. Awareness-raising events were held with experts, characterised by topics specific to their sector as part of spreading the culture of stakeholder engagement as well as basic technical and specialised skills, role awareness and a number of professional tools.
	Implementation of the project dedicated to the creation of a 'Water Museum'. **ACEA SpA - SPONSORSHIP AND VALUE LIBERALITY**	"Water Museum" Construction: Yes/No= **No**	The transformation of the physical museum into a virtual widespread one is being assessed.
	Completion of at least 3 projects per year for the redevelopment and upgrading of urban areas, metropolitan areas and territories where the Group works through public and artistic lighting. **ACEA SpA - SPONSORSHIP AND VALUE LIBERALITY in partnership with Areti and other Group Companies**	No. of initiatives carried out during the year= **13/3**	The lighting was completed on the Arco del Sacramento in Benevento, where Gesesa operates; temporary lighting on monuments or institution buildings to raise awareness of World Autism Awareness Day and Earth Day, International Day for the Elimination of Violence against Women, World Day Against the Death Penalty and for Breast Cancer Awareness Month in October. A number of areas with artistic lighting were developed in the City of Rome such as Piazza Vittorio and Corviale. Lastly, Acea carried out Roma by Light, the artistic lighting project for Christmas festivities.

MACRO-OBJECTIVE NO. 4 PROMOTING HEALTH AND SAFETY ALONG THE VALUE CHAIN

OPERATIONAL OBJECTIVES	TARGET FOR 2024 - FUNCTIONS/OWNER COMPANIES OF THE PROCESS	KEY PERFORMANCE INDICATORS	2021 ACTIONS
SCOPE OF ACTION 1: HEALTH AND SAFETY AT WORKPLACE FOR GROUP WORKERS			
Promoting a culture of health and safety at workplace	Consolidating the downward trend in the Group's accident indices (SI, FI). **ACEA SpA – HUMAN RESOURCES (Workplace safety)**	SI, FI in reporting year (*) ≤ reporting year -1= **SI: 0.20**; **FI: 5.09 > SI: 0.19**; **FI: 4.84** (*) the figure includes the companies Demap and Berg	The risk mitigation and worker health protection measures, including for the prevention of Covid-19 infection, made it possible to keep the accident rates of the Group companies substantially stable and at limited levels. In fact, during the year, no serious or fatal accidents or incidents caused by Covid-19 infection were recorded.
	Carrying out at least one health and safety awareness campaign each year involving 100% of Group employees (NFS scope of operating companies). **ACEA SpA – HUMAN RESOURCES (Workplace safety) in collaboration with COMMUNICATION (Media relations and internal communications)**	No. of employees involved/ no. of employees to be involved= **6,499/6,499 (*)** (*) the figure includes the companies Demap and Berg	The awareness campaign, carried out through the periodic sending of information, concerned the mitigation of the risk of Covid-19 infection through the dissemination of proper health and safety practices.

Promoting a culture of health and safety at workplace	Obtaining and maintaining ISO 45001 certifications for the companies in the NFS scope and, for Acea SpA, obtaining the Biosafety Trust Certification, while assessing the possibility to extend it to the operating companies. **ACEA SpA – RISK & COMPLIANCE (Integrated certification systems)**	Certified Companies/Companies in scope= **16/16 (*)** Obtaining Biosafety Trust Certification: Yes/No= **Yes** (*) the denominator excludes the 16 companies in the photovoltaic sector and Acea Innovation, not relevant for the purposes of the certification system	The 16 main operating companies that represent the biggest impacts of the Group passed the checks to maintain the existing ISO 45001:2018 certification systems. Acea Energia and Acea Elabori obtained the Biosafety Trust Certification, in addition to that of Acea SpA, obtained in 2020.
	Involving 100% of Acea SpA employees in the "Vademecum" project intended to explore issues of health, safety and well-being, and raise awareness about the correct use of PPE for protection against infection from Covid-19, training and information about infection risks in line with the objectives of the Biosafety certification (2020). **ACEA SpA – HUMAN RESOURCES (Workplace safety)**	Employees trained in risks from biological agents/ total employees (Acea SpA target scope)= **669/703**	Acea SpA continued the training course on topics related to Safety and Covid-19 infection containment measures; the course, which involved nearly all employees, addressed biological risk, chemical risk, biosafety, occupational medicine and hygiene, vaccines and prevention, and diagnostic testing. To facilitate the response to the topics and raise awareness about hygiene and well-being, a video was created.
SCOPE OF ACTION 2: HEALTH AND SAFETY AT WORKPLACE FOR CONTRACTORS AND SUBCONTRACTORS			
Creating awareness among contractors on health and safety at workplace	Creating awareness among contractors on health and safety, implementing a programme of supplier checks (24 per year) and carrying out engagement initiatives (video tutorials on safety best practice). **ACEA ATO 5**	No. of checks carried out/ no. of checks to be carried out = **270/24** Engagement initiatives: Yes/No= **No**	Implemented safety checks on contractors by establishing a specific campaign. The engagement event planned was not carried out due to the pandemic.
	30% increase in the number of inspections (12,481 in 2019) intended to check the application of safety standards and procedures on the contracts assigned to the control of the Procurement Safety Unit and creating awareness among suppliers on the culture of safety. **ACEA ELABORI**	No. of safety inspections/ no. of safety inspections in 2019 = **15,444/12,481 (+24%)**	In 2021, Acea Elabori carried out 15,444 safety inspections with an increase of 24% compared to 2019.
Creating awareness among contractors on health and safety at workplace	Defining and implementing a Supplier Engagement Plan (at least 5 initiatives over the 2020-2024 Plan), in synergy with the Group companies, on health and safety issues also by producing more detailed reporting on the injury prevention performance of contractors. **ACEA SpA – HUMAN RESOURCES (Workplace safety)**	Engagement Plan definition: Yes/No= **Yes** No. of initiatives launched/ no. of initiatives to be launched = **1/5** No. of reports received/no. of contractors involved= **225/342**	Improved the periodic reporting process for accidents and safety performance indices, including occupational illnesses at supplier premises, thanks to meetings with the RSPPs, the insertion of a specification into the tender contracts and the computerisation of data collection. Due to the continuation of the Covid-19 emergency, it was not possible to organise awareness-raising events for the contractors. The activity was postponed until 2022.
	Up to 70% increase in the percentage of contracts inspected for daily safety checks out of the total contracts that could be inspected by the Procurement Safety Unit (45% in 2019). **ACEA ELABORI**	Average contracts inspected/average contracts that could be inspected = **84/145, equal to 58%**	84 of 145 contracts were inspected, with an increase of 13 percentage points compared to the 2019 figures.
SCOPE OF ACTION 3: HEALTH AND SAFETY OF THE COMMUNITIES WITH WHICH THE GROUP OPERATES			
Ensuring the health and safety of the customers of the reference territory for the various services provided	Drawing up risk prevention/mitigation plans according to the guidelines of the Water Safety Plan for 100% of the population served by the aqueduct systems managed by Acea Ato 2. **ACEA ATO 2**	Population served by the aqueduct systems with WSP/total population served by Acea Ato 2 (year 2019)= **3,250,000/3,704,931, equal to 88%**	Finalised the WSPs for 8 of the 11 aqueducts of ATO 2, 7 of which shared with the Ministry of Health. For the remaining 3 aqueducts, activities for preparation of the Plans were initiated.
	Drawing up risk prevention/mitigation plans according to the guidelines of the Water Safety Plan for 2 sources serving 15% of the population served. **ACEA ATO 5**	Population served by springs with WSP/population served	The internal multifunctional team was set up for the definition and implementation of the WSP.
	Developing and implementing the Water Safety Plan (WSP) model on 150 of the 265 Water Supply Zones (WSZ), covering 55% of the population served. **AdF**	WSZs with WSP model/ total WSZs= **22** Population served by the aqueduct systems with WSP/total population served by AdF (year 2019)= **19,693/386,132, equal to 5.1%**	Completed the WSP projects on the Santa Fiora springs (6 WSZ) and on the first cluster of water systems supplied by the resource from the "Dorsale Fiora" (16 WSZ) for which the Risk Analyses were carried out. Planned the activities for the implementation of a Group IT system for WSP development and management.

Ensuring the health and safety of the customers of the reference territory for the various services provided	Drawing up risk prevention/mitigation Plans according to the guidelines of the Water Safety Plan for 100% of sources/population served. **GORI**	Population served by springs with WSP/total population served	Preliminary activities are ongoing for the implementation of the Water Safety Plan for the system of Sources named "Sarnese", including the preparation of an operating instruction manual for risk management.
	Drawing up risk prevention/mitigation Plans according to the guidelines of the Water Safety Plan for sources that serve at least 55% of the total population. **GESESA**	Population served by springs with WSP/total population served	In order to launch the structured study of WSPs, detection of critical issues began in the water assets managed with particular reference to the systems underlying each individual source.
	Reducing laboratory analysis response times by 25% (compared to 2019) through implementation of analytical screening and/or high automation (robotics and early warning) and/or high-tech techniques. **ACEA ELABORI**	% reduction (response time for the year under review/ response time in 2019) = **22% (10.48/13.41)** No. of techniques/survey systems introduced= **1 (plus 1 in development)**	A dashboard was created for the monitoring and identification of the critical activities and the definition of corrective actions, and protocols were developed for research into unknown substances in water intended for human consumption; an automated robot is being designed to determine SST in wastewater.

MACRO-OBJECTIVE NO. 5 INVESTING IN INNOVATION FOR SUSTAINABILITY

OPERATIONAL OBJECTIVES	TARGET FOR 2024 - FUNCTIONS/OWNER COMPANIES OF THE PROCESS	KEY PERFORMANCE INDICATORS	2021 ACTIONS
SCOPE OF ACTION 1: ORGANISATIONAL INNOVATION			
Promoting "smart" processes and working methods	Consolidating and incrementing the % of employees each year who work remotely and preparing at least one survey per year to monitor expectations and satisfaction in relation to the process. **ACEA SpA – HUMAN RESOURCES (Talent acquisition & people development)**	% of employees working remotely in the reporting year > % employees working remotely in the reporting year - 1= **KPI influenced by the health emergency** No. of surveys run = **1/1**	The use of "smart working" was structured and the frequency of in-person office time of administrators affected, during the emergency, by the restrictions due to the pandemic. A survey was launched to monitor the performance and effects of working remotely.
	Launching at least two co-working spaces per year. **ACEA SpA – HUMAN RESOURCES (Talent acquisition & people development in collaboration with Facility Management)**	No. of co-working spaces opened/no. of co-working spaces to be opened= **2/2 Annual target reached**	Acea took part in Smart Alliance – New Ways of Working and Training promoted by the Elis Business School System, which allows colleagues to work 2 days a week at the two Enel X and Elis sites in co-working spaces. The Talent Garden, to make use of the co-working spaces, is active.
SCOPE OF ACTION 2: TECHNOLOGICAL AND PROCESS INNOVATION			
Promoting the resilience of the urban territory and innovation from a smart city perspective	Equipping 1,000 IP supports with video cameras, communication devices and/or environmental sensors (intermediate target at 2022). **ARETI (Public Lighting)**	No. of poles equipped with intelligent equipment	Competed in the tender procedure for the identification of the technical partner.
	Optimising maintenance on IP infrastructure through the gradual application of Advanced Analytics systems, until 50% of interventions are covered by 2024. **ARETI (Public Lighting)**	No. of maintenance interventions carried out with the application of Advanced Analytics/total interventions	The Advanced Analytics system implemented did not produce the expected results, so in 2021 new tools were sought after for the optimisation of maintenance interventions; the Qlik dashboard named "Pareto" was identified, through which it was possible to identify the 13 priority cabins to work on with the replacement of a "fragile" element which was causing repeated breakdowns.
	Smart services applied to the organic fraction of waste: industrialisation and installation of 150 local composting systems for the transformation of the organic fraction into compost. **ACEA INNOVATION**	No. of structures installed/ no. of structures to be installed= **4/150**	In late 2021, 4 systems had been installed, including one at the Fiera di Roma. The systems, installed by Acea Elabori, even before 2021, were passed to Acea Innovation for commercial management during the year.

	Contributing to making urban sites more sustainable through the offer of services intended to reduce environmental impact: - insulation systems for thermal insulation (thermal cladding) and other energy efficiency services (100 apartment complexes); - residential photovoltaic and solar thermal systems (around 1,000 systems). **ACEA INNOVATION**	No. of apartment complexes involved in interventions/ no. of apartment complexes envisaged= **21/100** No. of photovoltaic and solar thermal systems installed/no. of systems to be installed=**21/1,000**	Launched 21 interventions, of which 2 are complete, for the construction of more sustainable apartment complexes. 21 photovoltaic systems were installed during these interventions.
Promoting the resilience of the urban territory and innovation from a smart city perspective	Installation of at least 2,200 electric vehicle charging points and development of a platform for the management of mobility services. **ACEA INNOVATION and ACEA ENERGIA**	Columns installed/columns to be installed= **200/2,200** No. of Acea Energia customers who used the platform in the year= **14,095**	Completed 200 charging points, of which 123 for public use (of which 44 in Terni) and 77 for private use. Over 14,000 users downloaded the Acea e-mobility app, which can be used to quickly locate the closest charging point, reserve it, check the car's charging status in real time and pay for the service.
	Providing visibility to collaborations with start-ups through the organisation of events/initiatives in synergy with universities, institutions, etc. **ACEA SpA – COMMUNICATION (Event Management)**	No. of events/initiatives held=**5**	In 2021, the Group held the second Innovation Day and attended the Maker Faire Rome and Ecomondo fairs. Acea also organised events to introduce the new Waidy app and the PlatOne project demo to the public.
	In collaboration with start-ups, innovative SMEs, universities, research centres, hubs, business incubators and other innovation players, developing innovative projects linked to the Group's core and non-core businesses, for at least 100 innovative proposals/year analysed, 10 trials/year (PoCs) launched and 1 industrialised process/year. **ACEA SpA – Technology & Solutions (Innovation)**	No. of innovative ideas/ proposals analysed= **800** Trials started (PoC)= **51** Projects industrialised= **2**	Established national and international partnerships and collaborations to activate deal flows for scouting startups and innovative solutions; continuous scouting and analysis of startups with activities in areas of interest; launched more than 50 PoCs and industrialised 2 projects: PASO and Safety Check. The former aims to improve the continuity of the electricity distribution service using data-driven analyses and techniques; the latter the introduction of sensors for the remote verification of the safety conditions of personnel working on the sites.
	Installation of 400,000 smart meters. **ACEA ATO 2**	No. of smart meters installed/no. of smart meters to be installed= **31,068/400,000**, **equal to 8% (30,000 in 2020 and 1,068 in 2021)**	Installed over 1,000 smart meters with the Proteus module, the transmitter that allows remote sending of meter data on water-intensive users and in specific districts.
	Installation of 188,000 smart meters by 2024 which allow for remote readings, covering 80% of AdF users (equal to 231,690 in 2019). **AdF**	No. of smart meters installed/no. of smart meters to be installed= **117,794/188,000 (82,626 in 2020 and 35,168 in 2021)** No. of users with smart meter/no. of users of AdF (in 2019) = **117,632/231,690**, **equal to 51%**	Mass installation of user meters with radio module for remote readings is being completed in the municipalities of Grosseto, Follonica and Orbetello (with coverage of over 97% of the network in Grosseto, 85% in Follonica and 56% in Orbetello).
Implementing remote control systems and remote interventions	Replacing around 1,300,000 electronic meters with second generation (2G) devices, following a customer communications campaign about the electronic meter replacement plan. **ARETI**	No. of 2G meters installed/no. of 2G meters to be installed= **375,451/1,300,000 (59,275 in 2020 and 316,176 in 2021)** Customers reached by the campaign ≥ customers whose meters were replaced = **440,000 ≥ 375,451**	Continued the mass replacement plan of 1G meters with 2G ones, by sending specific information to interested customers.
	Implementing broadband connectivity on an optical fibre network owned by the company (or any other broadband connection) serving the operation of the power supply network covering all 70 Primary Substations (PSs) and 250 Secondary Substations (SSs). **ARETI**	No. of PSs with broadband connection/70 PSs= **24/70**, **equal to 34% (14 in 2020 and 10 in 2021)** No. of SSs with broadband connection/250 SSs= **98/250**, **equal to 39% (7 in 2020 and 91 in 2021)**	Carried out various interventions for the connection of the cabins; in late 2021, 24 PS and 98 SS fibre optic connections were activated and inspected.
	Remotely controlling 100% of the IP plants (intermediate target at 2022). **ARETI (Public Lighting)**	No. of remote-controlled IP control panels/ total IP control panels= **3,737/4,428**, **equal to 74% (1,145 in 2020 and 885 in 2021)**	An additional 885 remote-control panels were activated for a total of 3,737 panels connected via TLC.

	Extending the current remote control system with the aim of reaching a total of 460 plants remotely (2019 figure: 278 plants connected via TLC). **ACEA ATO 5**	No. of plants controlled remotely/no. of plants to be controlled remotely = **331/460**, **equal to 72% (9 installed in 2021)**	9 remote control plants were installed.
Implementing remote control systems and remote interventions	Remotely controlling at least 72% and 15% of MV and LV lines respectively of all MV/LV secondary transformer substations (medium and low voltage side). **ARETI**	No. of remote-controlled MV/LV transformation SSs on medium voltage side/ total MV/LV transformation SSs in 2019= **7,585/13,238**, **equal to 57%** No. of remote-controlled MV/LV transformation SSs on low voltage side/total MV/LV transformation SSs in 2019= **261/13,238**, **equal to 2%**	In late 2021, 57% medium voltage and 2% low voltage of remote-control systems on the SSs were activated.
	Remote control/measurement of 100% of the purification plants with capacity > 2000 PE (equal to 13 plants), 100% of the sewerage lifting plants (13 plants) and 100% of the aqueduct plants of the Cities of Benevento and Telese Terme (29 plants). **GESESA**	No. of purification plants > 2000 PE remotely controlled/no. of purification plants > 2000 PE total = **1/13** No. of remotely controlled sewerage lifting plants/no. of total sewerage lifting plants = **6/13** No. of remotely controlled aqueduct plants/no. of total aqueduct plants = **19/29**	The installation of the remote-control systems continued on the sewage lifting plants and on the treatment plants, one of which with purification potential over 2,000 PE; the activity on other treatment plants is in progress.
	Expanding the analytical survey spectrum on the matrices managed (waste, water, emissions) with reference to new contaminants reported by the scientific community and the regulator. **ACEA ELABORI**	No. of studies introduced= **4**	Implemented the analytical methods for research on analytical parameters (Bisphenol A, Uranium, Haloacetic Acids, PFAS – Perfluoroalkyl and Polyfluoroalkyl Substances) envisaged by Directive 2020/2184 on the quality of water intended for human consumption."
Applying new technologies in leak detection and other operations	Implementing modelling methods, developing platforms and testing highly innovative techniques to support management and decision-making processes. **ACEA ELABORI**	No. of methods implemented= **3** No. of techniques implemented= **1** No. of platforms created= **2**	Developed a network of specific chemical sensors for 3 plants of Acea Ato 2 (Rome North, Rome East and Rome South treatment plants); inspected and installed the SIFT-MS technology for the immediate measurement of volatile substances and created the PICO platforms to encourage shared knowledge (new release) and the first beta version of SMART ODOUR used to monitor the requirements of the odour abatement systems.
	Application of new IoT technologies and advanced sensors with the installation of 300 sensors for the development of remote monitoring systems for water and sewerage networks. **GORI**	No. of sensors installed/no. of sensors to be installed= **316/300 (95 in 2020 and 221 in 2021)** **Target for 2024 achieved**	221 peripherals were installed with NB-IoT and LoRa transmission systems on the water and sewerage networks.
SCOPE OF ACTION 3: CREATING AND PROMOTING KNOWLEDGE			
Developing research projects in partnership with other competent organisations	Developing the research hub (Campus Grottarossa) by reinforcing collaborations/framework agreements with the scientific community on research, technological innovation and environmental sustainability, promoting synergies with the academic and institutional world and start-ups in order to identify development opportunities and applications for the Group. **ACEA ELABORI**	No. of projects funded with Acea participation= **1 (out of the 5 projects presented)** No. of scientific partnerships established= **26** No. of scientific publications or presentations at major conferences= **17 (7 scientific articles published and 10 calls for papers accepted/presented)**	Acea Elabori participated in the Horizon 2020 European call, presenting 5 projects included Promisces which was chosen for funding. It stipulated 26 agreements with scientific/academic partners, shared research contribution through international and national publications and participated in fairs and conventions.
	Promoting innovation with at least 4 initiatives per year, internal and external, intended to promote scouting, idea generation, entrepreneurship and the culture of innovation, involving at least 200 people from the Acea Group. **ACEA SpA – Technology & Solutions (Innovation)**	No. of people involved= **over 300** No. of initiatives carried out/no. initiatives to be carried out= **43**	Carried out idea generation workshops and 8 meetups dedicated to the Innovation Community to promote Corporate Entrepreneurship, with the involvement of around 60 people each session. The Innovation Day was held and the Innovation Garage began, for the generation of innovative ideas; the Pitch Day was held, during which 15 ideas were evaluated by company management and the top 3 entered the final Fast Track stage (i.e. the project incubation stage). Held the "Innovate the way we work" hackathon in partnership with Citrix and Codemotion, which was attended by students and external professionals.

CORPORATE GOVERNANCE AND MANAGEMENT SYSTEMS

CORPORATE GOVERNANCE AT ACEA

The governance model adopted by Acea complies with the best practice recommendations of the *Corporate Governance Code* and with the principles of **transparency**, **balance and separation between guidance**, **management and control activities**.
The Acea SpA Board of Directors **establishes the strategic guidelines of the Group** and is responsible for corporate governance. Three Committees are established within the Board with proposal and consultation responsibilities: the **Control and Risks Committee**, the **Appointments and Remuneration Committee** and the **Ethics and Sustainability Committee**.

There is also the **Committee for Related Party Transactions**, in implementation of Consob regulations, composed of Independent Directors, and the **Committee for the Region**, which is tasked with enquiry, consultation and monitoring duties for a healthy and virtuous development of the relationship with the territories where the Group operates and with particular reference to the sponsorships and donations granted by Acea, in accordance with the corporate prerogatives and the legislative and regulatory limitations applicable to the individual subsidiaries.
Lastly, the **Board of Statutory Auditors** performs supervisory duties, according to the traditional model in force.

Chart no. 14 – Activities of the Corporate Governance Committees

COMMITTEE	COMPOSITION	TASKS
CONTROL AND RISKS	At least 3 Independent Directors or, alternatively, Non-Executive Directors with an independent majority, from whom the Chairman is chosen **11 MEETINGS IN 2021**	Issues a prior opinion to the BoD regarding the **definition of the Guidelines for the Internal Control and Risk Management System** for the Group companies, **including those relevant for medium/long-term sustainability**, so that they are correctly identified, measured, managed and monitored. Supports the assessments and decisions of the Board of Directors on these issues. Assists the Board of Directors, together with the competent Function and having consulted with the independent auditor and Board of Statutory Auditors, in assessing **the correct use of accounting standards adopted in order to draw up the consolidated non-financial statement** as per Legislative Decree 254/2016. For the matters within its remit, monitors **the adequacy and effective implementation of the Code of Ethics.**
APPOINTMENTS AND REMUNERATION	At least 3 Non-Executive Directors with an independent majority, from whom the Chairman is chosen **6 MEETINGS IN 2021**	Provides opinions to the Board of Directors regarding its composition: **size, adequacy of skills, compatibility of positions**. Proposes the **remuneration policy** for Directors and Executives to the Board of Directors, **promoting medium-long term sustainability**.
ETHICS AND SUSTAINABILITY	At least 3 Non-Executive Directors with an independent majority, from whom the Chairman is chosen **7 MEETINGS IN 2021**	In a proactive and advisory manner, supports the Board of Directors in the context of **corporate ethics and environmental, social and governance topics**. Promotes **the integration of sustainability into the corporate strategy and culture**. Supervises the main sustainability issues related to business activities and interactions with stakeholders. Examines the guidelines of the **Sustainability Plan** and, once approved by the Board of Directors, supervises its monitoring. Checks the adequacy and implementation of the **Code of Ethics**. **Promotes a culture of diversity** and fighting discrimination in the company.

During the year, the Departments, Functions and Business Units tasked with oversight of relevant topics such as Communication, Administration, Finance and Control, Investor Relations & Sustainability, Procurement and Logistics, Human Resources, Occupational Health, etc. were **convened as normal by the Board Committees** of reference.

The company is managed by the **Board of Directors**, which can have from 5 to 9 members depending on the decision of the Shareholders' Meeting. The members of the BoD remain in office for three financial years and can be re-elected. The method for selecting the members of the Board guarantees **gender representation**, an adequate number of **Directors representing minorities** and **Independent Directors** in accordance with the law[37].

The Board in office, appointed in May 2020, is composed of 9 directors, 4 of whom are women.
The Board of Directors met fourteen times during the year.
The Chief Executive Officer is the only **executive Director**.
In accordance with the *Corporate Governance Code*, **Acea carries out a board evaluation annually**, availing of an external advisor in order to assess the adequacy of the **dimension**, **composition and function of the BoD and its internal Committees**, as well as the issues discussed.

The ***Report on corporate governance and shareholders' structure***, available on the institutional website (www.gruppo.acea.it), provides information about the Directors of Acea SpA: **CVs**, **gender**, **qualification of independence**, presence in meetings of the Board and the Committees they are members of and any positions in other Companies.

Table no. 8 – Structure of the Board of Directors and Committees of Acea SpA (as at 31/12/2021)

	role in the BoD	Appointments and Remuneration Committee	Control and Risks Committee	Ethics and Sustainability Committee	Executive director	Independent director
Michaela Castelli	Chairperson					
Giuseppe Gola	CEO				X	
Liliana Godino	Director	Member	Chairperson			X
Gabriella Chiellino	Director	Member		Chairperson		X
Massimiliano Capece Minutolo del Sasso	Director	Chairperson	Member	Member		X
Alessandro Caltagirone	Director					X
Giovanni Giani	Director	Member	Member	Member		
Giacomo La Rocca	Director		Member	Member		X
Diane Galbe(*)	Director					

(*) The Director Diane Galbe, following the new appointment, submitted her resignation to the Acea BoD on 25 February 2022.

THE ROLE AND POWERS OF THE BOARD OF DIRECTORS IN ACEA

The **duties lying with the Board of Directors** pursuant to the law provisions, the Articles of Association and in compliance with the recommendations provided in the *Corporate Governance Code* include:

- Definition of the strategic direction;
- Economic and financial coordination of the Group's activities;
- Definition of the guidelines of the Internal Control and Risk Management System (SCIGR), nature and level of risk compatible with the Company's strategic objectives, including **significant risks for medium-long term sustainability**;
- Establishing the Committees required by the *Corporate Governance Code* and appointing their members;
- Adopting the *Organisation, management and control model* as pursuant to Legislative Decree no. 231/01;
- Assessing the adequacy of the organisational, administrative and accounting structure of Acea and its strategic subsidiaries;
- Interacting with the shareholders, encouraging their participation and enabling them to exercise their rights;
- Evaluating the independence of its non-executive members at least on a yearly basis.

37 Pursuant to art. 147-ter., para. 4 of Legislative Decree 58/98, so-called Finance Act (TUF), the minimum number of independent Directors must be 1 in the case of a BoD up to 7 members, 2 in the case of BoD exceeding 7 members. During the year the BoD verified that the Directors met the conditions required to qualify as independent. As at 31/12/2021, 5 Directors are effectively independent.

FUNCTIONS OF THE CHAIRMAN, CHIEF EXECUTIVE OFFICER

The **Chairman** is the legal representative of the Company and is vested with powers of signature. He/she also convenes and chairs the Board of Directors and Shareholders' meetings. The Chairman supervises the secretariat of the Board of Directors of the Parent Company and oversees the proceedings of the Board of Directors, ensuring the timeliness and completeness of the meeting and pre-meeting information; ensuring that appropriate information flows are in place between Acea and the Group companies in order to monitor the consistency between the strategic guidelines and the performance; verifying the implementation of the resolutions adopted by the Board of Directors and the rules and principles of Corporate Governance, also in implementation of the powers reserved to the Board of Directors. He also presides over the topics of ***corporate social responsibility***.
The **Chief Executive Officer** is entrusted with the ordinary business of the Company. He/she has signing powers for the company and legal and procedural representation and any other powers delegated to him/her within the limits of the law and the By-laws. His/her terms of reference are based on long-term plans and annual budgets approved by the Board of Directors. Moreover, he/she ensures and monitors compliance with operating guidelines, implementing organisational and procedural changes to the Parent Company's activities consistent with the guidelines issued by the BoD. The current Chief Executive Officer is identified by the BoD as the Director in charge of the SCIGR and performs the duties of Head of the Business Development Strategies, Production and Overseas Department.
The Chairman and the Chief Executive Officer may jointly implement acts reserved for the Board of Directors concerning contracts, purchases, participation in tenders, issue of sureties, appointment of members of the Board of Directors and Boards of Statutory Auditors of the most significant subsidiaries and affiliates when the urgency of the matter does not allow their convocation, informing the Board at its first subsequent meeting, which shall establish the existence of proven urgency and need.

INTEGRATED GOVERNANCE INDEX 2021 AND ACEA POSITIONING

The **Integrated Governance Index** (IGI) is a consolidated analysis which assesses the positioning of companies against sustainability governance developments. The questionnaire underlying the index, now in its sixth edition in 2021, is addressed to the top 100 companies listed on the Italian Stock Exchange, to the companies that publish a Non-Financial Statement pursuant to Legislative Decree no.254/2016, and to the top 50 non-listed financial and industrial companies in the Mediobanca classification. The **questionnaire** consists of **an ordinary area**, **divided into ten areas of analysis**, and **an extraordinary area**, **which varies each year**, and explores challenging issues. In 2021, the Extraordinary Area looked at **ESG Identity**. The topics examined by the Ordinary Area range from the Corporate Governance Code to remuneration linked to ESG aspects, from the purpose to succession plans.
Acea, in its fifth year of participation, **achieved a score of 59.23** (scale of 0-100), coming 21st place out of a total of 80 respondents and recording a decrease compared to the previous year (score of 64.6 and 15th place). In particular, the areas where Acea performed best were **compliance with the Corporate Governance Code**, **Board and Sustainability Committees**, **Human Resources** and **the integration of ESG topics into strategies and remuneration**. The aspects with the least points related to the **Succession Plans**, **ESG Finance**, **Digital ESG Governance** and the **Purpose and stakeholders**. It should also be noted, as acknowledged by the analysts, that improvement initiatives on a number of these critical aspects, such as the issue of a green bond in January 2021, were already in place at the time of the search but could be not included due to the time limits of the survey. The IGI findings were subject to a **specific induction** aimed at the Acea Directors.

In accordance with current legislation, the Ordinary and Extraordinary **Shareholders' Meeting may be called up by the Board of Directors** and **at the request of shareholders** representing at least 5% of the share capital. Furthermore, in compliance with such provisions, the shareholders representing at least 2.5% of the share capital may request the addition of new topics be added to those to be discussed and submit resolution proposals for matters already included in the agenda.
Shareholder participation is facilitated by technology-based interactions (electronic notice of proxies; notice of call posted on the website). Prior to the date set for the meeting, the shareholders may submit enquiries regarding topics on the agenda, also by email. There are no shares with limited voting rights or devoid of such right[38].

Except for the shareholder Roma Capitale, restrictions shall apply to the voting right of shares exceeding 8% of the share capital, as laid down by the Articles of Association. Neither shareholders' agreements nor special rights of veto or in any way affecting the decision-making process exist other than as a result of the equity interest held.

The Parent Company has a number of **Company Committees** that operate on a continuous or periodic basis, attended by company management, in order to deal with significant aspects of the business or to assess strategic initiatives, **facilitating decision-making processes** and increasing the capacity for a prompt and coordinated response from an integrated perspective.

38 With the exception of 416,993 own shares (corresponding to about 0.2% of the total shares) for which the right of vote is suspended pursuant to art. 2357-ter Civil Code. See also the *Report on corporate governance and the shareholders' structure*.

TOP MANAGEMENT REMUNERATION DETERMINATION PROCESS

A **Remuneration policy** is in place in Acea concerning top management, directors tasked with specific duties and executives holding key positions.
The remuneration system regarding these individuals is based on a **clear and transparent process**, with a key role being played by **the Appointment and Remuneration Committee** which formulates proposals regarding the remuneration Policy and the **Board of Directors** of the Company which approves them. The role of the two main corporate governance bodies ensures the observance of rules which avoid producing conflicts of interest and ensuring clarity through adequate information.
The Shareholders' Meeting may set the fixed emoluments of the BoD members throughout their term of office and, furthermore, decides for or against (binding resolution pursuant to art. 123-ter of the Finance Act, paragraph 3-ter) the first section of the Report on Remuneration (paragraph 3 of the same article) and decides for or against (non-binding resolution pursuant to art.123-ter of the Finance Act, paragraph 6) the second section of the Report on Remuneration (paragraph 4 of the same article). The remuneration was confirmed for the Board members, as established by resolution of 5 June 2014; the Board of Directors, in exercising its competence in setting the payments for the Directors with special offices, resolved on the retributive references for the Chairman and the Chief Executive Officer throughout their term in office.
For more details see the *Report on the remuneration policy and on the fees paid – 2021* available on the website www.gruppo.acea.it.

Acea's Internal Control and Risk Management System (SCIGR), which holds a central role in the Group's corporate governance structure, consists of a set of people, tools and organisational structures intended to:

- **identify the risks** that can affect the pursuit of the objectives defined by the Board of Directors;
- encourage **the taking of conscious decisions** that are consistent with the company's objectives, within the context of a widespread knowledge of the risks and the level of tolerance to them, legality and company values;
- **safeguard the company's assets**, **the efficiency and effectiveness of its processes**, **the reliability of the information** provided to corporate bodies and the market and compliance with internal and external regulations.

INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM

The **Internal Control and Risk Management System** (**SCIGR**) Guidelines promote the proper management of the Group consistent with the corporate objectives through a process of identification, measurement, management and monitoring of the main risks and the activation of information flows to ensure sharing and coordination between the various SCIGR actors. The Guidelines take into account the recommendations of the *Corporate Governance Code* of Borsa Italiana and are inspired by existing *best practices*, in particular **CoSO – Internal Control – Integrated Framework** (*Committee of Sponsoring Organisations of the Treadway Commission*) and are intended to:

- Provide guidance for the actors of the SCIGR, **so that the main risks** pertaining to the Acea Group, including those regarding sustainability in the medium-long term, are **correctly identified** and adequately **measured**, **managed and monitored**;
- **Identify principles and responsibilities** with regards to governing, managing and monitoring risks linked to company activities;
- Provide for **control activities** at all operational levels and identify tasks and responsibilities to ensure coordination between the main subjects involved in the SCIGR.

Risk management is a **cross-cutting process** with **widespread responsibilities among all the parties of the company**: the Board of Directors and the Board Committees, the Director in charge of the SCIGR (who is also the Chief Executive Officer), the Board of Statutory Auditors, all the managers and employees, the Manager in charge, the second level Supervisors, the Supervisory Body, Data Protection Officer, the Internal Audit Function and the Risk & Compliance Function.

Dedicated corporate structures in the Holding Company oversee **specific models** for monitoring risks, including risks relating to the potential commission of crimes.

The internal control structures **carry out constant monitoring and adjustment activities** of their operating models and undertake implementing activities (e.g. training) in order to oversee the relevant risks in the best manner possible

Chart no. 15 – The architecture of the SCIGR

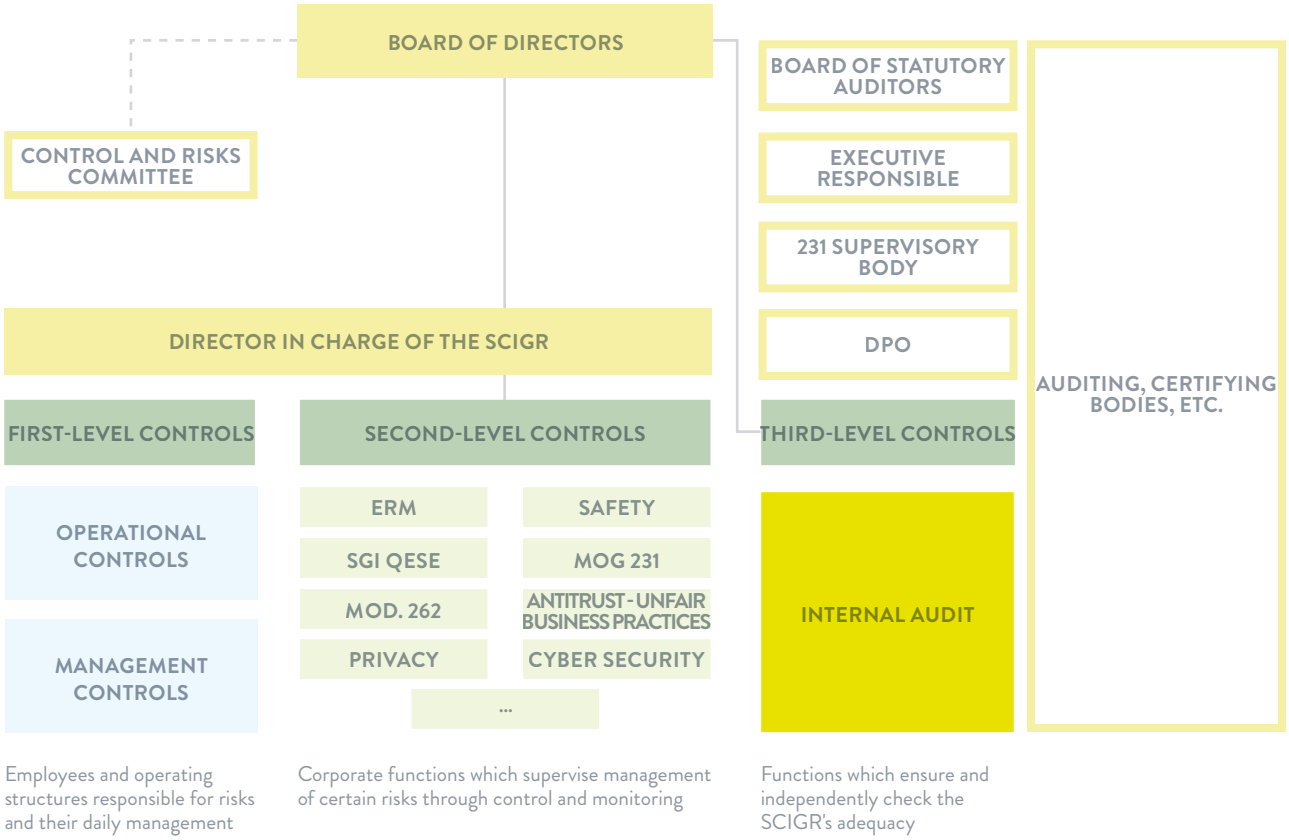


Chart no. 16 – The key players of the SCIGR

	BoD: determines the guidelines of the SCIGR **so that the main risks for Acea and its subsidiaries are identified, measured and managed**
	Appointed Director: implements the SCIGR guidelines and takes care – also by using the Audit and Risk & Compliance Departments – of the identification of the main corporate risks, subjecting them periodically to the BoD
	Board of Statutory Auditors: monitors the legislative and procedural conformity and the correctness of the administration
	Company staff: acts with different responsibilities, from management to workers, in maintaining an efficient process of identifying managing risks, operating with respect to the procedures and performing activities of control on the line
	Financial Reporting Officer: is responsible for establishing and maintaining the Internal Control System regarding Financial Statements
	Risk & Compliance – ERM: defines the risk assessment and prioritisation methodology and coordinates the management of the periodic *Risk Assessment process*
	Supervisory Body: has powers of initiative and action regarding the operation of the 231 Model
	Data Protection Officer: in charge of overseeing company organisation compliance with Reg. EU 679/2016 through guidance, control and monitoring activities
	Internal Audit: carries out independent audits on the operations and suitability of the SCIGR using an audit plan (risk based) approved by the BoD and monitors the execution of the action plans issued following the audits performed

Table no. 9 – Models and controls

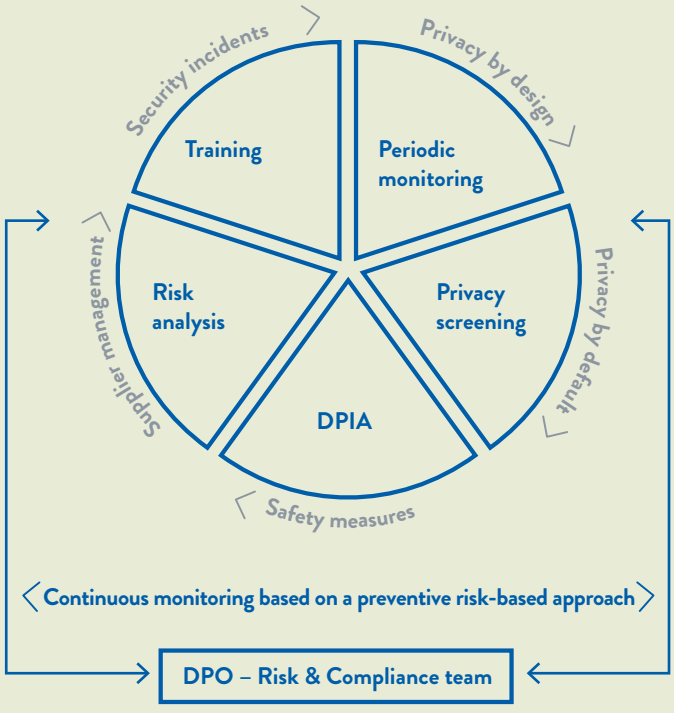
Models and controls	Oversight areas
Guidelines of the Management and Control Model pursuant to Law 262/05	Risks connected with the **Group's Financial Reporting**
Privacy Governance Model	compliance with EU Regulation 2016/679 (GDPR) and other national and European provisions on the **protection of personal data**
Antitrust Compliance Programme	compliance with **antitrust and consumer regulations** and development of a corporate culture to ensure the protection of competition and consumers
Oversight of Cyber Security	**Cyber** risk management, also in compliance with EU Directive 1148/2016 on European Information Systems and Networks (NIS)
Oversight of ISO45001 and ISO14001	monitoring **workplace health and safety risks and environmental risks** in accordance with international standards
Organisation, Management and Control Model as per Legislative Decree 231/01	Risk of committing **crimes and administrative offences** in the performance of the Company's activities

THE ACEA PRIVACY GOVERNANCE MODEL

Acea has a consolidated **Group Privacy Governance Model**, compliant with the indications of Regulation (EU) 2016/679 on data protection (GDPR), which constitutes the **organisational** and **control** framework in which the roles and responsibilities and the implementing methods of the basic principles of the Privacy regulation are identified, with a ***preventive risk-based*** approach supported by **continuous monitoring** and periodic reviews.

This Model – having concluded the implementation phase in the subsidiaries – was revised during the year on the basis of the application results seen in the previous two-year period and enriched with adequate methodological tools to reinforce its application efficacy (**Control Framework**).
Still characterised by a great commitment to the management of the *Covid-19 pandemic*, 2021 saw Acea involved in **initiatives with a high impact on privacy**, including **the activation of the company vaccination hub**, which led to the introduction of specific procedures to ensure secure and compliant data management (vaccination status, management of absences/replacements, etc.).

A **risk analysis** programme was also launched for all processing included in the Parent Company's records, to allow for the constant and prompt update of the associated risk. On processing considered potentially high risk, according to the specific situation, specific analyses such as the **DPIA** (*Data Protection Impact Assessment*), **LIA** (*Legitimate Interest Assessment*) and **TIA** (*Transfer Impact Assessment*) were carried out. For outsourced activities, specific contractual tools were adopted to govern personal data processing and continuous monitoring of *procurement* activities is ensured.
In 2021, the activities required to implement the "*Guidelines on cookies and other tracking tools*" **of the Italian Data Protection Authority** were carried out, through the adoption of a tool dedicated to cookie management on the Group's various websites. Lastly, communication initiatives and training sessions on the privacy impacts of individual process and an online **Workshop** dedicated to *Digital Marketing and Telemarketing were carried out*, with participation from sector experts, members of the Data Protection Authority and Business Associations.



ANTITRUST COMPLIANCE PROGRAMME

Compliance with **antitrust law** and the **legislation on consumer protection** is a priority for the Acea Group. To this end, Acea launched a project to revise and update the current **Compliance Programme**, aimed at the further reinforcement of the internal control system in terms of Antitrust & Consumer Protection and the improvement of the compliance strategies according to standards applied at European level and in line with the "Guidelines on Antitrust Compliance" issued by the AGCM, by national and European best practices and by the law. The subsidiaries have approved, according to the **guidelines set out by the Parent Company**, a specific Antitrust Programme, based on specific characteristics, the market context and the applicable legislative and regulatory provisions, and ensure the **presence of an oversight unit** with an Antitrust Representative responsible for implementing the Programme.

THE MANAGEMENT OF CYBER RISK AND PROTECTION OF INFORMATION ASSETS AND ICT SYSTEMS

Cyber threats that are potentially capable of causing a malfunction or interrupting the provision of essential services such as energy and water is one of Acea's national security issues.
The Cyber Security Unit, part of the Technology & Solutions Department, adopted a model in line with the requirements of public institutions, activating the CSIRT (*Computer Security Incident Response Team*) operating structure with subsequent accreditation with the National CSIRT of the Presidency of the Council of Ministers. In response to the changing national legislative context, **accreditation with the National Agency for Cyber Security**, **the Ministry of the Interior and Defence** was obtained.
In line with the indications of the competent authorities, Acea invested in upgrading the measures for the protection of networks and IT, IoT and OT systems and launched a project to assess the status of central and field systems, especially those of a strategic nature, to be able to then implement increased security in the systems.
In 2021, the **Cyber Risk Analysis Programme** was launched on all Acea services for the identification, measurement and management of risk due to cyber threats. At the same time, with the creation of the *Security Engineering* structure, the **Vulnerability Management Programme** was launched, aimed at the research and mitigation of vulnerabilities, to identify and combat illicit actions, with *machine learning*, *advanced analytics* and *big data* instruments; a **Security by Design** process was also activated, for the implementation of security requirements during developments of all technological projects. Through the CSIRT structure, the **Real Time Security Monitoring and Incident Management** capacities were **upgraded by over 50% compared to 2020** and the integration was launched between IT, IoT and OT protection processes, procedures and technologies, as per sector *best practice*, to ensure a holistic overview and united governance of security.
To adapt the company's legislative context to the operating requirements, guidelines and procedures that define the conduct required of personnel, how to use IT resources and checks are being constantly updated.
A **new service provision model** was also made operational, based on the flexibility of the requirements of the operating companies, to increase the efficiency of the Group's cyber security management at economic and operating level. The **awareness & training campaign** aimed at the entire company population also continued, to increase awareness and individual knowledge of cyber security topics.
Lastly, Acea continued its commitment to the **ECHO programme** (*European network of Cybersecurity centres and competence Hub for innovation and Operations*) for the establishment of a **European network of expert centres on cyber security** and to the H2020 ATHENS project dealing with security and resilience of digital infrastructure.

PROTECTION OF PHYSICAL AND DIGITAL ASSETS AND MANAGEMENT OF INTERNAL RISKS

The **Security Unit**, within the Human Resources Function, oversees activities to protect the **company's physical assets**, used for the **prevention of fraud** and **compliance with current security regulations**. **It also defines** the **Guidelines** and policies in terms of the **safeguarding and protection of property**; it oversees the design, installation and maintenance of the Security Systems for the company sites of the Group subsidiaries and it coordinates **the implementation of plans for the continuity of operations and the management of emergencies**.
The Security Unit manages the **security and reception facilities** and personnel and controls the **Security Operating Room (SOS)**, the video surveillance, anti-intrusion and alarm systems; lastly, in collaboration with the relevant structures and companies of the Group it coordinates the proper performance of the **activities required by judicial authorities**, **security institutions and the police**.
The focus on the **pandemic risk** in the workplace also continued during the year, through the preparation of "access filters" to limit Covid-19 infection, carried out with the activation of **39 thermal imaging cameras** at the main company offices, as well as App solutions on mobile devices for the electric signature and for checking the Green Pass upon entry, which allowed for full application of the regulations on **managing the flow of employees and visitors in the workplaces**.
In 2021, the replacement of IT equipment in the **Security Operating Room** was launched in order to improve performance and achieve compliance with the best standards of security, and new technologies (digital cylinders) were adopted for access to sensitive locations.

Within the framework of the Internal Control and Risk Management System, Group companies adopt their own **Organisation, management and control models pursuant to Legislative Decree no. 231/2001** to prevent the risk of certain crimes or administrative offences committed in their interest or benefit by top management or subject to the management or supervision of the latter. The development of the Models is preceded by a **mapping of the business areas concerned** (so-called "risk areas") and the **identification of sensitive activities and potential offences**. The Models are promptly **updated** in response to changes in the organisation or activities carried out, or following the introduction of new cases in the catalogue of predicate offences of the aforementioned legislative decree.

The **Supervisory Body** (**SB**) **has full and autonomous powers** of initiative, action and control **regarding the operation**, **effectiveness and observance of the specific Models**. An oversight organisation was set up in the **Internal Audit Department**, which ensures auditing and the flow of information to the Supervisory Body. For Acea, **the adoption of principles** and compliance with the rules set out in the Company Code of Ethics – an integral part of the 231 Model and the internal control system – are also relevant to prevent crimes pursuant to Legislative Decree no. 231/2001, as well as being a ready reference for all those who are addressed by the Code.

The **Internal Audit** function carries out the controls envisaged in the **Audit Plan**, **approved by the Board of Directors** and subject to the opinion of the Control and Risk Committee. The Plan is drawn up **on the basis of the analysis and prioritisation of the main risks for Acea and its subsidiaries**, carried out during the *Risk Assessment*, also thanks to the monitoring carried out by the corporate Functions responsible for second-level controls.
In 2021, **around 86% of the Plan activities** concerned **corporate processes deemed as exposed** to the **risks as per Legislative Decree no. 231/01**, amongst which the crimes regarding **corruption**, the **environment**, and in violation of **injury prevention laws and the laws safeguarding occupational health**.
With regard to audits of processes **related to risks of corruption**, there are in particular periodic audits of "Sponsorships", "Consulting", "Personnel selection" and "Purchasing and payments" for all companies that adopted the Model pursuant to Legislative Decree no. 231/01.
As required by the professional standards of the **Institute of Internal Auditors** (IIA), the audits also assess the specific fraud risks of the process analysed and test the operation of the related controls.
With reference to ***detection audit*** activities, **23 *Key Risk Indicators*** have been adopted for the purchasing area, which are analysed periodically.

REPORTS RECEIVED RELATED TO THE *CODE OF ETHICS*

In 2021, projects were launched to **update the Code of Ethics** in view of the organisational and regulatory changes that had developed since it was last approved. The principles and core values of the Acea Group, which already represent a key asset for the company, will be revised to ensure their alignment with the current context of reference.
Acea has a procedure **which can be activated by both employees and external parties**, for the receipt, analysis and processing of **reports** – so-called "**whistleblowing**" reports – relating to potential violation of the law, the internal rules and the *Code of Ethics*, as well as issues pertaining to the Internal Control System, corporate information, the Company's administrative responsibility (Legislative Decree no. 231/01), fraud and conflicts of interest, while ensuring the **maximum level of confidentiality and privacy** when processing the reports received in order **to protect the whistleblower and the reported party**. The **"*Comunica Whistleblowing*" company IT platform** uses an advanced encryption system for communications and its database to guarantee compliance with required regulatory standards (Law no. 179/2017), **confidentiality** for whistleblowers, secure filing of documents sent and uploaded to the system and confidential management of analysis and other processes.
The reports related to alleged violations of the *Code of Ethics* and the SCIGR of the Group companies are sent **to the Ethics Officer**, **the collegial body within the Group that manages the system for reporting alleged violations** due to non-compliance with the law, the internal regulations and the *Code of Ethics* and monitors observance of the values of transparency, legality, fairness and ethical integrity in relations with employees, suppliers, customers and all stakeholders.
The Ethics Officer also prepares **periodic reports** on the main findings to company top management and the supervisory bodies.
In 2021 **the Ethics Officer received 14 reports**, of which 12 related to alleged violations of the Code of Ethics and 2 for alleged violations of the SCIGR; 8 of these reports were sent to the Ethics Officer's email address, 1 via ordinary mail and 5 via the whistleblowing platform. Classifying the reports by topic, 7 pertain to procurement/supplier relations; 4 to human resources; 2 to health, safety and environment and 1 to the protection of company assets.
Following preliminary verification or checks, during closure, the **reports were classed** with the following outcomes: 1 report was considered founded and, therefore, the company involved implemented initiatives for the implementation and reinforcement of the existing checks; 6 reports were considered "unfounded", 7 were "filed" since they were "not substantiated" and "not verifiable".

ACEA ETHICS OFFICER AND THE CODE OF ETHICS: THE "PROTEGGO L'AZIENDA CHE MI PROTEGGE" [I PROTECT THE COMPANY THAT PROTECTS ME] CAMPAIGN CONTINUES

The Ethics Officer is also tasked with supporting the company departments appointed to **Code of Ethics training**, by promoting **communication programmes and activities intended for their maximum dissemination**, in addition to the Ethics and Sustainability Committee in monitoring the adequacy and implementation of the *Code of Ethics* (for the matters within its remit). To this end, he/she can suggest that the Ethics and Sustainability Committee issue or amend any guidelines and operating procedures in order to reduce the risk of violation of the *Code of Ethics* and indicate opportunities to update it.

In 2021, the Ethics Officer continued to support the internal communications campaign "***Proteggo l'azienda che mi protegge***" [I Protect the Company that Protects Me] intended to disseminate the knowledge of the whistleblowing tool and to encourage greater awareness of the values and principles contained in the *Acea Group Code of Ethics* and the importance of protecting them, through publication on the company intranet of Campaign "news" and video clips, produced with contributions from colleagues and top management.

INTEGRATED ANALYSIS AND RISK MANAGEMENT METHOD

Acea continues to develop the **ERM Programme**, based on the **CoSO framework** "*Enterprise Risk Management (ERM) - Integrating with Strategy and Performance*" 2017, to **improve an integrated vision of risks and their proactive management**. The aim of the ERM Programme is to:

- Represent the **type and significance** (probability and economic-financial and/or reputational impact) **of the main risks**, **including sustainability risks**, that may jeopardize the achievement of the Group's strategic and business objectives;
- Address strategies and subsequent additional mitigation actions.

The methodology and tools uses to identify risks and assess their severity in a consistent manner at a Group level – **definition of the Risk Model** – further focused the analysis on **ESG aspects** and the risk scenarios associated with the **issues that emerged from the Materiality Analysis**. During the Risk Assessment, performed annually at Group level, the Risk Owners identify the risk scenarios related to the **Acea material topics**, highlighting the possible impact and typical control activities implemented in order to manage and mitigate them. The results of the ERM Programme are also taken into account when **planning actions to mitigate risks and seize opportunities** by Group companies with certified Management Systems. The ERM processes allow for constant interaction between the ERM Unit of the Parent Company's Risk & Compliance Function and the *focal points* in the Risk & Compliance Units of the Operating Companies (see Chart no. 17).

Chart no. 17 – The ERM Unit and the corporate focal points

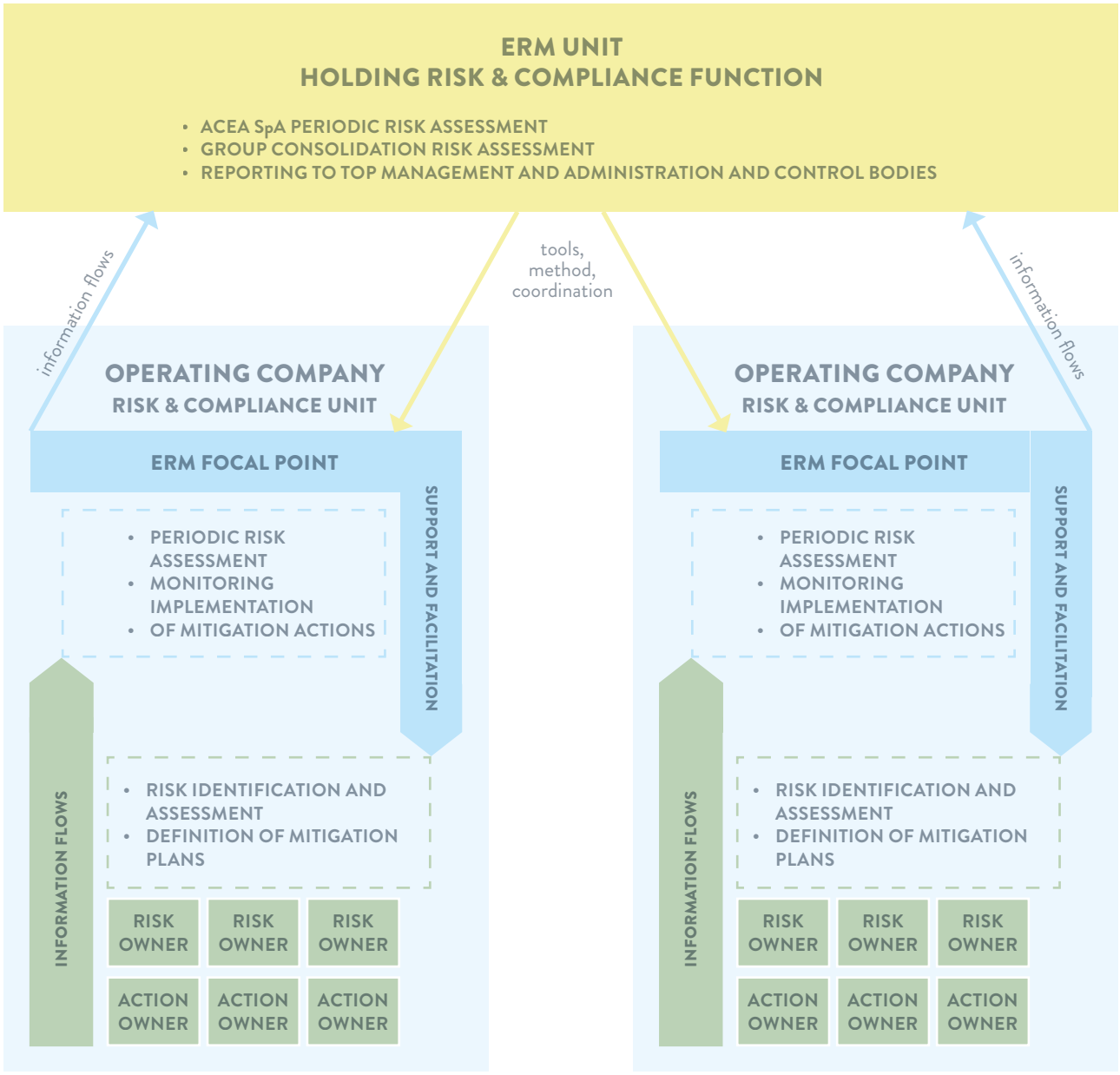


Table no. 10 – Acea material topics, risks and management methods

Highly significant material topic and related risk	Potential impact on Acea	Potential impact on stakeholders and capital	Risk management method
SUSTAINABLE WATER CYCLE MANAGEMENT unfavourable natural events and/or climate change; authorisation delays impacting on optimal management conditions; monitoring and analysis	economic/ financial reputational	*environment and community* natural and social-relational capital	• Policies, processes and procedures (relations with institutional representatives and authorisation bodies) • Dedicated organisational structures • Focus of investments • Business Continuity and Maintenance Plans • Specialist studies and analyses (ISO 17025) • IT security systems
SUSTAINABILITY IN INFRASTRUCTURE DESIGN, CONSTRUCTION AND MANAGEMENT environmental and social impacts from inadequate and failed design, construction and/or management of plants/ networks	economic/ financial reputational	*environment, community, institutions, suppliers* natural, production and social-relational capital	• Policies, processes and procedures (application of sector best practice) • Monitoring and periodic reporting • People and organisation (training and skill consolidation) • Implementation of specific applications • Maintenance plans
OCCUPATIONAL HEALTH AND SAFETY accidents at work, risk of spreading disease	economic/ financial reputational	*employees*	• Policies, processes and procedures (ISO 45001, Biosafety Trust, ISO39001) • People and organisation (dedicated structure, training and communication plans) • Supplier checks • Extraordinary maintenance on plants serving the offices, office sanitisation • Monitoring and periodic reporting
INNOVATION OF SMART UTILITY PROCESSES, INFRASTRUCTURE AND SERVICES operational inefficiency due to technological and innovative inadequacy; cyber risk	economic/ financial reputational	*community* and *business partners* production, intellectual and social-relational capital	• Policies, processes and procedures (dialogue with institutional counterparts) • Monitoring and periodic reporting • People and organisation (training and skill consolidation) • IT security systems
SUSTAINABILITY AND CIRCULARITY ALONG THE SUPPLY CHAIN failure to control the purchasing process – failure of suppliers to comply with the requirements (health and safety, environmental, anti-corruption)	economic/ financial reputational	*environment and suppliers* natural, human and social-relational capital	• Policies, processes and procedures • Quality monitoring of goods/services received • Qualified suppliers register • Specialist benchmark studies and analyses
EFFICIENT USE OF WASTE FOR A CIRCULAR ECONOMY failure to comply with regulations; obstacles in the waste treatment and delivery market	economic/ financial	*environment* natural capital	• Policies, processes and procedures (ISO 14001 and EMAS) • People and organisation (dedicated structures and training) • Periodic reporting • Audits on customers/suppliers/partners • Consolidation through corporate acquisitions (M&A) • Monitoring and control plans
STRATEGIC APPROACH TO STAKEHOLDER AND COMMUNITY RELATIONS tensions with stakeholder representatives in the region with negative effects on the development of activities	economic/ financial reputational	*community* social-relational capital	• Policies, processes and procedures • People and organisation (stakeholder engagement oversight activities, training and skill consolidation) • Dialogue with counterparties
BUSINESS ETHICS AND INTEGRITY conduct contrary to binding regulations, internal rules and standards of reference	economic/ financial reputational	*community, institutions* and *business partners* production, intellectual and social-relational capital	• Policies, processes and procedures (Code of Ethics – 231/01 organisation, management and control model – whistleblowing system) • People and organisation (training and communication plans) • Monitoring and periodic reporting
CUSTOMER FOCUS failure to achieve service quality levels until they are discontinued inadequate focus on customer expectations	economic/ financial reputational	*customers* social-relational capital	• Policies, processes and procedures • Dedicated organisational structure • Periodic reporting (analysis of customers and services) • Regulatory framework and reference legislation monitoring • Investment in Customer Care applications

AIR QUALITY: REDUCING EMISSIONS INTO THE ATMOSPHERE AND POLLUTION exceeding the emission limits envisaged by laws and authorisation decrees; failure to achieve the dissemination objectives of consumption from renewable sources	economic/ financial reputational	*environment and community* natural capital	• Policies, processes and procedures (ISO 14001, ISO50001 and EMAS) • People and organisation (training plans) • Focus of investments • Monitoring and support tools • Specialist studies and analyses • Periodic reporting
INVOLVEMENT OF PERSONNEL, INVESTMENT IN HUMAN CAPITAL AND ENHANCEMENT OF SKILLS lack of adequacy both in terms of skills and organic plants	economic/ financial reputational	*employees* human capital	• Policies, processes and procedures (remuneration and incentive policies) • People and organisation (dedicated structures and training) • Performance evaluation system • Monitoring and periodic reporting
PROTECTION OF THE TERRITORY AND BIODIVERSITY impacts on environmental balance conditions caused by plants that unexpectedly do not comply with legal limits	economic/ financial reputational	*environment* natural capital	• Policies, processes and procedures (ISO 14001 and EMAS) • People and organisation (dedicated structures and training) • Maintenance plans • Focus of investments • Periodic reporting • Remote control and remote management applications
DECARBONISATION AND ADAPTATION TO CLIMATE CHANGE failure to build sustainable plants and to adapt operating practices to the evolution of climate change and to achieve the dissemination objectives of consumption from renewable sources (production of energy from renewable sources, resilience of the electricity grid, availability of water)	economic/ financial reputational	*environment and community* natural and production capital	• Policies, processes and procedures (ISO 50001, ISO 14001, UNI 11352 and EMAS) • Dedicated organisational structure • Specialist studies and analyses • Focus of investments • Periodic reporting
CONSOLIDATION OF SUSTAINABILITY ELEMENTS IN CORPORATE GOVERNANCE violation of Legislative Decree no. 254/16; inadequacy of the internal regulatory system with respect to the guidelines of the Corporate Governance Code	reputational	*shareholders* economic-financial and intellectual capital	• Policies, processes and procedures (updating and verification of information systems and the organisation) • Board committees (Ethics and Sustainability, Control and Risks) • Certification of data managers and reporting assurance by the auditor • Monitoring and periodic reporting
BUSINESS EVOLUTION THROUGH OPEN INNOVATION AND DEVELOPMENT OF SYNERGIES WITH SCIENTIFIC AND ENTREPRENEURIAL PARTNERS inability to seize opportunities deriving from technological innovations and their integration into business processes	economic/ financial	*community, institutions* and *business partners* production, intellectual and social-relational capital	• Policies, processes and procedures • Dedicated organisational structure for innovation oversight • Specialist studies and analyses • People and organisation (dedicated structures and specific expertise)
COMPANY WELL-BEING, DIVERSITY AND INCLUSION increased absenteeism rate; negative company climate; possible lawsuits from employees	reputational	*employees* intellectual and social-relational capital	• Policies, processes and procedures • People and organisation • Training and communication plans • Corporate welfare initiatives (e.g. flexible benefits, health check-ups)

- ECONOMIC GOVERNANCE TOPICS - SOCIAL TOPICS - ENVIRONMENTAL TOPICS

The ongoing Covid-19 phenomenon also continues to impact on the risk analysis and the identification of risk management methods; for example, in relation to **occupational health and safety** and **corporate well-being**, the aspects related to detecting and managing the health risk and vaccination campaigns, widespread remote working (smart working) or, in relation to the guarantee of **customer focus**, the aspects associated with upgrading the digital channels and their innovation.

The topic of **climate change** is monitored by Acea, which responds to the CDP questionnaire (formerly *Carbon Disclosure Project*), including the assessment of risks and opportunities related to activities in the **short**, **medium** and **long term**. Table 11 provides a representation of the main evidence: short, medium and long-term scenario and more significant implications for the company in terms of financial, reputational, environmental and customer impact. In 2021, Acea also concluded an initial important project for alignment with the International Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) (see the dedicated box in *Relations with the environment*).

Table no. 11 – Risks and opportunities related to climate change: CDP evidence

RISKS

Type of risk	Type details and risk description	Most impacted industrial areas	Time frame
TRANSITION Risks arising from the ongoing transition to a decarbonised economic system (e.g. regulatory, technological, market)	**Legislative/Regulatory** These risks can manifest in the following ways: increasing carbon tax policies and white certificates; changes in incentive programmes; tightening of the values associated with the Emission Trading Scheme (both in terms of allowances – paid or not – and actual emission allowance costs); regulatory developments that impose the reduction of impacts during conduct of operations	Energy production (thermoelectric and waste-to-energy) Electricity grid management Water management	short/medium term
	Technology Technological evolution may impose the reconversion of the design of processes in order to make them less polluting (for example replacing existing plants or parts thereof with other low-emission technologies)	Energy production (thermoelectric and waste-to-energy) Electricity grid management Water management	medium
	Legal These include risks related to the worsening of legal and economic sanctions for failure to comply with technical quality and performance standards in the electricity and water services (fines and incremental compliance costs)	Electricity grid management Water management	medium-long
	Market Commercial risks are attributable to the failure to adapt the products/services of the Group companies to the new requirements of customers, who are increasingly more aware of the topics of sustainability, or to the increase in poverty, also caused by climate change, which changes the habits of consumers/customers	All businesses and Commercial in particular	medium-long
	Reputational Reputation risk derives from a negative perception of the company's image by its stakeholders as a result of negative events/conditions associated with climate change (e.g. interruption in services caused by the scarcity of water or by extreme weather events)	The Acea Group	short/medium term
PHYSICAL Risks arising from the physical effects of climatic events (acute if related to episodic phenomena, or chronic if related to long-term changes)	**Acute** Extreme weather events such as heavy rainfall and cloudbursts place stress on the resilience of the electricity grid (interruption to power supply) but also create difficulties in the normal management of over-abundance of water in the water service: cloudbursts can also cause a temporary service disruption in wastewater treatment plants or the entire sewerage network service. Heat waves cause peaks in demand for energy/water on the electricity distribution grid/water network	Electricity grid management Water management Energy production	short-medium-long
	Chronic The reduction in rainfall can have a negative impact on the electricity distribution service, the production of electricity by the hydroelectric plants and the availability of water for human consumption, thus causing an increase in energy consumption for the withdrawal of water. The risk of more frequent lightning strikes can cause interruptions to the distribution of electricity and thus economic damage. Temperature changes can cause variations in the composition of incoming waste in waste-to-energy plants, even changing the technological/operating needs associated with variations in emissions and the necessary processing. Incentives are also linked to the biodegradable quantity of the waste	Electricity grid management Water management Energy production	short-medium-long

OPPORTUNITIES

Drivers	Type details and opportunity description	Industrial areas affected	Time frame
Circular economy	Promotion of circular economy models and waste recovery projects, for example with waste-to-energy processes combined with material recovery (for example: sodium and ash recovery)	Environment Segment	medium
Development of photovoltaic plants	Diversification of production facilities with the acquisition and/or construction of photovoltaic plants that, in addition to receiving incentives for the feeding of electricity produced into the grid, allow balancing any reductions in hydroelectric production	Production of electricity; technological innovation	medium
Increase in network resilience	Investments to improve the resilience of the electricity grid promoted by ARERA	Distribution of electricity	medium
Market and services	Opportunities arising from the change in energy demand related to changes in peak ambient temperatures and the increase of the average temperature, with an impact on price growth and volumes sold	Energy sales	short/medium term

By 2022, Acea will publish a document on climate reporting, in alignment with the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), in order to develop better awareness and financial reporting practices related to most significant aspects of climate change (see section *Relations with the environment*).

Lastly, in relation to the management of **operational risks in case of emergency** and the **preventive and operational initiatives defined by the Group companies**, refer to the chapter *Institutions and the Company* (paragraph *Plans for emergency management*).

ANALYSIS OF POTENTIAL ENVIRONMENTAL RISKS

The companies operating in the industrial segments of **Water**, **Energy Infrastructure**, **Generation and the Environment** with ISO 14001:2015 certified environmental management systems have identified the **potential negative environmental impacts** generated by the activities in relation to specific events or operations.
For the **Water** sector, the main risks concern: acute or chronic climatic phenomena or seismic events, which could cause structural failure or malfunctions in the plants and network systems managed, causing water shortages for users or accidental spillage of pollutants; inefficient operational management of water, which could cause high levels of losses with consequent excessive consumption; water stress; possible breach of water control parameters with environmental consequences; inadequate interventions on the sewage treatment system with possible contamination of the soil and water bodies; risks of fires and explosions in treatment plants related to the production of biogas, with possible impacts in terms of emissions into the atmosphere.
In the context of **Energy Infrastructure**, the main risks are attributable to: existence of overhead and underground systems with impacts in terms of land use and subsoil; generation of waste and impacts on ecosystems; generation of electromagnetic fields with impacts in terms of exposure; maintenance of transformation plants with potential soil and subsoil contamination with hazardous materials; maintenance and construction of plants with impacts in terms of production of special waste.
For the electricity **Generation** activities, carried out with renewable and conventional power plants, the potential environmental risks attributable to the ordinary management of the plants or in the event of critical events like fires or explosions may lead to the accidental spillage of pollutants or the exceeding of threshold values in emissions (into the atmosphere, surface water and sewerage). An example of environmental risk derives from the potential dangerousness of structural failure of hydraulic works attributable to critical natural phenomena (such as earthquakes of particular intensity and/or millennial floods), which could affect the territory downstream of the plants (e.g. floods).

The **Environment** sector involves the treatment, recovery and disposal of waste, the recovery of materials and energy (waste-to-energy and composting) and the collection, transport, recovery and disposal of non-hazardous waste produced by waste treatment plants. In this context, potential risks for the environment could take the form of spills of hazardous substances and consequent contamination of the soil and aquifers or surface waters, or of emissions into the atmosphere or water above specific prescribed limits, the treatment of waste not compliant with the reference legislation with repercussions on plant operations, unintentional fires that may cause interruptions to plant operations and pollution of the surrounding areas, as well as the failure to make investments or carry out works on the plants, with impact on the company's management due to delays in the issue of authorisations; finally, environmental exposure can be caused by noise, odour and dust produced during extraordinary maintenance of the plants.

MANAGEMENT SYSTEMS

A system of *internal rules* was prepared for the regulation of the organisation, including aspects of general guidance and the statement of particular business aspects:

- **Group guidelines**: policies, regulations and management rules with which the Parent Company defines the general guidelines, guiding, coordinating and controlling the Group companies;
- **procedures**: acts governing the way in which a process is implemented, identifying roles and responsibilities.

The **Integrated Certification Systems** Unit within the Risk & Compliance Function of the Parent Company defines the methods and standards of reference for **the implementation of QESE (Quality, Environment, Safety and Energy) certified management systems**, as well as for further certifications and accreditations of interest to the Group, and operates in synergy with the same Units of the Operating Companies, to which the certified Management Systems are ascribed. These Units collaborate with the Energy Manager for the development and management of the **Energy Management System** and with the Head of the Prevention and Protection Service (RSPP) and the emergency coordinator for the **Workplace Health and Safety Management System**. The management of health, safety and environmental emergencies is handled by means of a specific procedure.
Acea also relies on professional profiles such as the **Energy Manager**, in both the Parent Company and in the Companies, and the **Mobility Manager**, whose duty is to respond to the demands for optimum management of internal energy consumption and staff mobility – i.e. the *Plans for travel between home and work*. They seek **systemic efficiencies and savings**, creating **positive external effects**, such as lower use of resources and reduction of greenhouse gases, the optimisation of travelling times and routes for employees, also with **positive impacts** on **road safety and urban traffic**. Through coordination with Energy Managers in the Companies, the Energy Manager has the duty of promoting **energy efficiency**, with actions to reduce consumption and cost control, while optimising the Group's energy costs.

Chart no. 18 – The certified integrated management system

In 2021, **the main operating companies** present in the scope of reporting **adopted certified management systems** (see table 12).
New developments during the year include the achievement of the *Biosafety Trust Certification*, for the prevention and control of the spread of infection in the workplace and already achieved in 2020 by Acea SpA, now also by **Acea Energia and Acea Elabori** as an essential tool for combating the health emergency caused by Covid-19. In 2021 the BIM (Building Information Modelling) certification was also achieved by **Acea Elabori** for engineering design and the professional skills of a group of BIM engineers.

In particular, **of the 16 main operating companies**[39], which represent the biggest impacts of the Group, **94%** hold **quality** certification; **87.5%** hold **environmental** certification (100% of companies in the Environment sector and 80% Water sector); **100%** have **safety** certification; **50%** have a certified **energy** management system. The **Acea Ambiente** plants located in Terni, San Vittore del Latium and Orvieto and the **Acque Industriali** site in Pagnana (Empoli), are also **registered** with the **EMAS**.

39 Of the 33 companies in the scope of reporting, the only ones not involved in a certification process are 16 companies in the photovoltaic segment and Acea Innovation, which has been awarded the commercial management of a number of added-value services.

Table no. 12 – Certified management systems in the Acea Group

	Quality (ISO 9001)	Environment (ISO 14001)	Safety (ISO 45001)	Energy (ISO 50001)	Other
Acea SpA	X	X	X	X	Biosafety Trust Certification
WATER					
Acea Ato 2	X	X	X	X	
Acea Ato 5	X	X	X	X	
Gesesa	X	X	X	X	
GORI	X	X	X		
AdF	X		X		
ENGINEERING AND SERVICES					
Acea Elabori	X	X	X		UNI CEI EN ISO/IEC 17025:2005 Accreditation of analysis laboratories UNI CEI EN ISO/IEC 17020:2012 Accreditation of inspection bodies Biosafety Trust Certification BIM UNI/PdR 74:2019 system certification and BIM UNI 11337-7 professional certification: 2018; UNI/PdR 78:2020
ENERGY INFRASTRUCTURES					
Areti	X	X	X	X	
GENERATION					
Acea Produzione		X	X		
Ecogena	X		X	X	UNI CEI 11352:2014
ENERGY (commercial and trading)					
Acea Energia	X	X	X		Biosafety Trust Certification
ENVIRONMENT					
Acea Ambiente	X	X	X	X	EMAS
Aquaser	X	X	X		ISO 39001:2016
Acque Industriali	X	X	X	X	EMAS
Berg	X	X	X		
Demap	X	X	X		

The companies with certified management systems carry out an annual **Management Review** to assess **the effectiveness of the systems**, propose possible improvements and verify the progress of activities. On these occasions, attended by the **Top Management and the first line of managers** of the Companies in question, elements are analysed, including: policy; context analysis and **materiality analysis** at Group level; **Group sustainability targets** and their monitoring; **risk assessment**; process performance; **significant environmental and energy aspects**; changes in legal requirements and those relating to **occupational health and safety**, **environment and energy**; **supplier** performance; **customer satisfaction** levels; analysis of complaints; **accidents and injuries**.
The results of the review for 2021, finding no criticalities, **confirmed the adequacy and efficiency of the management Systems.**
In line with the current *Management Systems and Sustainability Policies*, Acea **monitors the objectives required by the Management system in an integrated manner with the objectives of the 2020-2024 Sustainability Plan** approved by the Board of Directors.

THE ISO 37001 CERTIFICATION PROCESS OF ACEA SPA

In the year in question, Acea launched a planning process intended for the achievement of **ISO37001:2016 certification** (*Anti-bribery management systems*).
The management system is a flexible tool that envisages a systemic approach to the **prevention and combating of corruption**, is applied to the prevention of the phenomenon governed by the articles of the **penal and civil code** and provides a guide to implement, maintain, update and improve **a Management System** designed to **promote the transparency of all company processes**.
Creating a management system to prevent corruption is an effective way of implementing **actions that reduce the risk of corruption** in organisations and, as a result, exposure to liability including in terms of the application of the sanctions set out by Italian Legislative Decree no. 231/2001.

STAKEHOLDERS AND ALLOCATION OF GENERATED VALUE

STAKEHOLDERS AND THEIR INVOLVEMENT

Stakeholders are the various parties that play a **key role in making it possible to achieve the company's objectives** and represent the **main recipients**, **direct or indirect**, **of the value created**, **but also the impacts generated**, by the assets managed, according to a principle of mutual influence.
For this reason, for example, the natural environmental and the community are also considered stakeholders. Developing relationships of trust and adopting an inclusive proactive approach towards stakeholders is of particular importance for the Acea Group when generating and sharing value.
Acea promotes the involvement of stakeholders in line with the commitments expressed in the ***Management Systems and Sustainability Policies,*** and the principles set out in the ***Code of Ethics*** and the ***Stakeholder Engagement Principles and Values***, with a constructive approach that tends to rely on the results of dialogue and discussion. Furthermore, in 2021 the ***Stakeholder Engagement Principles and Values*** and the ***Stakeholder Engagement Group Procedure*** were formalised (see box).
In the Stakeholder Engagement process, the **identification** phase makes it possible to identify the parties directly or indirectly involved in company activities, assessing their level of qualitative and quantitative mutual influence. **Analysis** is then used to perform a structured evaluation of the existing **interactions** both between the company and the stakeholders as well as among the various categories of stakeholders, so that dialogue – **engagement** – and shared accountability paths may be developed. Lastly, the **management** phase leads to the **identification of answers** to the questions posed by the stakeholders or the company in order to pursue the achievement of company goals consistent with expectations.

Chart no. 19 – Stakeholders and their involvement

STAKEHOLDER ENGAGEMENT IN THE ACEA GROUP

The importance of strengthening relations with stakeholders, building a long-lasting, structured rapport of trust with them in a context that is continually changing, took on an even more relevant role in 2021, when the measures needed to combat the pandemic and the social distancing requirement strongly affected how people interacted. During the year, via online platforms, the activities curated by the Stakeholder Engagement Unit of Acea continued in order to **disseminate the culture of stakeholder engagement** within the Group, providing shared methodologies and useful tools for designing and implementing initiatives to develop more efficient interactions, including in line with the objectives set out in the Sustainability Plan and the Agenda 2030 for Sustainable Development.
To this end, the ***Stakeholder Engagement Principles and Values*** and the ***Stakeholder Engagement Group Procedure*** were formalised, with their related annexes, and **distributed on the company intranet and the corporate site**.
the *Principles and Values* guarantee a standard approach to stakeholder relations and constitute **strategic guidance**, as well as an element **underlying an extensive and coherent integration** of stakeholder engagement into the management of business activities. The *Procedure* governs the **management of the operating process** and makes it possible to identify and prioritise stakeholders to communicate with them efficiently and detect information that can be used in future to extrapolate quantitative metrics that represent the quality and evolution of the engagement carried out.
At organisational level, a transversal team was created formed of **Representatives identified within the Departments**, **Corporate Functions and Group Companies**. With the support of the Stakeholder Engagement Unit, the Representatives operate as **promoters of the culture of stakeholder engagement** within their own organisational contexts, tracking the initiatives carried out to structure information resources, promote their sharing and report on the activities, in a flow of information to said Acea Unit, which is responsible for annual reporting at Group level. In the second half of 2021, an **analysis process was launched through awareness-raising meetings held with sector experts**. The aim of this cycle of meetings, which will also continue in 2022 and were characterised by topics specific to their sector, is to spread the foundations of the culture of stakeholder engagement in the strategies, processes and business activities of the Acea Group, as well as basic technical and specialised skills, role awareness and a number of professional tools.
On the **company intranet**, **the section dedicated to stakeholder engagement** was also activated. It was created in collaboration with the Media Relations and Internal Communications Unit to systematise and share **processes**, **tools and materials** and to promote internal awareness. The Stakeholder Engagement activities are managed in line with the international standards of reference (AA1000 Stakeholder Engagement Standard and Global Reporting Initiative – Reporting Standards).

ACEA IN THE ESG PERCEPTION INDEX

The ESG Perception Index, prepared by Reputation Science, a leading company in Italy in the analysis and management of reputation, **measures and classifies the perception of sustainability of the top 200 Italian companies on the web**. The analysis model rates the proximity of the brand to the 17 goals of the UN Agenda 2030, assigning a score from 0-100, analysing the volume of online content that demonstrates the association between the brand and sustainability, the reputation impact of this content on the company analysed, the association of the brand identity with sustainability on search engines and how much the company talks about sustainability through its web channels. Acea has featured on the index since June 2021 with a score of **58.98 points**, **coming 7th place** in the ranking; in October, when the data were updated again, it fell one place, **to 8th**, **but its score increased to 61.30**.

For more details see www.esgreputation.it/

Chart no. 20 – Stakeholder mapping

The boxes below illustrate the most significant interactions between Acea and the main categories of stakeholders in 2021.

CUSTOMERS

Acea is one of the **main Italian multi-utilities by territory and customers served** with around **1.2 million customers in the energy sector** and over **228,000 customers in gas**, over **1.6 million withdrawal points for energy distribution** and **2.7 million water users**, equal to **8.5 million inhabitants served** in Italy.

The evolution of market demands towards **green and innovative solutions** is monitored by the Group through increasingly more specific and wider offers, such as those launched during the year by Acea Energia on 100% sustainable power and gas, the services linked to electric mobility and added-value products (energy efficiency of buildings, boilers, air conditioners and wall boxes). The development of **more advanced interaction dynamics**, as has happened with the figure of the **prosumer** – a party that is both a customer and an energy producer, connected to the distribution network – up by 8% compared to the previous year, manifests in an increasing focus on the use of **digital channels and services** by customers, including as a result of the requirement for safety due to the ongoing health emergency. Acea proposes solutions that are constantly improving, such as the **digital service point**, which in 2021 consolidated its operations, the **"Waidy Point" local branches**, **the MyAcea App**, enriched in 2021 with new functionalities (downloads of MyAcea have increased by 24.5% compared to 2020) and the **new navigable web bill** for companies in the water sector. Acea adopts initiatives intended to maintain the high level of trust and good customer relations. In addition to relations with **consumer associations**, through the action to raise their awareness and promoting the use of digital and telephone channels dedicated exclusively to them, critical situations were also monitored via the activities of the ADR Body for the out-of-court settlement of disputes (in the year, for the Companies managed, **345 requests** were received – 419 in 2020) and initiatives are carried out to **prevent cases of unfair commercial practices** (567 cases reported to the sales agencies during the year, equal to 61% of the cases analysed – 53% in 2020).

INSTITUTIONS

For a company that delivers essential public services, mostly subject to **regulation by the public authorities**, the relationship with institutions is of fundamental importance both for planning and performing the company activities. In this context, in agreement with the institutions of reference, it continued the preparatory activities for the construction of the new upper section of the **Peschiera-Le Capore Aqueduct** and the **Marcio Aqueduct**, strategic infrastructures for safeguarding the water supply in the city and province of Rome.

Acea is active in the prevention and management of critical events and in the event of an emergency it provides support to the **authorities responsible for public health**, **civil protection and public safety**, for example through **plans for managing emergencies** of the water companies, shared with **local institutions** (such as Governmental Territorial Offices, Local Health Authorities, Area Management Agencies), or the electricity companies, which are essential for restarting the system in the event of a blackout of the National Transmission Grid or re-establishing power for **strategic users**, **such as institutions and hospitals**.

Interactions also take place through research projects on topics of **public relevance** with public bodies such as **ENEA** with which a study was conducted in 2021 to perform a preliminary investigation into the definition and implementation of **sampling and analysis methods of microplastics** in the water lines of treatment plants and in recipient bodies of water.

Acea participates in **research centres**, **standard-setting bodies and industry associations**, acting as promoter or contributing to research and experimentation in the businesses in which it operates. Also as a result of this commitment, Acea takes part in international programmes (**Horizon2020**), for example through the **PlatOne** and **Promisces** projects.

COMPANY

By seizing the opportunities arising from the market and the context of reference, Acea is focused on a process of full integration of sustainability into its strategic decisions, placing sustainable success, as indicated in the new Italian Corporate Governance Code, as an objective of its activity.
In 2021, the Industrial Plan and the Sustainability Plan approved in 2020 were implemented, both of which cover the 2020-2024 period. Investments by 2024 will reach a figure of 4.3 billion, of which **2.1 related to sustainability targets**.
The **performance management system** in force, as an integrated governance instrument, both in the long term (LTIP) and in the medium term (MbO), provides for a **composite sustainability indicator**, with a percentage weight in line with the best practices of the market.
During 2021, Acea **launched a planning process intended for the achievement of ISO 37001:2016 certification** (Anti-bribery management systems).
The **Stakeholder Engagement Principles and Values** and the **Stakeholder Engagement Group Procedure** were formalised, in order to define a standard and inclusive approach in stakeholder relations as part of the activities managed by the Group.
For Acea, **overseeing the ecosystem of innovation** is fundamental for accessing ideas and business and technological ideas, so it has developed partnerships with InnovUp (formerly Italia Startup), SEP (Startup Europe Partnership) and Open Italy and launched collaborations with specialised observers at the Politecnico di Milano (Digital Innovation, Startup Intelligence and Space Economy).
A particular achievement in 2021 was Acea Elabori's **BIM certification** (Building Information Modelling), which determines an important process innovation in the engineering design of works, creating economic, time and environmental savings.
The Company's commitment to research and innovation has also been recognised by the achievement of the **Innovazione SMAU 2021 awards given to Acea and GORI** for the "Lean Procurement for startups and innovative SMEs" and "Smart Metering" projects, and the Ecohitech Award with the PASO project.

SHAREHOLDERS AND FINANCIERS

The relationship with the **capital markets** guarantees the best conditions thanks to a careful diversification of sources. About 85% of the debt stems from **bond placement** operations. With reference to bank loans, Acea mainly borrows from **institutional operators**, **such as EIB and Cassa Depositi e Prestiti**, worth around 10%, whose mission is to **support strategic infrastructure**. Acea recorded a positive performance on the stock exchange with a **9.4% increase in the share**. The value of each share rose from € 17.15 at the beginning of the year to € 18.76 as at 30 December 2021 (the last stock exchange session of the year) with a capitalisation of **€ 3,995 million**. The ratings agencies Moody's and Fitch **confirmed the long and short-term rating**.
The interest of "sustainable investors" towards Acea is growing, **from 5.5%** of the share capital and to **around 40% of total institutional investors**.
In January 2021, the **first Acea Green Bond** was issued, which recorded a market demand 7 times higher than the offer. It obtained a price premium compared to a traditional issue, and, **for the first time for corporate issues of Italian issuers**, a negative yield for the 5-year tranche with a consequent reduction in the interest paid by Acea.
Lastly, in November, the "*Policy for managing dialogue with institutional investors, shareholders and bondholders*" was adopted in line with the provisions of the new Corporate Governance Code.

SUPPLIERS

In 2021, the value of orders for goods, services and works exceeded **€ 2 billion** (+66% compared to 2020), with around **2,870** suppliers involved. 61% of total volumes in the year were procured through the use of competitive tendering procedures. With reference to supplier **payment times**, the average delay decreased to 27.3 days (42 days in 2020) and the percentage of amounts settled on the due date increased (74%, compared to 65%).
The **protection of staff employed by the suppliers** was subject to specific measures. In particular, **the safety measures to combat Covid-19** continued and several **meetings** were held with the trade unions involved in water contracts and the contractors on occupational health and safety, compliance with the contractual regulations applied and protection of employment.
The safety of workers, as a fundamental element for the services provided in favour of the Group, was monitored through **15,444 worksite inspections**, which confirmed the decreasing trend of non-conformities detected. In 2021, Acea Elabori, in collaboration with the Parent Company's Technology & Solutions Department, continued **testing on the Safety Check project**. The objective is to remotely verify the safety conditions of personnel at construction sites with IoT sensors.
During the year, development continued of the **Group's Vendor Rating system**, which is being fine tuned. It will assess supplier performance on indicators related to punctuality, quality and safety; **the Ecovadis model** was **also adopted**, which rates suppliers based on 21 ESG criteria (environment, employment and human rights, ethics and sustainability in procurement). In 2021, 148 suppliers were evaluated and 102 are currently being assessed, with an average score of 59.2/100.

EMPLOYEES

Employees are the company's most important asset. Acea is committed to promoting the best conditions of **stability**, promoting **safety** and developing a sense of **cohesion** and **participation** in the company's mission.

In 2021, the total staff of the companies within the scope of reporting was numbered **6,466 people**, of which **24% women**. **98%** of the company population have a **permanent employment contract**. The professional structure is composed as follows: 60% are employees, 31% are workers, 8% are executives and 1% are managers. **335 people** were **hired**, 39% of which aged 30 years or younger. **262 people left**, 81% aged over 50 years. The **turnover rate**, which was **9.2%**, decreased (11.1% in 2020).

In 2021, **agreements on measures to contain and combat Covid-19** were confirmed and renewed in line with the provisions of the National Protocols, the regulation concerning remote working in emergencies, flexible working time and remote learning.

In 2021, Acea Energia and Acea Elabori also achieved **Biosafety Trust Certification** for the prevention and control of the spread of infection.

Particular attention was paid to the risk mitigation of work-related stress, exacerbated by the pandemic, with the activation of the **I Care project**.

The **training on digitalisation** also continued and the second edition of the "**Agire sostenibile per fare la differenza**" [Sustainable action for difference] was launched, to increase the **culture of sustainability** within the Group.

A significant widespread commitment was made during the year to **Diversity & Inclusion**. In particular, the **Protocol on Diversity and Inclusion was signed**, applicable at Group level, and the **2021-2022 Diversity & Inclusion Plan was defined**, for the development of initiatives dedicated to employees, with an impact on customers and the local area.

Lastly, in 2021 a procedure was launched for the achievement of the **Top Employers certification**, which was obtained in January 2022.

ENVIRONMENT

The main challenges for **environmental sustainability** are indicated in the **Green Deal**, the European Union's growth strategy, which sets the goal of carbon neutrality by 2050, an essential element for safeguarding the climate, thanks to a progressive transition towards an economy supported by **renewable**, **decarbonised**, **energy efficient sources**, in the context of a **circular economy**. In this context, note the growth of production from PV and the Group's progressive expansion into the "circular" management of waste.

In particular, in 2021 Acea Produzione acquired an additional 4 MW in the photovoltaic segment, and installed 16 MW, reaching a total of 72.5 MW.

Acea has also set itself the objective of achieving **a high level of efficiency for final domestic usage** and usage in energy processes, and reducing carbon intensity (gCO_2/kWh produced). The electricity consumption of the main companies, particularly connected to water needs, waste management and internal consumption of work premises, originates from renewable sources with a Guarantee of Origin, for a total of approximately **420 GWh**, which in 2021 was equal to **57% of specific consumption** (731.8 GWh).

With regard to the subject of *climate change*, in the year a **first project was carried out to align** to the international recommendations of the **Task Force on Climate-related Financial Disclosures**, which analyses the climate risk management approaches by the organisation.

Acea is committed to **safeguarding biodiversity** and in 2021, it carried out further detailed analysis of potential impacts on biodiversity, with the aim of identifying "priority" areas with high levels of biodiversity in which sites/plants/networks of Group Companies are located, i.e. the most fragile habitats or those most greatly impacted by external factors. Based on this information, it was possible to internally prepare an **Environmental fragility index (EFI)**, aimed at evaluating the different habitats present and the portion of land occupied, the fragility of the habitat and the type of sites/plants present, for each protected area intersected by the activities of the main Group Companies.

COMMUNITY

2021 was still characterised by the pandemic and Acea took significant action to make its contribution to the local community. Indeed, it was the first Italian multi-utility company to transform its own company space into a **vaccination hub**, **open to the local area and citizens**, in support of the anti-Covid vaccination plan in the Latium Region. In total, in 2021 over 140,000 doses of the Covid-19 vaccine were administered. With **technical and economic support**, Acea also supported a number of healthcare organisations, including the Campus Biomedico, the Policlinico Gemelli and the Bambino Gesù Paediatric Hospital.

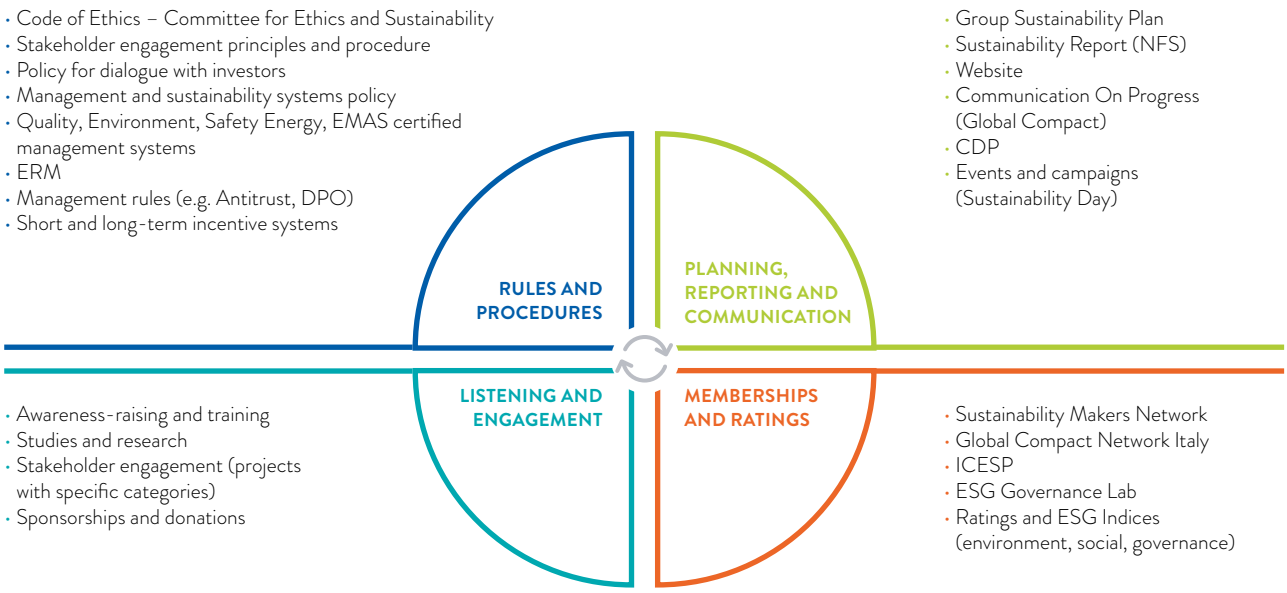
The health emergency also had socioeconomic impacts on the local community. Applications for **social bonuses** increased significantly in order to address this situation. For the energy sector, **over 57 thousand** Acea Energia customers were eligible for the bonus compared to around 26 thousand in 2020, by virtue of the changes in the regulations of reference which set up automatic application, with intermediation by INPS with the Acquirente Unico. Aware of these findings, at the end of the year, Acea joined the *"Insieme per contrastare la Povertà energetica" [Together to combat fuel poverty] Manifesto*, promoted by the Banco dell'Energia, and supported the project "Energia in periferia" [Energy in the suburbs], in order to address situations of energy poverty. In the water segment, the **Water Safety Plans**, to which the Group companies are committed, had effects on health risk prevention and mitigation.

New generations and schools have always been a special focal point for the Group, even more so now in the circumstances experienced by the country. To this end, **initiatives in relation to younger generations** continued, for example with the fully digital event "Acea Scuola Siamo Energia! Spegni la luce e accendi la tua fantasia" [Acea School We Are Energy! Turn off the light and turn on your imagination], a training course that welcomed young people from all over Italy, reaching around 25 thousand users.

TOOLS AND ACTIONS FOR SUSTAINABILITY

The Group works towards spreading sustainability values, culture and practices, both within the organisation and in the contexts it operates in, adopting tools and policies which today cover the most important phases of planning, management and accounting.

Chart no. 21 – Sustainability tools



DISTRIBUTION OF THE VALUE GENERATED BY ACEA

The overall economic value generated by the Acea Group in 2021 is € **4,012.4 million** (€ 3,433.7 million in 2020).
Below is a breakdown of the above figure amongst the stakeholders: **61.1%** to **suppliers**, **20.1%** to the **company** as resources to be withheld; **6.9%** to **employees**; **5.5%** to **shareholders** in the form of profits to be allocated; **2.4%** to **investors** in the form of interest on capital provided; **3.8%** to the **public administration**[40] in the form of taxes paid and **0.2%** to the **community** by way of sponsorships and donations for events and similar endeavours.

Table no. 13 – Economic value directly generated and distributed (2020-2021)

(in € million)	2020	2021
total economic value directly generated	**3,433.7**	**4,012.3**
distribution to stakeholders		
operating costs (suppliers)	1,979.4	**2,453.3**
employees	267.6	**275.8**
shareholders (*)	211.6	**219.7**
financiers	98.1	**97.4**
public administration	134.6	**150.7**
community	7	**7.9**
company	735.4	**807.5**

(*) Includes dividends for the financial year 2020 proposed by the BoD, any dividends from reserves and minority interests.

Table no. 14 – Breakdown of value generated by stakeholder (2020-2021)

	2020 (%)	2021 (%)
suppliers	57.6	**61.1**
employees	7.8	**6.9**
shareholders	6.2	**5.5**
financiers	2.9	**2.4**
public administration	3.9	**3.8**
community	0.2	**0.2**
company	21.4	**20.1**

40 The amount paid to the public administration net of public contributions which Acea receives (equal to € 13.3 million) is € 137.4 million.

2

RELATIONS WITH THE STAKEHOLDERS

CUSTOMERS AND THE COMMUNITY

SCOPE

Data pertaining to the volume of customers, apart from the Companies Acea Energia, Areti, and, in the water segment, to the Companies Acea Ato 2, Acea Ato 5, Gesesa, GORI and AdF also includes data related to Umbria Energy and other water Companies (Acque, Publiacqua, AdF and Umbra Acque) – that are not included in the NFS scope – highlighting the single contribution for the sole purpose of providing a "global" dimension. Data pertaining to perceived quality, delivered quality, tariffs, customer care and communication activities relates to the operating Companies – Acea Energia, Areti, Acea Ato 2, Acea Ato 5,Gesesa, GORI and AdF – and the Parent Company – as recalled in the text.

ACEA GROUP CUSTOMERS: ELECTRICITY AND WATER SERVICES

Over **1.4** **million customers** for energy and gas

Over **1.6** **million withdrawal points** for electricity distribution

About **2.7** **million water user accounts** (of which around 907,500 in Lazio), serving **8.5 million residents** (4.2 million in Lazio)

Social bonuses **for electricity, gas and water** (national and local) have respectively provided savings of **€ 8.8** and **€ 2.4 million** for the entitled customers/users

According to the latest data from the Regulation Authority for Energy, Networks and the Environment (ARERA)[41], **Acea Energia** is Italy's **seventh** largest operator in terms of volumes of electricity sold on the final market, an improvement of 3 positions from its previous position and **third**, with a 3.3% market share, for **energy sold to families** ("domestic customers"). The company also confirmed its position as **Italy's second largest operator** in terms of volumes sold to customers of the **standard market service**, with a market share of 5.4%, and became **eleventh** in terms of volumes sold to the **free market**, with a share of 2.3% (it was sixteenth in the previous survey, with a share of 1.9%).

The contracts managed by the Group for electricity and gas (free market and standard market service[42]), as at 31/12/2021, are **more than 1,416,000**, with an increase compared to the 2020 figure (+2%), which concerned all types of customers in the free market segment (see table No. 15).

Areti, holder of the ministerial concession for the **distribution of electricity** in the territory of Rome and Formello, is **Italy's third largest operator** in terms of **volumes of energy distributed**, with 3.6% of the market share (4.7% in the "domestic" and 3.3% in the "non-domestic") market and **Italy's second largest operator** in terms of **withdrawal points**[43]. As at 31/12/2021, it manages **1,640,461 withdrawal points**. The growth of the customer base, which generally shows slight increases or decreases, is due both to urban expansion and disposals resulting, for example, from discontinued operations (see Table No. 15).

41 See the *Annual report on the status of services and activities carried out*, 2021 edition (on 2020 data), *Structure, pricing and quality in the electricity sector*, available online on the website of the Authority (ARERA).

42 The relevant national Authority accurately defines the energy market segments. See the ARERA website.

43 See the *Annual report on the status of services and activities carried out*, 2021 edition (on 2020 data), *Structure, pricing and quality in the electricity sector*, available online on the ARERA website.

PROSUMERS CONNECTED TO ACEA'S NETWORKS: GROWTH TREND CONFIRMED IN 2021

A prosumer is at the same time a **producer and consumer of energy**; it partially or totally ensures its own energy supply and transfers any surplus produced to the grid. In the **new energy model**, prosumers play **an increasingly consolidated and widespread role**, interacting with both the distributor and the entity in charge of selling/collecting energy. **Acea responds adequately to the evolution of the energy model**, by developing the capacity of connection, transmission and distribution systems.
At 31/12/2021, there were **15,786 prosumers** active on the energy distribution network managed by Areti: this **figure**, compared to the 14,641 prosumers recorded in 2020, **confirms an annual growth trend of around 8%**, the same percentage increase already recorded between 2020 and 2019. **The largest number of prosumers (13,019) are qualified as "domestic prosumers"**, i.e. customers with residential user contracts who are also small-scale energy producers, **and 2,767 are qualified as "other uses"**, i.e. non-domestic users (businesses, professional firms and artisans). **About 9,000** of the prosumers on the Acea network **are fed Acea Energia customers**. **The energy fed into the grid** by these entities in 2021 is **84.43 GWh**, of which **about 75% is from photovoltaic sources**.

USERS OF THE SOCIAL ELECTRICITY AND GAS BONUS: WHAT'S NEW IN 2021

With regard to the disbursement of the **social electricity and gas bonus** provided for customers **with economic difficulties** and for customers who, due to their **state of health**, require energy-intensive medical equipment, **it is worth noting the intervening evolution of the legislation** (Decree-Law No. 124 of 26 October 2019, converted with amendments by Law No. 157 of 19 December 2019) according to which, **as of 1 January 2021**, while the bonus for physical hardship continues to be managed by municipalities and/or CAFs, **social bonuses for economic hardship are automatically recognised to citizens/households which are entitled to them**. In order to obtain the bonus for economic hardship, it is sufficient to request the ISEE certificate; if the household meets the conditions that entitle it to the bonus, INPS, in compliance with privacy regulations, sends the necessary data to the Integrated Information System (IIS), managed by Acquirente Unico company, which cross-checks the data received with those relating to electricity supplies, enabling the automatic payment of the bonus to those entitled. This development has led to **a significant increase in the number of bonus beneficiaries (electricity and gas)**.
In 2021 the **number of Acea Energia customers eligible for the electricity bonus**, in the protected and free markets, **was 57,644**[44] **(the figure in 2020 was 26,053 customers accepted)**, **who benefited from overall economic savings of almost € 7.4 million**. In particular, 56,914 bonuses were paid for economic hardship (99% of the total) and 828 for physical hardship (state of health), making a total of 57,742, which is higher than the number of beneficiary customers as one customer may be entitled to both bonuses.
Similarly to the electricity bonus, ARERA provides for the "**GAS bonus**", with similar procedures. **The number of customers eligible for this bonus** in 2021 **was 19,147**, representing savings exceeding **€ 1.4 million**.
Overall, during the year, **the bonus system (both electricity and gas) resulted in savings of around € 8.8 million for Acea Energia customers who benefited from it**.
In the area served by the **distribution network** managed by **Areti**, in 2021 there will be **a total of 91,796 customers eligible for the electricity bonus** (90,664 for economic hardship, 1,132 for physical hardship); this figure, which refers to customers served, for the "sales" component, by companies other than Acea Energia, has undergone an exceptional increase (those eligible for the bonus were 11,649 in 2020), following the automatic mechanism introduced by the above-mentioned legislation.

Acea is also **Italy's leading integrated water service operator** (catchment, supply, purification, wastewater collection and treatment) in terms of population covered, with **approximately 2.7 million connected users** and an overall base consisting of **8.5 million inhabitants in Italy** (see Table no. 15). Within the area of Rome and province alone, managed by Acea Ato 2, there are **over 705,000 users** and a served population equal to about **3.7 million people**. Starting from this area – Ato 2-Central Lazio – over time the Group has expanded its activities, becoming the reference operator also in the province of Frosinone (Lazio), in the provinces of Pisa, Florence, Siena, Grosseto, Arezzo and Lucca (Tuscany), in the areas from the Sorrento peninsula to the areas around Vesuvius in the provinces of Naples and Salerno and the province of Benevento (Campania) and Perugia and Terni (Umbria). Moreover, the Group operates in a number of South American countries.

44 For customers with financial hardship and health problems reference is made to the number of customers who benefited from the bonus at least once during the year.

THE APPLICATION PROCESS OF THE NATIONAL SOCIAL WATER BONUS

The **social water bonus**, implemented by the Authority since 2017 with the approval of the application methods (TIBSI)[45], **provides for a discount for the supply of water to domestic users under ascertained socio-economic hardship**, based on specific thresholds of the ISEE indicator. The bonus is calculated by each operator according to family numbers (per capita basis), applying the discounted tariff to the quantity of water required to satisfy the protected amount (about 50 litres/inhabitant/day). **Area Governing Bodies may introduce** or confirm **further measures of protection** for users in financially vulnerable conditions, granting a local "**supplementary water bonus**".

As of 1 January 2021, national water bonuses for economic hardship **are granted automatically to citizens/family units who are entitled to them**, without requiring submission of an application (pursuant to Decree Law No. 124 of 26 October 2019, converted with amendments by Law No. 157 of 19 December 2019). With Resolution 11/2020 - DACU (Consumer and User Advocacy Directorate) of 29 December 2020, ARERA **approved the provisions for managing the transition period to the new system of automatic recognition of social bonuses for economic hardship**, **as well as the application methods** (Resolution 63/2021/R/com, subsequently amended and supplemented by Resolution 257/2021/R/com). As far as the water bonus is concerned, the resolution regulates the activities that fall within the competence of the concerned territorial water manager, with reference, among other things, to the procedures for **identifying the water supplies to be facilitated**, the **criteria for quantifying the bonus** and the **procedures for its subsequent payment to those entitled to it**. The process of automatic recognition of the bonus is based on the **exchange of information flows between the Water Operator and Acquirente Unico SpA**, in its capacity as manager of the Integrated Information System (IIS) which, in turn, **receives some of the necessary data from INPS**. With the subsequent Resolution 366/2021/R/com, ARERA assigned responsibility for the processing of personal data functional to the activities of identifying users and payment of the bonus to the Operators. The procedure for appointing the Operators as **personal data** controllers is currently being finalised, at the end of which Acquirente Unico will be able to **transmit to the Operators the information received from INPS regarding the data of the entitled persons**, thus starting the automatic recognition system.

NATIONAL AND INTEGRATED WATER BONUS USERS FOR ACEA GROUP COMPANIES

In 2021, with the support of the Parent Company's Communication Department, the water companies also carried out information campaigns on the water bonus aimed at users (see also the section on *Communication, events and solidarity*). **Acea Ato 2**, which also recognises **on a local basis** the **supplementary water bonus** approved by its own Area Governing Body, **has also given ample visibility to the issue on its customer communication channels** (dedicated page on its website, information on bills, etc.).

With regard to the **2021 data** relating to customers entitled to the **national water bonus**, it should be kept in mind that, **where possible**, **they have only been partially accounted for and for the first few months of the year**; this situation, which applies to all Operators, occurred because the application **of the system for automatic recognition of the bonus** is being finalised (see the box on the application process for the water bonus).

In light of the **partial accounting**, therefore, Acea Ato 2 **paid 8,034 national water bonuses for an economic value of approximately € 354,000 and 3,657 supplementary** (local) **water bonuses for an economic value of € 858,400**. The supplementary bonus was higher than the 2020 figures (746 supplementary water bonuses, with an economic value of € 135,298) **thanks to the possibility for those entitled to access**, **in addition to the ordinary valuation**, and exclusively **to cover past arrears**, **an additional one-off amount** of up to three times the ordinary valuation. This provision, **approved by the Conference of Mayors of ATO 2**, has been envisaged on an extraordinary basis for the whole of 2021 - unless extended - **in view of the emergency situation resulting from the Covid-19 pandemic**. In the first few months of 2021, **Acea Ato 5 accepted 307 requests** for the national water bonus, which generated total savings for beneficiaries of around **€ 35,000**.

AdF continued to give visibility to the possibility of accessing the **national water bonus** and the **supplementary bonus** through the fiora.it website and by notices posted at branches. In 2021, **AdF invoiced the social water bonus** to **4,558 beneficiaries** for requests made in 2020 but with a 2021 benefits end date, for a value of around **480,000**. In addition, a total of **2,649 users** benefited from the **supplementary water bonus**, amounting to **€ 595,234**.

For GORI, the total number of those entitled to the water bonus in the year was **21,538 beneficiaries**, **with a saving of € 880,739**.

In May 2021, **Gesesa** launched a communication campaign through banners, commercials, press releases and through social media channels to give visibility and information on the procedures for accessing the water bonus benefits.

For the water companies in the scope, therefore, cumulating the data of the supplementary water bonuses, where applied, and the partial data from the national water bonuses, where available, **the system has generated for the beneficiaries a total economic saving of approximately € 2.4 million**.

45 Resolution 897/2017, integrated text of the implementing rules for the social water bonus – TIBSI and subsequent amendments and additions in 2019 (resolution 165/2019/R/com and resolution 1/2019 – DACU) to update the measure to the regulatory provisions contained in Law 26/2019 (urgent provisions on national income and pensions).

Table no. 15 – Customers (energy and water sectors) (2019-2021)

	u. m.	2019	2020	2021
ENERGY AND GAS SALES (Acea Energia and Umbria Energy)				
standard market service	no. of withdrawal points	774,823	738,989	700,496
free market EE - mass market	no. of withdrawal points	322,037	364,378	393,182
free market EE - large customers	no. of withdrawal points	76,902	72,195	94,698
free market gas	no. of redelivery points	192,107	212,234	228,148
total	**no. of supply contracts**	**1,365,869**	**1,387,796**	**1,416,524**
ENERGY DISTRIBUTION (Areti)				
domestic customers, low voltage	no. of withdrawal points	1,326,078	1,330,557	1,338,868
non-domestic customers, low voltage	no. of withdrawal points	305,925	296,248	298,736
customers at medium voltage	no. of withdrawal points	2,907	3,116	2,851
customers at high voltage	no. of withdrawal points	7	7	6
total	**no. of withdrawal points**	**1,634,917**	**1,629,928**	**1,640,461**
WATER SALE AND DISTRIBUTION (main water Companies of Acea Group)				
Acea Ato 2	no. of users	692,893	705,685	705,607
Acea Ato 5	no. of users	199,823	200,876	201,878
GORI	no. of users	528,437	531,987	533,662
Gesesa	no. of users	57,142	57,247	57,404
AdF (*)	no. of users	231,690	232,152	233,440
Acque	no. of users	326,105	327,412	329,973
Publiacqua (**)	no. of users	397,684	399,943	402,370
Umbra Acque	no. of users	233,460	234,185	234,850
total	**no. of users**	**2,667,234**	**2,689,487**	**2,699,184**
Acea Ato 2	population served	3,704,931	3,705,295	3,705,995
Acea Ato 5	population served	469,836	467,993	455,164
GORI	population served	1,456,462	1,398,678	1,395,841
Gesesa	population served	120,574	116,897	110,316
AdF	population served	386,132	382,724	380,463
Acque (***)	population served	737,455	734,898	734,898
Publiacqua (****)	population served	1,247,216	1,217,083	1,217,083
Umbra Acque	population served	501,186	494,272	493,460
total	**population served**	**8,623,792**	**8,517,840**	**8,493,220**

(*) The 2021 figures are estimates.
(**) Some 2020 figures on users and/or 'population served' have been adjusted, after the final calculation.
(***) Figures for 2021 are estimates; some 2020 figures on users and/or "population served" have been adjusted, after the final calculation.
(****) Some 2020 data on users and/or the 'population served' have been adjusted after the final calculation.

PERCEIVED QUALITY

Surveys of customer and public satisfaction with services delivered:

more than 35,283 people interviewed

Overall opinion in 2021

on the services provided (score 1-10):
Electricity service "sales" (MV and LV): **7.7**
and "distribution": **7.8**
public lighting service: **6.7**
water service in Rome, Fiumicino and province: **7.9** and **7.2** in Frosinone and province: **6.3**
in Sarnese Vesuviano: **6.6**
in Benevento and province: **6.9**
in Grosseto, Siena and province: **7.5**

The **Customer listening Unit** of the Parent Company **coordinates the process of measuring customer and citizen satisfaction** with the services provided in the electrical, water[46] and public lighting sectors. The Unit works **in agreement with the operating companies** that manage the services and **supports top management with analysis of the data collected**.
Customer satisfaction surveys ("perceived quality") are carried out **twice a year** by an institute specialising in demographic research, selected by tender.
In 2021, with a view to the constant improvement of measurements, a new continuous survey method has been designed, especially for the satisfaction surveys of customers who contacted Acea through the various channels available.
The 2021 half-yearly surveys, in line with previous years, were conducted using CATI methodology[47], but CAWI (online surveys) was also added to this survey method. Since the new method has not yet been applied uniformly to the various Group companies and introduces a discontinuity in the interpretation of results, **in order to maintain a comparison**, **presented here are only the data collected using the CATI method**, **which have enabled the following main indicators to be processed**:

- the overall **judgement** on the general quality of the service **(scale of 1 to 10**), where 1 means very bad and 10 means very good, which expresses an **instinctive evaluation** by customers;
- **overall opinions on individual aspects of the service** (**scale of 1-10**);
- the **percentages of satisfaction with the items**, or quality factors, selected within each aspect of the service, according to the importance attached to them by the respondents.

The synthetic CSI (Customer Satisfaction Index) indicators presented in previous editions of the *Sustainability Report* are therefore being **replaced by overall opinions** on services and their individual aspects, as these are more stable indicators than the CSI[48]. To **ensure comparability** with the previous year, **the results of the 2020 surveys were expressed using the same indicators as those used in 2021**.
Interviews on "**contact channels**" are aimed at selected **customers**, using the "call back" method, **from among those who have used the services** (toll-free numbers for commercial information or fault reporting, website, branch, technical intervention, chat channels and digital service points) **immediately before the first entry** and consented to be contacted again.
Concerning the **physical branch**, unlike what happened in some cases, in 2020 following the closures imposed by the health emergency for the first semester, **in 2021 it was possible to conduct the interviews in both the first and second semester**.

In the two customer satisfaction survey sessions carried out in 2021, a total of **35,283 people were interviewed** about the quality of the services provided by Acea Energia, Areti - both for the distribution and public lighting service -, Acea Ato 2 (Rome and Fiumicino and province), Acea Ato 5, GORI, Gesesa and AdF. The **overall opinions** expressed on each service, as an average of the two six-monthly surveys, fall **within the area of average satisfaction** and between 6.3 and 7.9 (see the charts below and the tables at the end of this paragraph).

The **overall opinions** expressed on the **electricity service and the main aspects** into which it is divided indicate, for **Acea Energia sales**, positive evaluations and above average satisfaction (rating > 7/10) both for the service in general (7.9/10 for standard market customers and 7.6/10 for free market customers) and for the aspects of "billing" and "online branch", the latter surveyed among free market customers, while the aspects of "toll-free number" and "branch"

46 As regards water services, the main results of the customer satisfaction surveys carried out by Acea SpA and reported here concern the customers of the companies Acea Ato 2 (Rome and Fiumicino and province) and Acea Ato 5 (Frosinone and province) operating in the Lazio area, Gesesa and GORI, both operating in Campania, and AdF, operating in Tuscany.

47 *Computer Assisted Telephone Interviewing* of a stratified sample based on variables and representative of the universe of reference, following a structured questionnaire. Depending on the sample, the statistical error varies between +/- 2.8% and a maximum of +/- 4.3% and the level of significance is 95%.

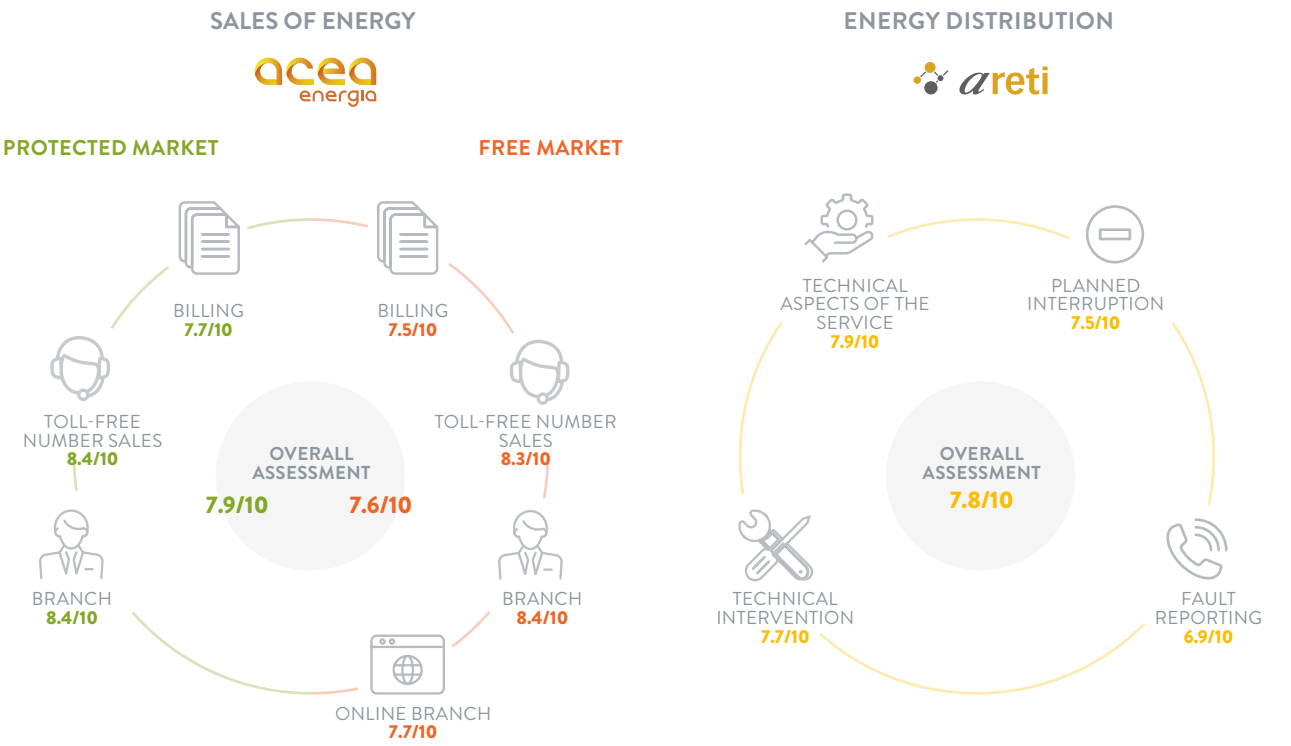
48 In fact, the CSI is based on a statistical formula comprising the proportion of customers satisfied with the different aspects/channels and a predetermined system of weights relating to the importance of each factor; aspects and weights are currently being revised to better reflect the evolution of services and their importance over the historical period.

are in the area of complete satisfaction (ratings of 8-10) for both standard and free market customers. For **distribution**, managed by **Areti**, the overall rating is 7.8/10 and the aspects of the service, with the exception of "fault reporting" which, with 6.9/10, is in the average satisfaction range (ratings of 6-7), receive overall opinions above 7/10 and in particular the "technical aspects of the service" (7.9/10) and "technical intervention" (7.7/10) are close to the complete satisfaction area. Residents of Rome were interviewed about the **Public Lighting service** for all areas. The overall opinions on the service and its aspects are confirmed to be of average satisfaction (rating of 6-7), with 'fault reporting' receiving higher ratings of 7.5/10.

As regards the water service (sale and distribution of water), the satisfaction of **customers of Acea Ato 2** (Rome and Fiumicino and province) and **Acea Ato 5** (Frosinone and province), in the Lazio area, customers of **GORI** and **Gesesa**, operating in Campania, and customers of **AdF**, operating in Tuscany, was measured. **The overall opinion** on the service provided by **Acea Ato 2 in Rome and Fiumicino** is 7.9/10; the "billing" and "technical aspects" of the service receive overall ratings above the satisfaction average (> 7/10) and "fault reporting", "technical intervention", "sales toll-free number" and "branch" are in the area of complete satisfaction (ratings of 8-10). For **Acea Ato 5**, which operates in the city and province of Frosinone, **the overall rating** of the service is 6.3/10; the overall opinions on "billing" and "technical aspects" are on the average level of satisfaction, while all other aspects receive overall ratings of over 7/10 and close to complete satisfaction. For **GORI**, which manages the service in the Sorrento peninsula and Vesuvian centres between the provinces of Naples and Salerno, **the overall opinion** is also 6.6/10; the "billing" aspect, with an overall opinion of 6.6/10, is in the area of average satisfaction, "fault reporting" (7.7/10) and "commercial toll-free number" (7.8/10) are close to complete satisfaction and the other aspects of the service have overall opinions of 8/10 or higher. With regard to **AdF** which operates in Tuscany, in the provinces of Grosseto and Siena, **the overall opinion** on the service is 7.5/10; the overall rating of the service aspects are over 7/10 for "billing" and "technical aspects" and over 8/10, i.e. in the area of complete satisfaction, for all other areas. Finally, for **Gesesa**, which operates in the city and province of Benevento, **the overall opinion** for the service is 6.9/10; the 'technical aspects of the service' receive an overall opinion of 7.2/10, higher than the average satisfaction rating, and billing 6.9/10.

The charts below show, for each service, **the 2021 overall opinion (scale of 1-10)**, as the average of the two surveys for the year, and **Tables 16 and 17** also show **the percentages of satisfied customers** insofar as the most important **quality factors** for the electricity sales and distribution services, the public lighting service and the water service, and the **comparison with the previous year**, with indication of the most significant deviations.

Chart no. 22 – Overall opinion and on electricity service aspects – sale and distribution of energy - 2021 (scale of 1-10)



NB: the overall opinions and on the individual aspects of the service – shown in the chart are the average of the two semi-annual surveys.

Chart no. 23 – Overall opinion and on aspects of the public lighting service in Rome and Formello - 2021 (scale of 1-10)

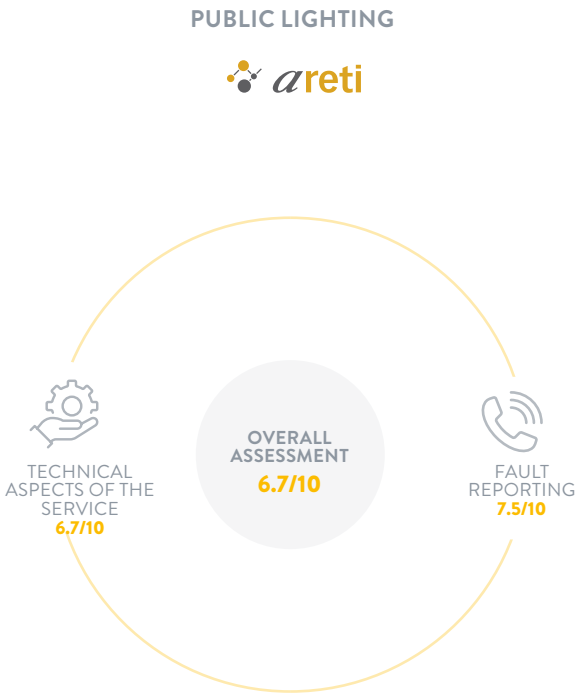
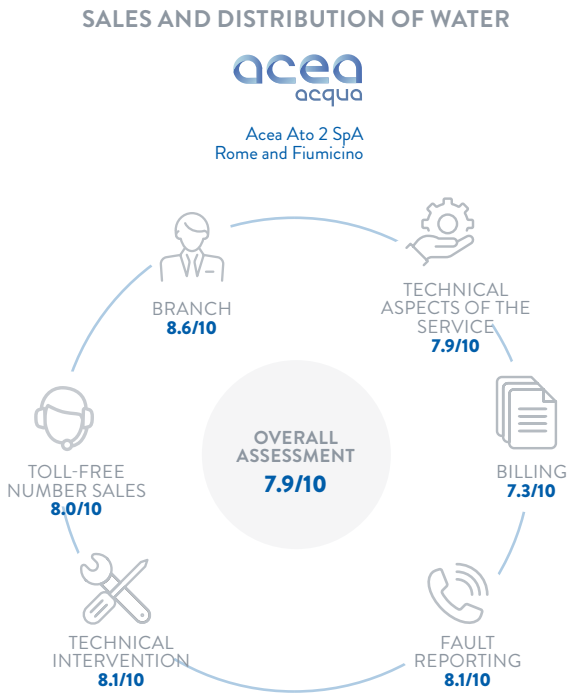


Chart no. 24 – Overall opinion and on aspects of the water service – sale and distribution of water in Rome and Fiumicino 2021 (scale of 1-10)



NB: the overall opinions and on the individual aspects of the service – shown in the chart are the average of the two semi-annual surveys.

SURVEYS ON SATISFACTION WITH WATER SERVICE IN OTHER AREAS IN ATO 2 – CENTRAL LAZIO

Customer satisfaction surveys were also conducted **in the province of Rome**. In particular, **in 2021**, the two six-monthly surveys involved a sample of **2,200 customers** with direct users, representative of three territorial areas – **North Lazio**, **East Lazio and South Lazio** – falling within Optimal Territorial Area 2 – Central Lazio, managed by Acea Ato 2. The surveys carried out in previous years, on the other hand, referred to four specific 'sentinel' municipalities; the results of the two-year surveys are therefore not directly comparable.

The **overall opinion on the water service** in 2021 was **7.2/10**; ratings for **individual aspects** of the service were **7.5/10** for "**technical aspects**" (including continuity of service and water pressure level), **7.3/10** for "**billing**", **6.8/10** for "**fault reporting**", **7.3/10** for "**technical intervention**", **7.3/10** for "**sales toll-free number**" and **6.5/10** for "**branch**". All the ratings expressed are therefore in the area of average satisfaction.

Chart no. 25 – Overall opinion and on aspects of the water service – sale and distribution of water in Frosinone and its province 2021 (scale of 1-10)

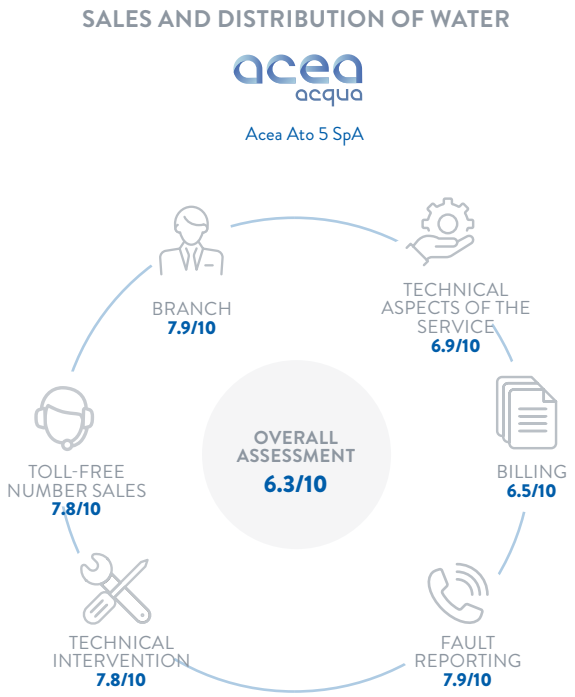


Chart no. 26 – Overall opinion and on aspects of the water service – sale and distribution of water in Sarnese Vesuviano 2021 (scale of 1-10)

NB: the overall opinions and on the individual aspects of the service – shown in the chart are the average of the two semi-annual surveys.

Chart no. 27 – Overall opinion and on aspects of the water service – sale and distribution of water in Territorial Conference No. 6 "Ombrone" - 2021 (scale of 1-10)

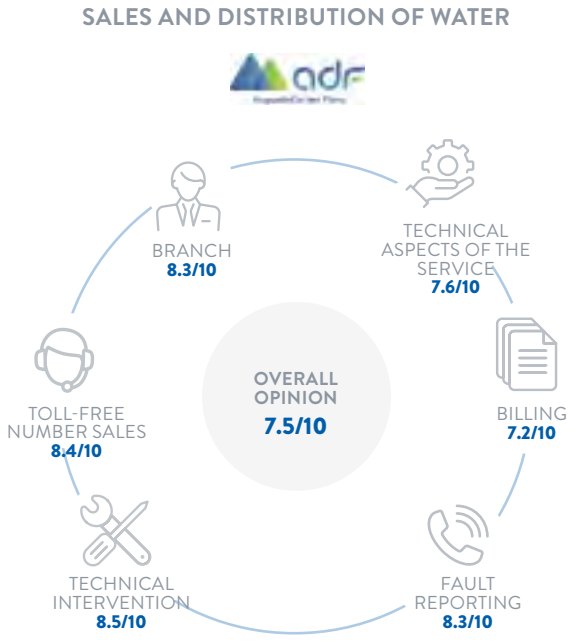
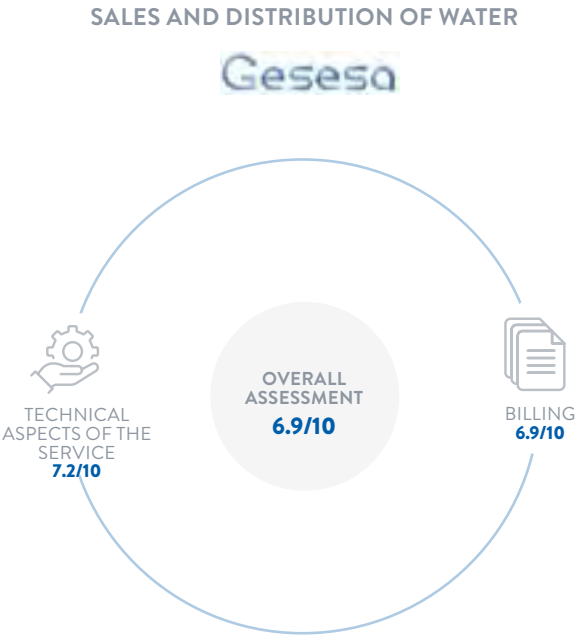


Chart no. 28 – Overall opinion and on aspects of the water service – sale and distribution of water in Benevento and its province 2021 (scale of 1-10)



NB: the overall opinions and on the individual aspects of the service – shown in the chart are the average of the two semi-annual surveys.

Table no. 16 – Results of customer satisfactions surveys: sales and distribution of energy, public lighting service (2020-2021)

average of the two interim reports

	u. m.	2020	2021
electrical service – sale of energy – ACEA ENERGIA			
STANDARD MARKET CUSTOMERS (*)			
sales activity (overall opinion)	1-10	8.0	7.9
ASPECTS OF THE SERVICE AND ELEMENTS OF QUALITY			
billing	1-10	7.7	7.7
correctness of the amounts	%	90.4	91.9
bill clear and easy to read	%	89.1	90.1
sales toll free number	1-10	7.8	8.4
operator's competence	%	92.9	93.6
operator's courtesy and availability	%	94.9	94.3
branch	1-10	8.2	8.4
operator's competence	%	93.5	92.2
clarity of the information provided	%	93.1	91.9
FREE MARKET CUSTOMERS (**)			
sales activity (overall opinion)	1-10	7.9	7.6
ASPECTS OF THE SERVICE AND ELEMENTS OF QUALITY			
billing	1-10	7.7	7.5
correctness of the amounts (***)	%	88.7	86.8
bill clear and easy to read	%	89.8	88.6
sales toll free number	1-10	7.8	8.3
operator's competence	%	91.9	89.1
clarity of answers provided	%	92.0	88.5
branch	1-10	8.3	8.4
operator's competence	%	93.5	90.5
clarity of the information provided	%	93.6	90.4
on-line branch	1-10	7.6	7.7
clarity of the information found	%	89.0	94.9
communicating meter reading	%	89.7	91.7
electrical service – energy distribution – ARETI (Rome and Formello)			
distribution activity (overall opinion)	1-10	8.0	7.8
ASPECTS OF THE SERVICE AND ELEMENTS OF QUALITY			
technical aspects of the service	1-10	8.3	7.9
service continuity	%	95.2	97.5
planned interruption	1-10	7.7	7.5
clarity of information on notices regarding recovery times	%	87.7	86.8
prior notice of suspended supply	%	88.7	87.1
fault reporting	1-10	7.3	6.9
clarity of the information provided	%	86.7	78.3
operator's courtesy and availability	%	90.4	82.9
technical intervention	1-10	7.7	7.7
intervention speed following the request	%	80.7	80.3
technicians' competence	%	89.9	85.1
public lighting service – ARETI (Rome and Formello)			
lighting service (overall opinion)	1-10	6.5	6.7
ASPECTS OF THE SERVICE AND ELEMENTS OF QUALITY			
technical aspects of the service (***)	1-10	6.7	6.7
service continuity	%	73.5	77.2
switching on and off times	%	84.8	84.7
fault reporting	1-10	7.6	7.5
operator's courtesy and availability	%	91.8	90.8
clarity of the information provided	%	89.1	86.3

(*) It should be noted that, in the context of the interviews of standard market customers, the "website" aspect of the service was no longer investigated in 2021; instead, the "digital consultant" and "chat service" aspects were introduced, the results of which will possibly be illustrated in the next reporting cycle, to allow for a two-year comparison.
(**) Also for free market customers in 2021, the "website" aspect was no longer investigated and the "digital consultant" and "chat service" aspects were introduced, which will possibly be presented in the next reporting cycle. On the other hand, the results of the surveys on the "online branch" aspect are made public, for which the two-year comparison can be produced.
(***) The figure refers to the correctness of the amounts of the electricity supply on the bill.
(****) From 2021 onwards, only the technical aspects dependent on Acea were rated.
NOTE: the table shows only the quality factors indicated as most important by the sample of interviewees in 2021, which may lead to consequent changes in the 2020 column. The right-hand column also shows the most significant deviations, of about 5 percentage points, for the individual items surveyed.

Table no. 17 – Results of customer satisfactions surveys: water service (2020-2021)

average of the two interim reports

	u. m.	2020	2021	
water service – sale and distribution of water – ACEA ATO 2 (Rome and Fiumicino)				
water service (overall opinion)	1-10	8.0	7.9	
ASPECTS OF THE SERVICE AND ELEMENTS OF QUALITY				
technical aspects of the service	1-10	8.1	7.9	
service continuity	%	95.3	96.2	
billing	1-10	7.3	7.3	
correctness of the amounts	%	88.9	93.9	▲
bill clear and easy to read	%	87.4	92.3	▲
fault reporting	1-10	8.1	8.1	
clarity of the information provided	%	87.6	91.3	
operator's courtesy and availability	%	92.9	93.5	
technical intervention	1-10	8.1	8.1	
technicians' competence	%	91.5	90.6	
intervention speed following the request	%	84.8	85.5	
sales toll free number	1-10	7.9	8.0	
operator's competence	%	90.5	89.3	
operator's courtesy and availability	%	93.5	90.9	
branch	1-10	8.2	8.6	
operator's competence	%	91.7	93.5	
clarity of the information provided	%	91.1	93.6	
water service – sale and distribution of water – ACEA ATO 5 (municipalities within ATO 5 – Frosinone)				
water service (overall opinion)	1-10	6.1	6.3	
ASPECTS OF THE SERVICE AND ELEMENTS OF QUALITY				
technical aspects of the service	1-10	6.7	6.9	
service continuity	%	77.0	81.6	
billing	1-10	6.3	6.5	
correctness of the amounts	%	77.0	75.7	
bill clear and easy to read	%	77.3	77.5	
fault reporting	1-10	7.9	7.9	
clarity of the information provided	%	93.3	90.8	
operator's courtesy and availability	%	94.6	89.3	
technical intervention	1-10	7.7	7.8	
technicians' competence	%	89.3	88.0	
intervention speed following the request	%	79.9	81.8	
sales toll free number	1-10	7.9	7.8	
operator's competence	%	90.6	93.5	
clarity of the information provided	%	89.4	93.3	
branch (*)	1-10	8.0	7.9	
operator's competence	%	92.6	97.6	▲
clarity of the information provided	%	92.8	97.8	▲
water service – sale and distribution of water – GORI (municipalities within the Sarnese-Vesuviano District Area)				
water service (overall opinion)	1-10	6.6	6.6	
ASPECTS OF THE SERVICE AND ELEMENTS OF QUALITY				
technical aspects of the service	1-10	6.9	7.1	
service continuity	%	81.2	79.8	
billing	1-10	6.6	6.6	
correctness of the amounts	%	76.9	72.6	
bill clear and easy to read	%	77.2	78.5	
fault reporting	1-10	7.5	7.7	
clarity of the information provided	%	88.6	86.9	
operator's courtesy and availability	%	90.8	89.1	
technical intervention	1-10	8.2	8.5	
technicians' courtesy and availability	%	96.4	91.8	
intervention speed following the request	%	92.5	90.5	

sales toll free number	**1-10**	**7.6**	**7.9**	
operator's competence	*%*	*87.8*	*88.9*	
clarity of the information provided	*%*	*89.8*	*89.4*	
branch	**1-10**	**7.8**	**8.0**	
operator's courtesy and availability	*%*	*92.6*	*89.4*	
clarity of the information provided	*%*	*90.9*	*88.9*	
water service – sale and distribution of water – ADF (municipalities falling within Territorial Optimal Conference no. 6 Ombrone)				
water service (overall opinion)	**1-10**	**7.6**	**7.5**	
ASPECTS OF THE SERVICE AND ELEMENTS OF QUALITY				
technical aspects of the service	**1-10**	**7.8**	**7.6**	
service continuity	*%*	*92.0*	*92.3*	
billing	**1-10**	**7.3**	**7.2**	
correctness of the amounts	*%*	*85.7*	*87.6*	
bill clear and easy to read	*%*	*86.4*	*87.2*	
fault reporting	**1-10**	**8.2**	**8.3**	
clarity of the information provided	*%*	*90.8*	*90.8*	
operator's courtesy and availability	*%*	*96.0*	*93.8*	
technical intervention	**1-10**	**8.3**	**8.5**	
problem-solving skills	*%*	*93.3*	*95.3*	
technicians' courtesy and availability	*%*	*95.0*	*96.5*	
sales toll free number	**1-10**	**7.9**	**8.4**	
operator's competence	*%*	*88.5*	*94.6*	▲
clarity of the information provided	*%*	*87.8*	*94.3*	▲
branch (**)	**1-10**	-	**8.3**	
clarity of the information provided	*%*	-	*90.3*	
operator's competence	*%*	-	*89.8*	
water service — sale and distribution of water — GESESA (***) (municipalities within ATO – Calore Irpino)				
water service (overall opinion)	**1-10**	**6.6**	**6.9**	
ASPECTS OF THE SERVICE AND ELEMENTS OF QUALITY				
technical aspects of the service	**1-10**	**7.0**	**7.2**	
service continuity	*%*	*83.6*	*84.2*	
billing	**1-10**	**6.7**	**6.9**	
correctness of the amounts	*%*	*77.8*	*80.1*	
bill clear and easy to read	*%*	*77.2*	*81.9*	

(*) It should be noted that in the satisfaction surveys of Acea Ato 5 customers relating to the "branch" aspect, the data for the first half of the year, included in the calculation of the average for the year, refers to a sample of only 52 respondents, which is lower than the statistical significance, due to the low influx recorded for the pandemic situation.
(**) For AdF, the 'branch' aspect was not investigated in 2020, due to the prolonged closure caused by the health emergency.
(***) For Gesesa, a smaller company, the service aspects investigated are "technical aspects" and "billing". It should be noted that in 2020 the surveys took place only in the second half of the year, while the 2021 data are the average of the two surveys of the year. The decision to illustrate the results of the customer satisfaction surveys of all the companies by means of overall opinions has made it possible to include Gesesa in the table for the first time.
NOTE: the table shows **only the quality factors indicated as most important by the sample of interviewees in 2021**, which may lead to consequent changes in the 2020 column. The right-hand column also shows the **most significant deviations**, **of about 5 percentage points**, for the individual items surveyed.

QUALITY DELIVERED

Acea oversees the **quality of the services provided** with interventions aimed at its constant improvement. To this end it trains people and ensure that they attend seminars, applies innovative technology to the management of processes, renews and expands the infrastructure (networks and plants), increasing its resilience, also aimed at the reduction of failures and timely recovery, increases the offer of digital contact channels, complementing the traditional ones and takes care of communication with customers.
The "**quality delivered**" is **also measured via benchmarks defined by the sector authority** or indicated in the **service contracts and management agreements** with local authorities, in particular:

- for the **Public Lighting** service, the contract between Acea and Roma Capitale regulates the qualitative parameters (performance standards);
- the **technical and commercial quality standards in the energy sector** (for both distribution and sales) **and the contractual and technical quality standards in the integrated water service are defined and updated** by the **Energy**, **Networks and Environment Authority** (ARERA) and, for the water sector, also by the local authorities.

The **main regulatory interventions by ARERA** in 2021 for the electricity and water sectors are summarised in the *Group profile*, in the paragraph *"Context analysis and business model"*, to which reference should be made.
In addition to complying with the quality standards laid down by the regulation, Group companies operate in accordance with **UNI EN ISO certified management systems** based on a **rationale of continuous improvement** (see also *Corporate identity*, in the paragraph *Management systems*).

QUALITY IN THE ENERGY SEGMENT

This section illustrates the quality aspects relating to **electricity distribution services** in the municipalities of Rome and Formello, **and public lighting** in the municipality of Rome, both managed by **Areti**[49], while for electricity and gas sales, managed by Acea Energia, see the section on Customer Care.
The Company operates in compliance with the **QESE (Quality**, **Environment**, **Safety and Energy) Management System** for both the construction and management of distribution infrastructure and Public Lighting.

THE DISTRIBUTION OF ELECTRICITY

Plan for en masse replacement of second generation devices: **installed** in 2021, an additional **316,176 2G meters**

as part of **Areti's resilience plan** for **critical factor "heat waves"**: **122 km** of MV cable were upgraded and **98 secondary substation** renovations were carried out

critical factor "flooding": **36 secondary cabins** built

in 2021: **7,582 MV nodes remotely controlled**

Areti plans and carries out the modernisation and expansion works on **the electricity distribution network**, consisting of high (HV), medium (MV) and low (LV) voltage power lines, primary and secondary substations, and systems for the remote control and measurement of energy drawn from and fed into the grid. The **interventions** take into account the objectives established by the national authority (ARERA), the progressive evolution of electricity applications, the increase in "prosumers"[50], new connections, etc., and **aim to make the infrastructures increasingly resilient**, with an adequate and **enabling network configuration for future scenarios**, **such as widespread electric mobility and progressive electrification of consumptions**.
The **integrated development of the electricity grids** is defined in the **Master Plans** for the HV, MV and LV networks, which Areti implements through construction - and also decommissioning or demolition, and consequent containment of environmental impacts, in specific areas-, transformation, modernisation, maintenance, etc. (see Table 18). The interventions carried out each year are aimed at **rationalising and upgrading the networks**, increasing transport capacity and margins for further use, **increasing their adaptability** and **reducing network losses and voltage drops**, improving **service continuity**.
In 2021, as part of the implementation of the **Resilience Plan**[51], **122 km of medium voltage cable** at 20 kV were upgraded and **98 secondary substation renovations were carried out to increase their resilience to the critical factor of "heat waves"**, and **36 secondary substation renovations were carried out to increase resilience to the critical factor "flooding"**. For the LV networks, **118 km** were put in place as part of the **overall network modernisation programme**, in preparation for the subsequent voltage change from 230 V to 400 V. Remote control was extended to additional **secondary substations** and reclosers, for a **total of 7,582 remote-controlled MV nodes at 31/12/2021**.

49 Areti holds the ministerial concession for the distribution of electricity in the areas indicated and manages public lighting under the *Service Contract* stipulated between Acea SpA and Roma Capitale.

50 Prosumers are both consumers and producers of energy, which they use for their own consumption or sell to the grid (see the box on prosumers connected to Acea's networks, which are constantly increasing, in the section on *Acea Group customers: electricity and water services*.

51 Areti's Resilience Plan was submitted to ARERA in June 2019.

Table no. 18 – Main interventions for the management and development of electricity grids and substations (2021)

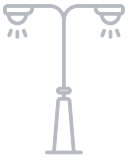
type of work	HV lines and primary substations (PSs)
Demolition of grid and supports	work continued on the **dismantling of high-voltage lines**, which had been taken out of service, leading to the removal of a total of **48 pylons** of the 150 kV and 60 kV lines; a total of 7.2 km of 150 kV high-voltage lines in fluid oil underground cable (Belsito-Tor di Quinto and Belsito-Monte Mario/F sections) were decommissioned.
Construction of grid and supports	construction began on the new section of the **150 kV Selvotta - Castel Romano overhead line** (5.8 km long and comprising 24 supports); construction continued on the new section of the **150 kV North Rome - San Basilio underground cable line** (3.4 km long); **new 150 kV XLPE** (cross-linked polyethylene) underground cables were put into service to replace the above-mentioned cables that had been decommissioned (7.2 km of the Belsito - Tor Di Quinto and Belsito - M. Mario/F sections).
Station upgrading, expansion, renovation	interventions were carried out in 51 primary substations; at the **PS. Belsito** was put into service the **new HV 150kV hybrid switchgear**
Ordinary and extraordinary maintenance on PS station equipment	interventions were made on **106 high-voltage circuit breakers** and **784 medium-voltage circuit breakers** were maintained; **16 on-load tap changers** of power transformers were overhauled and **63 high-voltage measuring transformers** were replaced; power transformers at the Appio primary substation and the ATR transformer at the Flaminia Receiver were also replaced.
	HV and MV protection and measures
Remote management	the following were prepared, calibrated and put into operation **78 new MV line bays**; **checked 327 posts** (57 HV posts and 421 MV posts) and **43 transformers** (between HV/MV and MV/MV).
measures	earth resistance measurements were carried out on **2,350 secondary substations**; step and contact voltages and total earth resistance measurements were conducted on **12 substations** (5 primary and 7 secondary).
	MV and LV lines
Modernisation and upgrading of MV networks (transformation from 8.4 kV to 20 kV) and LV networks (transformation from 230 V to 400 V)	**196 km of 20 kV MV cable** (22 km for expansion and 174 km for upgrading), **including 122 km to increase resilience to heat waves**, and **192 km of LV cable** (74 km for expansion and 118 km for upgrading in preparation for voltage changeover) were installed.
ordinary and extraordinary maintenance	**heloborne inspections** were carried out for an extension of the overhead MV network equal to **170 km**, in order to carry out specific interventions to replace equipment, supports, conductors, etc. necessary for the preservation and maintenance of the functionality of the systems.
	secondary substations (SSs) and remote control
construction, extension, reconstruction SS	**835 secondary substations** were built/upgraded/rebuilt (190 for new connections or power increases, 645 for upgrading to 20 kV, renewing equipment, setting up remote control), **of which 134 substations were rebuilt to increase resilience** to "heat waves" (98 substations) and "flooding" (36 substations).
ordinary and extraordinary maintenance on SS	**1,019 extraordinary maintenance operations** and **2,067 inspections** on secondary substations were carried out
remote control	remote control was extended to **335 secondary substations and 394 reclosers** (7,582 MT nodes were remote controlled at 31/12/2021) and **4,664 maintenance operations** were carried on TLCs and reclosers.

In 2021, Areti carried out interventions to protect the primary and secondary substations, as part of the activities aimed at raising the levels of security for the **protection of infrastructures from cyber risks**, **integrated technological solutions** have been implemented to protect field equipment and **detect any vulnerability of industrial network protocols**. In addition, Quick **SIEM** and **Blue Team** services were strengthened to monitor the network infrastructure and manage incidents, ensuring security oversight in view of the establishment of the **Security Operation Center** (SOC). **Analyses** were started to identify additional technological solutions for upgrading the existing technological security system. See also the chapter Institutions and Business for an in-depth analysis of research and innovation and the projects implemented in the year.

Following the launch, in the last quarter of 2020, of the plan to **massively replace first-generation (1G) meters with second-generation (2G) ones**, **which will progressively affect the entire managed territory, in 2021 Areti installed a further 316,176 2G meters**; the new meters encourage greater **customer awareness of consumption**, thanks to the data available, and a **reduction in estimated billing**.

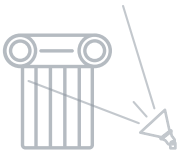
The total number of **remote-controlled meters** (1G and 2G) installed on low-voltage active users **at 31/12/2021** is **1,646,739**.

PUBLIC LIGHTING



201,215 light points and **227,635 bulbs** managed in Rome:
92% of the park LED lamps

1,697 lamp posts reinstalled and
7,952 maintenance interventions on LED lamps/fixtures



artistic lighting:
installations renewed for enhancement of Palatino, Porta S. Sebastiano and Fontana dello Zodiaco in Ostia

Areti manages, by virtue of the Service Agreement[52] between Acea SpA and Roma Capitale, works on the **functional and artistic-monumental public lighting infrastructures**, **for about 201,200 lighting points** located on a territory covering about 1,300 km^2.
The company handles **the design**, **construction**, **operation**, **maintenance and renovation of lighting networks and installations**, and plans interventions **in accordance with the instructions of the local government departments and supervisory departments**, which are responsible for new urban developments, redevelopment projects and cultural heritage.
In addition to the service provided to Roma Capitale, Areti also makes public and artistic lighting services available to other stakeholders (e.g. ecclesiastical bodies, hotels, etc.).

Table no. 19 – Public lighting in Rome in figures (2021)

lighting points (no.)	**201,215** approx.
monumental artistic lighting points (no.)	***10,128***
bulbs (no.)	**227,635**
MV and LV network (km)	**8,036**

Energy consumption for public lighting, which has been on a downward trend in recent years thanks to the gradual modernisation of the systems with the installation of LED technology lamps, will stabilise in 2021; as at 31/12/2021, the **208,870 LED lamps installed cover around 92% of the total number of lamps** (see *Relations with the environment*; *The use of materials, energy and water and the* Environmental Accounts).

In 2021, the **tender procedure** to find a partner for the implementation of the **"POLEDRIC" project was concluded**. It was launched the previous year, with the aim of developing an **innovative technological solution** for the creation of a **"smart pole"**, in a "**smart city**" perspective (see the chapter *Institutions and the Company*, *Commitment to Research and Innovation*).

The lighting projects carried out during the year include, by way of example, the **new lighting of some parks and gardens** located in central and suburban areas of the capital, for the benefit and greater safety of citizens, including **the park at Tor Sapienza**, **the Commendone park and the Villa Massimo park**, and among the functional projects the installations in **Via della Mortella** and **Via del Carbonio**. (see boxes with more details).

52 By Resolution of the City Council No. 130 dated 22 December 2010 regarding the *Updating of the Service Agreement between Roma Capitale and Acea SpA*, effective 15 March 2011, the agreement was extended to 31/12/2027.

LIGHTING WORKS IN PARKS AND GARDENS

The new lighting in **Tor Sapienza Park** has been financed with funds from the Quality of Light Plan 2021. The work involved the laying of more than **1.3 km of cable** and **the installation of 57 lighting points**, with a total installed power of 2,380 W.
In **Piazza Brin** the objective was to **standardise and brighten the lighting of the route** between Via Cialdi and Via Orlando, by **revising the lighting of the square**, **the stairway and the pedestrian underpass**; the existing lighting was integrated by installing **26 lighting points**, for a total of 750W installed and 330W removed, which contributed significantly to urban decorum.

In the green area of **Villa Massimo (Giuseppe de Meo garden)**, the **existing system was upgraded and implemented** by installing **21 candelabra** in the "Villa Umberto" style with "Trastevere" armature. The installed power is 790W and the removed power is 900W.
Finally, in **Piazza Re di Roma**, the existing system was extended by installing **10 lighting points** with an installed power of 350W. The intervention contributed to the **improvement of the lighting in the centre of the square**, thanks to the relocation of some lighting points and to increased illumination of both the external pavements and the internal paths, achieved through the installation of new supports.

TRANQUILLO CREMONA AND ANAGNINA TUSCOLANA FUNCTIONAL INTERVENTIONS

The intervention in **Via Tranquillo Cremona**, in the Tor Sapienza area, concerned the realisation of a public lighting system inside an area belonging to ATER, where the existing system was modernised and integrated; **45 functional LED lighting points** were installed along the road and **12 LED garden lighting points** in the green area, for a total installed power of 2,800W, and about 1,000 m of cable were laid.

In the **Anagnina Tuscolana** area, the junction carriageway from the G.R.A. was illuminated; two 30 m high mobile crown light towers were installed at a distance of about 100 m from each other, each equipped with **12 LED projectors** with asymmetrical street optics. The projectors have a power of 210W each, for a total of 5,024W installed.

Areti has **consolidated expertise in artistic and monumental lighting**, and in 2021 the main activities carried out in this area concerned the renovation of existing systems at sites of particular importance, including the **Palatine Hill**, the **Aurelian Walls** (in the Colombo-Numidia section), **Porta S. Sebastiano** and the **Zodiac Fountain in Ostia**, helping to enhance their beauty for the benefit of citizens and visitors (see the dedicated box below).

Every year, Areti carries out **efficiency and safety upgrades** at lighting points, as well as **scheduled and extraordinary maintenance** on the installations (see Table 20).

Table no. 20 – Main efficiency, safety, repair and maintenance projects (2021)

type of work	(no.)
energy efficiency/technological innovation (replacement of fixtures)	**189 lighting points replaced** (not including new LED installations)
safety measures	**1,817** lighting points made safe
checking corrosion on lamp posts	**31,425** supports verified (functional and artistic)
LED lamp reinforcement/maintenance	**7,952** maintenance jobs
Reinstalling lamp posts that were corroded or knocked down due to accidents	**1,697** lamp posts reinstalled

NOTE: the table includes operations carried out for the Municipality of Rome and third parties.

Acea monitors the **quality parameters of the public lighting service** with regard to the **repair time of faults**, calculated from the time the report is received[53]. The **performance standards** are **expressed by an average allowable restoration time** (TMRA), within which repairs should be carried out, **and a maximum time** (TMAX), beyond which **a penalty system is triggered**[54].
For the **2021 performance** relating to the **average recovery time** (TMR) **of the functionality of the systems**, for the various types of failure, the best estimate available is shown in table 21, since the data, at the time of publication of this document, is in the process of being consolidated; most of the performances, with the exception of the single lighting point, are below the average permitted recovery time set out in the contract standards.

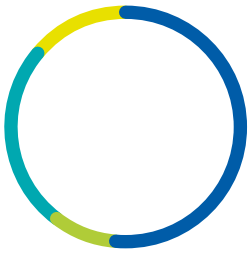
Table no. 21 – Public lighting recovery: Acea penalties, standards and performance (2020-2021)

type of fault	daily penalty for delays	standard contractual service (*)		Acea service	
	(€)	TMRA (average permitted recovery time) (working days)	TMAX (maximum recovery time) (working days)	TMR (average recovery time) (working days)	
				2020	2021
blacked out neighbourhood – MV grid failure	70	1 day	1 day	< 1 day	<1 day
blacked out street – MV or LV grid failure	50	5 days	8 days	1.9 days	1.2 days
blacked out stretch (2-4 consecutive lights out)	50	10 days	15 days	8.4 days	9.7 days
Lighting points out: single lamps, posts, supports and armour	25	15 days	20 days	8.9 days	23.4 days

(*) Consistent with previous years, data were monitored in compliance with provisions under Annex D/2 to the 2005-2015 Municipality of Rome – Acea SpA Service Agreement.

Control systems, such as remote management, detect the fault situation, which **can also be reported** via contact channels (call centre, app, web, fax or letter)[55]. **In 2021**, **18,340 fault reports were received**[56], a reduction of around 5% compared to the previous year (19,278 reports), and **91%** were followed up within the year.
The **percentage distribution of the total number of reports received by type of fault** is shown in Chart 29. The most significant incidents confirm "blacked out street", in relation to a "network fault" (52%) and "lighting point out" (26%), with the lowest impact in terms of safety. "Blacked out stretch" is more contained (9%) and decreasing. During the year there have been no cases of "Blacked out neighbourhood" due to grid failure.

Chart no. 29 – Types of public lighting faults out of total reports received (2021)



0% Blacked out neighbourhood – grid failure
52% Blacked out street – grid failure
9% Blacked out section (2-4 lamps switched off in a row)
26% switched off lighting point (Single lamp, post, supports and armour)
14% Other (door, cabinet, etc.)

53 For the purpose of calculating service levels, reports pertaining to damages caused by third parties are not be considered.

54 The calculation of penalties is based on the following criteria: any repair carried out beyond TMAX is penalised; those carried out with times below TMAX but above TMRA are only penalised if TMR>TMRA. At the time of publication of this document the data is not yet definitive, therefore the accurate data on 2020 reports subject to fines being calculated is not available.

55 More detailed information on call centre performance and written complaints is provided in the *Customer Care* section.

56 The data excludes reminders and repeated reporting of the same fault.

As mentioned, **Acea enhances the monumental heritage of the capital** in agreement with the relevant authorities, with over **10,100 light fixtures** for **artistic lighting**. The main **interventions of the year**, already mentioned at the beginning of the paragraph, are illustrated in a separate box.

AMONG THE ARTISTIC LIGHTING PROJECTS: THE PALATINE, THE ZODIAC FOUNTAIN, A NEW SECTION OF THE AURELIAN WALL AND PORTA S. SEBASTIANO

A particularly important intervention, carried out in 2021, concerned the **Palatine Hill**, where Areti carried out an extraordinary maintenance operation, **replacing all the floodlights dedicated to the artistic lighting of the monumental complex with state-of-the-art fixtures**, equipped with an innovative integrated system of protection against power surges (SPD devices). Low-impact elements were used, custom-designed and engineered for the project, which involved the **replacement of 100 old-generation lighting points** and the **reinstallation of 105 state-of-the-art fixtures** to ensure greater weather resistance and a 15% reduction in electricity consumption. For the intervention at the **Zodiac Fountain in Ostia**, and in **Piazzale Cristoforo Colombo**, **53 20W LED underwater projectors** and **18 64W LED projectors** were installed; Areti was responsible for the design and implementation of the artistic lighting of the fountain and the functional lighting of the square. For the lighting of the pedestrian zone, a modular support was designed and built, the design of which was agreed with the Superintendency to minimise its aesthetic impact. Acea sponsored the artistic lighting of the fountain.
As part of the Quality of Light project, the **artistic lighting of the Colombo-Numidia section of the Aurelian Walls** was carried out, as a continuation of the project carried out in 2020 at the linear park of the Walls. This involved the modernisation of a discharge system and an increase in the number of existing lighting points: from 53 lighting points to **142 state-of-the-art floodlights** with precision optics, with a total installed power of 9,720W. A second project was carried out at **Porta S. Sebastiano**, again modernising and increasing the number of lighting points by replacing 6 discharge floodlights with **36 state-of-the-art floodlights** (installed power from 900W to 2,575W). The project was drawn up in collaboration with the University of Roma Tre.

THE QUALITY LEVELS REGULATED BY ARERA IN THE ELECTRICITY SECTOR

The **Regulatory Authority for Energy, Networks and the Environment** (ARERA) defines, at a national level, the **commercial quality** standards (timing of the technical-commercial services requested by customers, such as estimates, work on connections, activation/deactivation of the supply, response to complaints) and **technical** quality standards (continuity of supply) **of the electricity service**; **it periodically reviews them**, directing operators to constantly improve performance.
Commercial quality is divided into **"specific"** and **"general" levels**, [57]for the **distributor** (differentiated for low and medium voltage supplies) and for those of the **seller** (see Tables 22, 23 and 24).
Every year **Acea communicates to ARERA the results achieved and includes them in the bill it sends to its customers**.
The 2021 commercial and technical quality results[58] related to the **distribution** and metering, as disclosed herein, represent the **best estimate available**[59] at the time of writing and may not coincide with those submitted to ARERA as part of the annual reports.

With regard to the **"specific" levels of commercial quality**, compared with last year, there has been an improvement in the timing of the execution of simple and complex works for the construction of new ordinary connections in LV (especially for domestic users) and MV, as well as a slight deterioration in other performances, although in most cases they fall within the standards set by the regulations in force.
With regard to the **"general" levels**, relating to responses to written complaints/enquiries, there was a deterioration in performance compared to 2020, attributable to the work of recovering backlogs, linked to the effects that the pandemic period has had on operations (e.g. the increase in complaints due to the suspension of measurement data collection by the operator) (see table 22).
Automatic compensation to customers[60] to be paid in case of non-compliance with "specific" quality levels, start from a basic amount[61], which can be doubled (if the timing of the activities exceeds the standard between two and three times) or tripled (if the timing exceeds the standard by three times).
For the quality aspects of the **sales** service, managed by **Acea Energia**, the **increase in the percentages of compliance with the standards** set by ARERA, already recorded in the last two years (see table 23), was confirmed in 2021.

With **reference** to Areti's performance related to the incentive regulation of the duration and **number** of **interruptions without prior notice** for **low-voltage users**, the data related to the 2021 financial year - summarised in Table no. 24 - indicate that in the urban areas characterised by the highest degree of concentration of users (so-called high and medium concentration territorial areas), the continuity of the service was guaranteed with a noticeably better quality compared to last year. Steady and already positive results are also being achieved in suburban and rural areas.
In addition to the indicators described above, the electricity distributor is also required to comply with specific levels of service continuity with reference to **medium voltage users** for which automatic compensation will be paid[62] in cases where the number of interruptions during the year exceeds a defined standard.
Finally, separately for **medium and low voltage users** in the event of failure to comply with the maximum power restoration times, there is an additional reimbursement to be paid by the distribution company to each user that is disconnected for more than 4 or 8 hours respectively.

57 Specific quality standards" are defined as the deadline within which the service provider must provide a given service and, in the event of non-compliance, they require that automatic compensation is granted to customers; the general quality standards" are defined as the minimum percentage of services to be provided within a given deadline.

58 Integrated Test on the output-based regulation of electricity distribution and measurement services – Annex A to ARERA resolution 646/2015/R/eel as subsequently amended and supplemented.

59 This is due to the misalignment between the delivery times of reports to the Authority and those required by law for the publication of this document.

60 Where due, automatic compensation is paid to the customer by deduction from the amount charged in the first subsequent bill and if needed in following bills, or paid by direct remittance. In any case, such automatic compensation must always be paid to the customer within 6 months from the date of receipt of the written complaint or the request for reimbursement of double billing, with the exception of customers who are billed quarterly, for which the term is set at 8 months. For distribution activities, automatic compensation is paid by the distributor to the service recipient within 7 months from the date on which the required service is provided.

61 The amount set by the Authority for compensation for non-compliance with the specific quality standards for the distribution service starts from a basic amount of € 35 for domestic low voltage customers; € 70 for non-domestic low voltage customers and € 140 for medium voltage customers. In the event of non-compliance with the specific quality standards of the sale, the seller shall pay the final customer an automatic compensation of € 25. Compensation grows in relation to the delay in the provision of the service.

62 In order to be entitled to compensation, medium voltage customers must prove that they have installed protection devices at their plants that can prevent any interruption caused by faults in their utility plants from having repercussions on the Areti network, damaging other customers connected nearby. Furthermore, they must send their own plant adequacy statement, issued by parties with specific technical and professional expertise. Where customers fail to meet the requirements whereby compensation may be sought, that amount is paid by Areti as a fine to the Energy and Environmental Services Fund.

Table no. 22 – The main specific and general levels of commercial quality – energy-distribution (2020-2021)
(ARERA parameters and Areti's performance - 2020: data reported to ARERA; 2021: estimated data)

ENERGY DISTRIBUTION

SPECIFIC LEVELS OF COMMERCIAL QUALITY

SERVICES	ARERA PARAMETERS – maximum time by which the service must be performed	average actual completion time for services	percentage of services carried out within time limit	average actual completion time for services	percentage of services carried out within time limit
			2020		2021
LOW VOLTAGE (LV) SUPPLIES					
DOMESTIC CUSTOMERS		ARETI'S PERFORMANCE			
estimates for work on LV networks (ordinary connections)	15 working days	8.09	95.38%	9.08	91.05%
completion of simple work (ordinary connections)	10 working days	10.51	73.40%	10.02	72.00%
completion of complex works	50 working days	13.44	96.15%	11.51	95.13%
supply activation	5 working days	1.20	97.38%	1.47	97.46%
deactivation of supply on customers request	5 working days	1.07	97.38%	1.05	98.59%
reactivation of supply following disconnection for late payment	1 working day	0.05	99.56%	0.10	99.52%
resumption of the supply following faults of the metering equipment (requests sent during business days from 08:00 to 18:00)	3 hours	2.80	68.10%	3.52	60.07%
resumption of the supply following faults of the metering equipment (requests sent during non-business days or from 18:00 to 08:00)	4 hours	2.52	87.54%	2.40	86.40%
maximum punctuality band for appointments with customers	2 hours	N.A.	91.46%	N.A.	91.70%
NON-DOMESTIC CUSTOMERS		ARETI'S PERFORMANCE			
estimates for work on LV networks (ordinary connections)	15 working days	8.21	95.51%	9.98	88.26%
completion of simple work (ordinary connections)	10 working days	11.47	72.55%	10.98	77.57%
completion of complex works	50 working days	16.66	94.59%	17.55	92.49%
supply activation	5 working days	2.12	93.97%	2.68	93.63%
deactivation of supply on customers request	5 working days	2.41	95.46%	2.28	96.07%
reactivation of supply following disconnection for late payment	1 working day	0.08	99.42%	0.13	99.30%
resumption of the supply following faults of the metering equipment (requests sent during business days from 08:00 to 18:00)	3 hours	2.90	67.04%	3.48	62.78%
resumption of the supply following faults of the metering equipment (requests sent during non-business days or from 18:00 to 08:00)	4 hours	2.35	86.45%	2.51	84.91%
maximum punctuality band for appointments with customers	2 hours	N.A.	91.61%	N.A.	91.13%
MEDIUM VOLTAGE SUPPLIES (MV)					
END CUSTOMERS		ARETI'S PERFORMANCE			
estimates for work on MV networks	30 working days	13.38	93.20%	17.50	86.44
completion of simple work	20 working days	17.68	90.91%	3.00	100%
completion of complex works	50 working days	14.47	96.67%	9.88	92.86%
supply activation	5 working days	5.44	77.78%	10.52	56.53%
deactivation of supply on customers request	7 working days	12.85	69.70%	19.53	67.86%
reactivation of supply following disconnection for late payment	1 working day	1.00	82.35%	0.42	100%
maximum punctuality band for appointments with customers	2 hours	N.A.	92.05%	N.A.	92.11%

GENERAL LEVELS OF COMMERCIAL QUALITY					
SERVICES	ARERA PARAMETERS minimum percentage of services to be performed within a maximum time	average actual completion time for services	percentage of services performed within the maximum time	average actual completion time for services	percentage of services performed within the maximum time
			2020		2021
LOW VOLTAGE (LV) SUPPLIES					
DOMESTIC CUSTOMERS		ARETI'S PERFORMANCE			
reply to written complaints/enquiries written for distribution activities	95% within 30 calendar days	40.05	60.00%	85.47	50.70%
reply to written complaints/enquiries written for measurement activities	95% within 30 calendar days	67.68	53.43%	72.46	44.72%
NON-DOMESTIC CUSTOMERS		ARETI'S PERFORMANCE			
reply to written complaints/enquiries written for distribution activities	95% within 30 calendar days	44.91	56.44%	59.08	66.53%
reply to written complaints/enquiries written for measurement activities	95% within 30 calendar days	63.03	53.66%	79.03	38.46%
MEDIUM VOLTAGE SUPPLIES (MV)					
END CUSTOMERS		ARETI'S PERFORMANCE			
reply to written complaints/enquiries written for distribution activities	95% within 30 calendar days	23.98	78.59%	34.73	75.38%
reply to written complaints/enquiries written for measurement activities	95% within 30 calendar days	150.08	25.00%	136.74	20.83%

Note: the symbol "/" is used when services were not requested during the year, "n.a." means the data are not applicable.

Table no. 23 – The main specific and general levels of commercial quality – energy sales (2020-2021) (ARERA parameters and Acea Energia's performance - data reported to ARERA)

ENERGY SALES

SPECIFIC LEVELS OF COMMERCIAL QUALITY (*)			
SERVICES	ARERA PARAMETERS maximum time by which the service must be performed	percentage of services carried out within time limit	percentage of services carried out within time limit
		2020	2021
MORE PROTECTED SERVICE		ACEA ENERGIA PERFORMANCE	
billing adjustments	60 calendar days	50.0%	100%
double billing adjustments	20 calendar days	/	/
reasoned reply to written complaints	30 calendar days	90.66%	92.30%
FREE MARKET		ACEA ENERGIA PERFORMANCE	
billing adjustments	60 calendar days	42.86%	52.89%
double billing adjustments	20 calendar days	/	/
reasoned reply to written complaints	30 calendar days	88.73%	93.08%

GENERAL LEVELS OF COMMERCIAL QUALITY			
SERVICES	ARERA PARAMETERS minimum percentage of services to be performed within a maximum time	percentage of services performed within the maximum time	percentage of services performed within the maximum time
MORE PROTECTED SERVICE		ACEA ENERGIA PERFORMANCE	
reply to written enquiries	95% within 30 calendar days	99.65%	99.72%
FREE MARKET		ACEA ENERGIA PERFORMANCE	
reply to written enquiries	95% within 30 calendar days	99.33%	99.64%

(*) Free market and more protected service customers with low and medium voltage supplies, and end customers of low-pressure natural gas (predominantly domestic customers and small businesses) receive an automatic compensation calculated on a base value of € 25 if standards are not met.
The symbol "/" is used when services were not requested during the year, N.A. means the data are not applicable.

Table no. 24 – Service continuity data – energy distribution (2019-2021) – (ARERA parameters and Areti performance – 2019-2020: data certified by ARERA; 2021: provisional data)

ENERGY DISTRIBUTION – CONTINUITY INDICATORS – LV CUSTOMERS

DURATION OF DISRUPTIONS AND PERCENTAGE CHANGES

SERVICES	average cumulative duration of long disruptions without prior notice under the operator's responsibility per LV customer per year (minutes)			percentage changes	
	2019	2020	2021	2021 vs. 2019	2021 vs. 2020
high concentration	43.8	42.3	30.4	-30.6%	-28.1%
medium concentration	60.1	52.0	45.5	-24.3%	-12.5%
low concentration	66.4	47.6	47.3	-28.8%	-0.6%

AVERAGE NO. OF DISRUPTIONS AND PERCENTAGE CHANGES (*)

SERVICES	average no. of disruptions without prior notice under the operator's responsibility per LV customer per year			percentage changes	
high concentration	2.016	1.869	1.603	-20.5%	-14.2%
medium concentration	2.525	2.589	2.459	-2.6%	-5.0%
low concentration	3.327	3.064	3.248	-2.4%	6.0%

(*) The yearly average number of disruptions per low voltage customer considers both lasting disruptions (> 3 minutes) as well as short disruptions (≤ 3 minutes but longer than 1 second).
NOTE: the three territorial areas are defined on the basis of the degree of concentration of the resident population: more than 50,000 inhabitants is defined as "high concentration"; between 5,000 and 50,000 inhabitants is defined as "medium concentration"; less than 5,000 inhabitants is defined as "low concentration".

QUALITY IN THE WATER AREA

The Acea Group manages the integrated water service (IWS) in several Optimal Areas of Operations (ATO) or District Areas of Lazio, Tuscany, Campania and Umbria through subsidiaries and investee companies.
Below, in line with the scope of reporting (see Communicating sustainability: methodological note), we describe the activities carried out *in* **Lazio**, **Campania** and **Tuscany** by the following companies:

- **Acea Ato 2**, Acea Ato 2, in ATO 2 - Central Lazio (Rome and Ato 2, equal to about 94% of the population in the area), the Group's "historical" area of operation[65], with a pool of residents served of over 3.7 million;
- **Acea Ato 5**, in OTA 5 – southern Lazio – Frosinone (86 municipalities managed[66] in the area of Frosinone and vicinity, equal to about 95% of the population), for about 455,000 residents served;
- **GORI** operates in the Sarnese-Vesuviano district (in 76 municipalities, equal to about 94% of the population in OTA 2 – Central Lazio, Acea Ato 2 managed the entire IWS (aqueduct, sewerage and waste water treatment), and the IWS was partially managed in another 17 municipalities, in addition to 112 other municipalities[63], of which 80 are managed [64] by Acea

131 Water Kiosks active in territories managed by Acea Ato 2, GORI and AdF: over **30 million litres of water provided**, equal to **601 t of plastic saved per year** and over **1,580** tons of CO_2 prevented from entering the atmosphere

Envision and CAM to be included in the design of the **interventions of the strategic structures** of Acea Ato 2: **Peschiera** and **Marcio aqueducts**

Energy for the Sarno: the project launched by GORI **will contribute to restabilising the fluvial ecosystem**

63 In July 2021, with Regional Council Resolution No. 10, the Optimal Territorial Area 2 - Central Lazio-Rome was modified to include the Municipality of Campagnano di Roma, which previously belonged to ATO 1 - North Lazio-Viterbo.

64 In 80 municipalities, equal to about 94% of the population in OTA 2 – Central Lazio, Acea Ato 2 managed the entire IWS (aqueduct, sewerage and waste water treatment), and the IWS was partially managed in another 17 municipalities.

65 Acea was entrusted with the running of the capital's aqueduct service since 1937, the water treatment system since 1985 and the entire sewerage system since 2002, effective 1 January 2003.

66 Including the management of two municipalities outside the area (Conca Casale and Rocca d'Evandro).

ipalities - 59 in the province of Naples and 17 in the province of Salerno - of which 74 are managed), with approximately 1.4 million residents served;
- **Gesesa** operates in the ATO - Calore Irpino (22 municipalities managed, in the area of Benevento and province), with more than 110,000 residents served.
- **AdF** - in the reporting perimeter from this year - operating in the ATO 6 Ombrone that includes 55 municipalities (28 in the province of Grosseto and 27 in the province of Siena) with a population of more than 380,000.

The integrated water service (IWS) involves the **entire cycle of drinking water and wastewater**, from the collection of water from the springs until its return to the environment, and is regulated by a **management agreement** signed **between the Company that takes charge of the service and the Area Authority** (AGB – Area Governing Body). The Regulatory Authority for Energy, Networks and the Environment (ARERA), which also regulates the water sector at a national level, has defined the minimum essential contents of the "**Standard Agreement**" **between the entrusting bodies and the service operators**. For the main regulatory interventions in the water sector undertaken during the year by ARERA, see paragraph *Context analysis and business model* (Group Profile *chapter*), and for more details see the Authority's website.

The ***Integrated Water Service Charter***, annexed to the Agreement, defines the **general and specific quality standards** that the operator must respect in relation to the users, in compliance with the ARERA Resolutions on **contractual quality and technical quality aspects**. The ***User Regulations***, also annexed to the Agreement, govern the **relationship with customers**, establishing the technical, contractual and economic conditions that are binding for the operator in the provision of services. For **the contractual quality performance** of water companies, see below the sub-section *Levels of quality regulated by ARERA in the water segment.*

The **management activities** of the integrated water service, **though** closely related and therefore allowing **an optimal definition of the processes**, must relate to **situations that are very diversified** from the standpoints of sale, demographics, geomorphology and hydrology **of the regions served**, which also have an impact on the infrastructure to be implemented. The Companies operate in compliance with the procedures of the **certified management systems**, in particular, for Acea Ato 2, Acea Ato 5 and Gesesa in the areas of Quality, Environment, Safety and Energy, for GORI in the areas of Quality, Environment and Safety and for AdF in the areas of Quality and Safety (see, for further details, The corporate identity, The management systems).

CONSISTENCY, INTERVENTIONS AND REMOTE CONTROL

The companies managing the IIS are engaged in progressive **digitising of the networks**, through studies, field surveys and **data entry into the geo-referenced information system** (GIS). In particular, at 31/12/2021, **Acea Ato 2** has **over 85% of the networks traced in the GIS system**; **Acea Ato 5** has digitised **about 4,917 km** of the water network at 31/12/2021 and in 2021 completed the surveys on another 925 km (24 municipalities). **GORI** and **Gesesa** have geo-referenced the stocks shown in Table 25 and are continuing to survey and update the data; Gesesa has already geo-referenced the **water sites** (wells, springs, reservoirs/partitions) and the **sewage lifting and treatment plants**, including their functional diagrams.

In 2021, **AdF** activated a process of geo-referencing the reclaimed pipelines, which made it possible to map the entire database of replaced pipelines, equal to about 38.55 km on the aqueduct and about 1.63 km on the sewerage system.

Table no. 25 – Water mains areas 2021 (geo-referenced data)

company	drinking water network (km)	sewerage network (km)
Acea Ato 2	13,152 (723.4 km of aqueduct, 1,127 km of supply network and 11,301 km of distribution)	6,217
Acea Ato 5	6,027 (1,207 km of supply network and 4,820 km of distribution network)	1,776
GORI	5,215 (865 km of supply network and 4,350 km of distribution network)	2,625
Gesesa	2,063 (174 km of supply network and 1,889 km of distribution network)	523 (among outfalls, main and secondary collectors)
AdF	8,328 (1,993 km of supply network and 6,335 km of distribution network)	1,746 (among outfalls, main and secondary collectors)

The networks are connected to a complex system of equipment and plants necessary for the operations of the aqueduct, treatment and sewerage services. Each year, the Companies carry out:
- **infrastructure interventions such as modernisation** or strengthening of the plants the **remote control of infrastructures**, **the completion,** extension or the **drainage of pipelines and networks**, to contain the losses and improve the efficiency and quality of the service provided;
- **interventions to improve utility management** (such as installation and replacement of meters), in addition to everything concerning the relationship with customers, for which reference is made to the paragraph *Customer care*);
- **interventions to protect people and territory**, **aimed at ensuring the** quality of the drinking water distributed and the water returned to the environment (such as Water Safety Plans - WSPs - and laboratory controls; see also the section *Relations with the environment* and the chapter *Institutions and the Company).*

For a quantification of the main interventions carried out by the companies during the year and the analytical checks on drinking water and waste water carried out independently or by Acea Elabori, see Table 26. **Acea Ato 2** pursues security and **greater resilience of the supply system managed**, in compliance with the Concession flows. In particular, under Ministerial Decree No. 517 of 16 December 2021 "Investments in primary water infrastructures for the security of water supply", Acea Ato 2 obtained funding of € 150 million as the implementer of four strategic interventions[67] within the broader project of making Rome's water supply safe and modernising it; see also the box - *Interventions on strategic infrastructures, Peschiera - Le Capore and Marcio aqueducts: making them safe and authorisation procedures* - paragraph Protection of the territory and safeguarding biodiversity in *Relations with the environment*. **The design** of strategic infrastructures is also defined, in collaboration with **Acea Elabori**, with **specific attention to sustainability criteria** (see box with details).

67 These are the "New Marcio Aqueduct - Lot I", the "Raddoppio VIII Syphon - Casa Valeria Section - Ripoli Tunnel Exit - Phase I", the "Ottavia - Trionfale Supply System" and the "Monte Castellone - Colle S. Angelo (Valmontone) Pipeline".

STRATEGIC INFRASTRUCTURES OF ACEA ATO 2: ENVISION AND CAM FORESEEN IN THE DESIGN

On the new upper section of the **Peschiera Aqueduct**, design activities continued in order to obtain environmental authorisations and **Envision Certification** - the first rating system for building sustainable infrastructures; a methodological approach was defined and applied to **estimate the CO_2 emissions** generated by the infrastructure construction activities. For the **Marcio aqueduct**, a **Sustainability Report** was prepared in compliance with EU Regulation 852/2020 on the European taxonomy, in order to verify compliance with the principle of "not causing significant damage", and with the reference regulations of the NRRP. In addition, the document containing the prospective indications for sustainable engineering and **for the application of the Minimum Environmental Criteria (CAM) for both infrastructures is being further developed**.

In 2021, Acea Ato 2 **installed 144 hydro valves** to optimise the operating pressures of the distribution networks and **reclaimed 203.4 km of water mains**; it started **work on major supply systems** to increase the resilience of complex municipal systems; to increase the availability of water in the municipalities of Castelli Romani, it completed the new drinking water plants serving the Madonna di Coccio and Camporesi wells in the municipalities of Castel Gandolfo and Ciampino. The programme to install flow-limiting devices on rural utilities has also continued to limit non-drinking consumption.

Table no. 26 – Main interventions on the drinking water and sewerage networks and controls on drinking water and wastewater (2021)

INTERVENTIONS ON DRINKING WATER NETWORKS, METERS AND WATER TESTS	
type of work	
ACEA ATO 2	
interventions due to network failure/leak detection	**35,313 interventions** (34,904 due to faults, 409 leak detection)
meter installations (new installations and replacements)	**15,807 interventions** (12,233 new installations and 3,574 replacements) and **135,448 massive replacements** with contract
network extension	**203.39 km** of expanded network
network reclamation	**10.10 km** of reclaimed network
drinking water quality control	**11,926 samples** collected and **346,164 tests** performed
ACEA ATO 5	
interventions due to fault	**11,046 interventions** of repair
planned interventions	**1 intervention** (on supply network)
meter installations (new installations and replacements)	**30,103 interventions** (3,082 new installations and 27,021 replacements)
network extension	**0 km** of expanded network
network reclamation	**31.7 km** of reclaimed network
drinking water quality control	**2,530 samples** collected and **105,430 tests** performed
GORI	
interventions due to network failure/leak detection	**15,604 interventions** (13,767 due to faults, 1,837 leak detection orders)
planned interventions	**7,065 interventions**
meter installations (new installations and replacements)	**26,194 interventions** (12,937 new installations and 13,257 replacements)
network extension	**0.23 km** of expanded network
network reclamation	**14.07 km** of reclaimed network
drinking water quality control	**4,903 samples** collected and **136,156 tests** performed
GESESA	
interventions due to network failure/leak detection	**4,340 interventions** (4,104 due to faults, 236 leak detection)
planned interventions	**56 interventions**
meter installations (new installations and replacements)	**3,190 interventions** (1,113 new installations and 2,077 replacements)
network extension	**3 km** of expanded network
network reclamation	**1.4 km** of reclaimed network
drinking water quality control	**828 samples** collected and **11,955 tests** performed
AdF	
interventions due to network failure/leak detection	**8,836 interventions** (8,200 due to faults, 636 leak detection)
planned interventions	**71 interventions**
meter installations (new installations and replacements)	**38,686 interventions** (3,518 new installations and 35,168 replacements)
network extension	**1.8 km** of expanded network
network reclamation	**48 km** of reclaimed network
drinking water quality control	**4,757 samples** collected and **139,634 tests** performed

INTERVENTIONS ON SEWERAGE NETWORKS AND TESTS	
type of work	
ACEA ATO 2	
interventions due to network failure	**3,302 interventions**
planned interventions	**172 interventions**
network extension	**8.23 km** of expanded network
network reclamation	**17.6 km** of reclaimed network
wastewater quality control	**6,646 samples** collected and **127,417 tests** performed
ACEA ATO 5	
interventions due to network failure	**655 interventions**
planned interventions	**1 intervention**
network extension	**0 km** of expanded network
network reclamation	**1.6 km** of reclaimed network
wastewater quality control	**3,044 samples** collected and **40,636 tests** performed
GORI	
interventions due to network failure	**545 interventions**
planned interventions	**6,576 interventions**
network extension	**1.11 km** of expanded network
network reclamation	**4.25 km** of reclaimed network
wastewater quality control	**1,584 samples** collected and **43,270 tests** performed
GESESA	
interventions due to network failure	**203 interventions**
planned interventions	**7 interventions**
network extension	**0 km** of expanded network
network reclamation	**0.05 km** of reclaimed network
wastewater quality control	**489 samples** collected and **11,448 tests** performed
AdF	
interventions due to network failure	**373 interventions**
planned interventions	**41 interventions**
network extension	**0 km** of expanded network
network reclamation	**2.6 km** of reclaimed network
wastewater quality control	**7,372 samples** collected and **51,707 tests** performed

Acea Ato 2's aqueducts and supply network are equipped with **remote-control systems**: **meters and sensors** connected to the field equipment provide the **central system** with useful information on the condition of the network and its operation (system set-up, pump and valve status, hydraulic, chemical, physical and energy measurements), **highlighting any alarms** and offering the possibility of **remote operation**, such as turning pumps on or off, opening, closing or adjusting valves. Rome's particularly complex distribution network is fed by water centres, where remote control has been implemented extensively. The number of **water centres** and **points on the network** that have been partially or fully **remote-controlled** has **further increased**: at the end of 2021, there were **1,019** remote-controlled **plants** on the collection and distribution network (springs, wells, aqueducts, supply systems, water centres, drinking water treatment plants) and a further **1,662** remote-controlled ones along the distribution network (1,066 districtisation points, 106 water kiosks and 490 network pressure measuring points, including 319 hydro valves and 171 pressure points). Of these, 355 are equipped with **water quality** measurement systems. **For** the sewage system the progressive remote control of the entire sector is very advanced **which intervenes on both central systems and plants** (large and small treatment plants and sewage lifting plants): **the main treatment plants are already remotely controlled through on-site rooms** and further work to upgrade the technology and connect them to the central room is in progress.
The water sites managed by **Acea Ato 5** - including supply sources, distribution plants, sewage lifting stations and purification plants - are partly **equipped with remote control**, which makes telemetry, remote command and control possible, as well as the detection of hydraulic (water flow rate, network pressure, tank level, operating status of electric pumps), electrical and qualitative (turbidity and residual chlorine) parameters. At the end of 2021, there **were 331 plants with a remote-control system installed** (equipped with hydraulic measurements - flow rates, pressure and levels -, 16 of which were also equipped with **water quality control**) and **111 network points** (with continuous pressure or flow monitoring systems). **The plants** managed by GORI, relating to the drinking water, sewage and purification systems, **are all equipped with remote-control systems**; as at 31/12/2021, there were a total of **677 plants**, of which 269 water sites and 203 water network nodes, 195 sewage sites and 10 purification sites, at which the same activities as indicated above for Acea Ato 5 are carried out. At **GORI**'s plants, a local control system provides automated management (with human intervention only in emergencies) of electric pumps and valves according to a logic of energy efficiency and saving of water resources; in the largest reservoirs, outflow control valves are installed and remotely controlled, for dynamic adjustment of the quantity of resource supplied based on different water availability scenarios; finally, the progressive application of **IoT technologies** in nodes of the water and sewerage networks where **electricity is absent** allows essential network parameters (pressures and flows) to be monitored.
Gesesa has continued the programme of installing the remote-control system at the water sites it manages; in particular, in 2021 it **completed the implementation of remote control on 4 sewage lift-**

ing stations and started the installation of an alarm system on all the purification plants. It has also been awarded the works for upgrading and securing several of the water plants it manages. **AdF** has also continued the progressive implementation of remote control on its plants, **extending it to 45 more aqueduct sites in 2021**. Constant monitoring of the networks (district flow measurements and control valves) and of the smaller reservoirs makes it possible to reduce inefficiencies; the automatic instruments installed on the pumping systems of the sewage lifts also facilitate predictive maintenance, frequency analysis of alarms, and the status of priority process meters for management and budgetary purposes. Work continued during the year on the implementation of automatic regulation of the network, depending on pressure conditions, and testing of battery-powered pressure and flow rate sensors with NB-IoT technology, and their management and analysis platform.

The issue of **limiting losses on distribution networks** is carefully monitored by all Group companies, which are committed to the sustainable management of the water cycle; to this end, **organisational structures dedicated to protecting the resource** have been set up. The companies carry out **districtisation**, **inspection and reclamation** of the networks, installation of automatic valves and other pressure control instruments, as well as verification and calibration of meters, **identification of abnormal consumption** and also initiatives to combat illicit connections and improper use of the resource. The specific activities undertaken in 2021 by each company are illustrated in the dedicated chapter Water Segment in the section *Relations with the environment*, to which reference should be made.

UTILITY MANAGEMENT AND SERVICE CONTINUITY

The companies continued **in 2021** with the **installation of new meters and the replacement of old ones** (see figures in Table 26). As part of its **mass meter replacement activities**, **Acea Ato 2** has continued its experience in the field of IoT, "Water meter remote reading development", in collaboration with Areti, which has led to the development and testing of a patented product called "Proteus". During the year, a total of **about 17,000 Proteus NB-IoTs** were installed and put into operation on as many water users and public fountains in Rome. In 2021, around **1,100 meters were brought into remote reading mode**, bringing the total number of installed remote reading meters to over 30,000 as of 31/12/2021.
In addition, Acea Ato 2 focused during the year on **a diversified remote meter-reading strategy**, which includes the introduction of **specific solutions** according to different installation requirements. In fact, in addition to Proteus NBIoT devices, the company has started **both the procurement of integrated market meters** – devices with ultrasound technology that allow for taking measurements and remote reading – **and the design and development of a new advanced smart metering system for the water service**, from which benefits are expected in terms of, for example, optimisation of data quality and quantity, maximisation of the use of communication technologies, and cybersecurity.
AdF continued to massively implement **remote reading of meters in the area**, through drive-by and walk-by reading, installing **over 38,000 meters in 2021** and achieving **coverage of 50% of the entire fleet of meters**; the work carried out in Grosseto, Follonica and Orbetello made it possible, in fact, to almost complete the largest municipalities managed. The solution installed makes it possible to increase the frequency of readings and facilitate data collection. AdF has also **created a platform for analysing**, **checking and monitoring** data from remote reading which, by also integrating data collected by fixed and mobile concentrators, will allow greater control of the flows supplied and network balance.

The **continuity of the water supply** is one of the fundamental service parameters for customer satisfaction, which has been subject to regulation by the ARERA. Table no. 27 shows the data of the last three years relating to **disruptions and water reductions**, **urgent** (due to accidental breakdowns of pipelines or plants, energy interruption, etc.) **or planned**, for the Companies in question.

Table no. 27 – Number, type and duration of disruptions in the supply of water (2019-2021)

type of disruption	2019	2020	2021
ACEA ATO 2 (*)			
urgent disruptions (no.)	1,304	1,207	881
planned disruptions (no.)	204	212	341
total disruptions (no.) (**)	**1,508**	**1,419**	**1,222**
suspensions lasting > 24hrs (no.)	170	196	147
ACEA ATO 5			
urgent disruptions (no.)	428	521	691
planned disruptions (no.)	338	568	397
total disruptions (no.) (**)	**766**	**1,089**	**1,088**
suspensions lasting > 24hrs (no.)	0	0	0
GORI (*)			
urgent disruptions (no.)	1,755	3,042	2,629
planned disruptions (no.)	218	103	59
total disruptions (no.) (**)	**1,973**	**3,145**	**2,688**
suspensions lasting > 24hrs (no.)	0	0	0

GESESA (*)			
urgent disruptions (no.)	107	90	17
planned disruptions (no.)	31	57	19
total disruptions (no.) (**)	**138**	**147**	**36**
suspensions lasting > 24hrs (no.)	3	1	8
AdF (*)			
urgent disruptions (no.)	1,978	2,378	2,155
planned disruptions (no.)	179	390	468
total disruptions (no.) (**)	**2,157**	**2,767**	**2,623**
suspensions lasting > 24hrs (no.)	175	48	64

(*) The 2020 figures for Acea Ato 5, AdF and GORI have been consolidated. The 2021 figures for Acea Ato 2, GORI, Gesesa and AdF and Gesesa are still being consolidated. Any adjustments, after data consolidation, will be reported in the next reporting cycle.
(**) As envisaged by the Authority, total disruptions include both shutdowns (due to damage to pipes/pipelines and network changes) and interruptions due to disruptions and system anomalies. The number of total out of service cases is therefore used for the calculation.

WATER DISTRIBUTED AND RETURNED TO THE ENVIRONMENT

The quality of the drinking water distributed mainly safeguards **aspects related to health and safety of the community** and is therefore an essential element of the service. The same approach also applies, however, to the **water returned to the receiving water bodies**, as regards **safeguarding ecosystems**. Consequently, **all the Companies independently carry out controls on drinking and wastewater** using internal laboratories or with the support of the **Acea Elabori** Group Company (see Table no. 26).
In particular, **tests on water intended for consumption** are carried out on samples collected from springs and wells, supply plants, reservoirs and along distribution networks, as well as samples collected for extraordinary testing (users, local health authority requests, etc.) and specific parameters (e.g. radioactivity). Test frequency and sampling points are defined taking into consideration **the volumes of water distributed**, **population served**, **network and infrastructure conditions and specific characteristics of local springs** (see also *Environmental relations*).
All the Water Operations Companies in the group have started preparations or begun to implement **Water Safety Plans (WSP)**, aimed at **preventing and reducing the risks inherent to the drinking water service**; the activities in question, conducted in 2021, are illustrated in the dedicated (Water Safety Plans - WSP) section of the Water Segment chapter in the Environmental relations section, to which reference should be made.

As regards the territory managed by Acea Ato 2, the spring water collected to supply the Rome and Fiumicino area presents levels of excellent quality at the source, while in the Castelli Romani area and other areas of upper Lazio, the volcanic nature of the terrain adds mineral elements to the aquifer such as fluorine, arsenic and vanadium, in concentrations exceeding those envisaged by the law. For some time, Acea Ato 2 has been working to resolve these issues, such as by decommissioning some local sources of supply and replacing them with higher quality springs. In 2021, in particular, Acea Ato 2 **built new drinking water plants** and upgraded/expanded existing plants in the municipalities of Marino, Castel Gandolfo, Ariccia, Rignano Flaminio, Civitavecchia and Pomezia. It has also **started work on aqueduct interconnections** that will ensure greater network resilience and improve the service provided.

In 2021, AdF **implemented the first phase** of the project planned in 2020 to **monitor the quality of supply sources** with **online instrumentation**. The installation of the instruments, the acquisition of the remote-control signals and the preparation of the relative **control/reporting dashboards** were carried out, through which it is possible to **integrate the qualitative data** collected with **quantitative information** and with the **meteorological and hydrogeological information** made available online by the related regional services, updated on a daily basis. During the year, the first **8 supply sources** were monitored, which together provide approximately **68% of the water resource distributed by AdF**; these include the Santa Fiora springs, and advanced monitoring of the **arsenic** parameter, using a high-tech analyser tested in 2020, in the water of the Galleria Alta spring is planned. The project envisages monitoring around 75% of the resources drawn from the environment, leaving out only small and very small sources, whose suitability for online monitoring can be assessed on a case-by-case basis.
The installation of online measurement systems and the uptake of remote control makes it possible to continuously monitor the quality of the water and activate **early warning** systems as provided for in the new quality guidelines for the safety of drinking water specified by the recent European Directive 2020/2184.
GORI supplies its users with quality water, collected from deep wells. The qualitative characteristics of the water distributed are verified by the internal "Francesco Scognamiglio" laboratory, located in Pomigliano d'Arco, which uses cutting-edge instruments, including a spectrometer capable of determining **all the metals** indicated by the regulations in force on drinking water. The introduction of this equipment has made it possible to reduce the time required to carry out analyses and to reduce laboratory consumables, reagents, the quantity of technical gas and electricity consumption.
Gesesa participates in the technical round table, together with the Campania Water Authority, local, provincial and regional institutions, and Arpac and the local health authorities, dedicated to the monitoring and characterisation of the groundwater resource that, through the Campo Mazzoni and Pezzapiana wells, supplies the city of Benevento. In the previous two years it carried out an extraordinary control plan for the tetrachloroethylene parameter in the groundwater, finding concentrations below the values imposed by the reference legislation. In 2021, Gesesa **launched a project** aimed at creating an **activated carbon filtration system** for the treatment of drinking water at the Benevento water plant (see the dedicated box in Relations with the environment, Water area, paragraph Water quality).
In 2021, there were **131 water kiosks active** (**106 of Acea Ato 2**, of

which 31 in the City of Rome and 75 in the province of Rome, **20 of GORI** and **5 of AdF**, which has another 2 in the start-up phase); these are dispensers of chilled natural or sparkling water, installed throughout the territory, **available to citizens and tourists**, free of charge or at minimal cost. The water distributed is the same as the aqueducts and the quality is certified by regular checks conducted by the companies and the relevant local health authorities. The initiative met with a **positive response** and **in 2021**, the "kiosks" **supplied a total of over 30 million litres of water** (about 26.8 million litres from Acea Ato 2, about 3.2 million litres from GORI and about 35,000 litres from AdF water kiosks), with a percentage of sparkling water of about 56%. The **environmental benefits** are clear: **the litres dispensed are equivalent to 601 tonnes of plastic saved over the year** (equal to over 20 million 1.5 litre bottles) and **over 1,580 tonnes of CO_2 not emitted into the atmosphere** (**around 63% more** than the 2020 figure of 968 tonnes of CO_2 avoided), due to the lack of bottle production[68] and net of emissions due to the energy consumption of the kiosks[69] and the CO_2 added to obtain sparkling water.

Acea Ato 2, by virtue of the new installation plan approved by the OTS, **will be able to install a further 100 water kiosks**; the company **has also undertaken a project** for the installation and maintenance of water kiosks and dispensers **on behalf of third parties**, which in 2021 allowed it to install two water kiosks and one dispenser at LUISS University, one at the Quirinale and one at the Ministry of Economy and Finance.

Acea Ato 2 is also responsible for water up to the "point of supply" for the **drinking water fountains** in the territory of Rome. . Launched by Acea in 2020, **the Waidy app** makes it possible to **identify the water supply points** located throughout the territory. In 2021 it was renamed **Waidy Wow** and **underwent evolution** aimed at improving the user experience, becoming **a complete tool with better performance**. The graphical interface has been improved and **the number of water points mapped across the country has increased to over 50,000**; a feature has been made available that allows the user to add a new water point directly. Artistic, cultural and historical content has been expanded to enhance the area, and news and in-depth articles on sustainability have been added in order to involve users and **create a community** attentive to environmental and social issues. A feature allows users to identify **personalised routes by following the "waterways"** (drinking fountains, artistic fountains, water kiosks) or to access pre-set thematic routes and related multimedia content. Finally, the app gives access to a "Web radio", a channel dedicated to infotainment with 24-hour music programming and the inclusion of "short videos on sustainability" in collaboration with LifeGate.

THE PERCEIVED QUALITY OF DRINKING WATER, RESULTS OF THE 2021 SATISFACTION SURVEYS

Acea **measures customer habits and perceptions regarding the quality of the drinking water supplied**. The customer satisfaction surveys, carried out twice a year, include not only an overall opinion on water quality but also an in-depth analysis of the subject. The outcomes presented below are **the average of the two surveys**.

For **Rome and Fiumicino**, where the service is managed by **Acea Ato 2**, the **overall opinion on taste**, **smell and clarity of drinking water** expressed by the sample of respondents remains **stable and high** at **7.6/10** (it was 7.7/10 in 2020); **39.2%** of those interviewed, a figure that is down compared to 2020 (46%), **state that they habitually drink the water that comes to their homes**, while **28%**, the same percentage as in 2020, **state that they never drink it**; among **the reasons given** by those who never drink water at home, 49.4% continue to be the habit of drinking mineral water, while 27.2% responded that it is "not good for my health".

The surveys carried out in 2021 in the **other areas of Lazio** where Acea Ato 2 operates used a larger sample of respondents than in 2020, representing different and larger areas, so the results are not directly comparable. The surveys showed that the **overall satisfaction** rating for water quality **in the province is 6.8/10**; 25.1% **say they drink tap water regularly** and **45.9% never drink it**; for 38.6% of the latter, the reason is related to their habit of drinking mineral water, while 25% say "it's not good for my health".

For **Acea Ato 5** customers in Frosinone and vicinity, in 2021 the overall opinion expressed on drinking water came to **6.1/10** (it was 6/10 in 2020). **The percentage of respondents** stating that they **habitually drink** tap water remains limited and is decreasing at **17%** (it was 21% in 2020), while the percentage of those stating that **they never drink it**, equal to **54.9%** is high, although decreasing with respect to 2020 (59%). For the latter, the main reasons given were the habit of drinking mineral water for 34.3% and "not good for my health" for 34.1%.

In the Sarnese Vesuviano district, the overall opinion on drinking water expressed by **GORI**'s customers in 2021 remains stable at **6.2/10** (6.1/10 in 2020), as do the percentages of **respondents** who say they **habitually drink** tap water, **23%** (same figure as in 2020) and **never drink it**, 52.4% (slightly down from 53% in 2020). The main reasons cited by those who do not prefer tap water are 'it's not good for my health', for 30.2%, and 'I don't like the taste', for 24.1%.

For customers of **Gesesa**, in Benevento and province, the overall opinion expressed on the quality of drinking water is **6.9/10** (6.6/10 in 2020); **continuing its upward trend**, although only slightly, is the percentage of customers who **say they drink tap water regularly**, **which was 16.6% in 2021** (against 13% in 2020) with a slight decrease in the percentage of those who state that they never drink it, which came to **55.6%** (against 56% in 2020); in this area also, the prevailing reasons given were "it is not good for my health", 39.5% of the respondents and "I am accustomed to drinking mineral water", 36.9% of respondents.

For customers of **AdF**, operating in the province of Grosseto and Siena, the overall opinion expressed on drinking water remains stable and was **6.9/10** (compared with 7/10 in 2020). The percentage of respondents who say they **habitually drink tap water**, **36.9%**, has increased slightly (**35%** in 2020) and the percentage who say they **never drink it** (45% in 2020) has decreased more significantly to 40.2%, because "I don't like the taste" in 33% of cases, and because they are used to drinking mineral water in 29.8%.

68 The figure, although significant, is certainly underestimated because it does not take into account the emission savings induced by not transporting the bottles by road/rail.

69 Consumption data of the AdF water kiosks managed by the municipalities are not available.

The collection of wastewater and its treatment prior to being returned to the environment takes place through a complex system and a configuration **organised by "areas"** comprising **wastewater treatment plants**, **sewerage networks** connected thereto and the associated **pumping stations**. **Acea Ato 2** manages **676 sewage lifting plants**, **166 purification plants** and **more than 7,000 km of sewerage networks** (of which 6,217 km mapped on GIS); in 2021, the company continued with its **plan to centralise the purification plants**, for the work carried out, see the box in the Water Area chapter of the section Relations with the environment.
The **Acea Ato 2 Environmental Operations Centre** constantly monitors data recorded remotely using **cutting-edge technology** relating to **hydrometric and rainfall information** for the Rome area, shared with the Rome Hydrographic and Tide Gauge Operations Office, as well as data on the **quality of water** of the water bodies: In 2021, **366 samples were taken at 32 sampling points on the Tiber and Aniene rivers and on Lake Bracciano**.
In the territory of the municipality of Rome, Acea Ato 2 also manages the lifting plants and tanks for the watering network and the **non-drinking water network supplying the water features of the most important artistic fountains**. In particular **9 of the main artistic and monumental fountains of the capital**: the Triton Fountain, the three fountains in Piazza Navona – the Fountain of the Four Rivers, the Moor Fountain and the Fountain of Neptune – the Trevi Fountain, the Fountain of Turtles, the Fountain of Moses, the Fountain of the Naiads.
The infrastructure of the water treatment and sewerage service managed by **Acea Ato 5** includes, as at 31/12/2021, **229 sewage lifting plants**, **127 purification plants** and **approximately 1,776 km of dedicated networks**. **GORI** manages **2,625 km of network** serving the water treatment and sewage system and **10 purification plants** some serving individual municipalities and others serving inter-municipal areas of Sarnese-Vesuvius agriculture. In 2021, GORI undertook a major project to complete the sewerage and purification works in the **Sarno hydrographical basin** (see the dedicated box).

GORI LAUNCHES THE *ENERGIES FOR THE SARNO* PROJECT

The Campania Region, through the Ente Idrico Campano (Campania Water Authority), has identified GORI as the implementing party for the completion of the sewage and water purification works in the **Sarno hydrographical basin** in the Sarnese Vesuviano district in 2020.
The *Energies for the Sarno* project, which began in 2021, will have a **significant environmental impact** through the gradual completion of the sewage network and the consequent collection for purification, creating the conditions – with the elimination of polluting discharges – to **re-establish the river ecosystem** with consequent positive effects on the entire area and the Gulf of Naples, as well as on the health of agricultural products and the health of citizens, around 800,000 people living in the 33 municipalities of the basin, plus those living in neighbouring municipalities. GORI has undertaken the project with a **remarkable involvement of local stakeholders**, in addition to the 33 municipalities involved in the project, also the canning industry and the environmental association Marevivo Non-Profit Organisation, with the aim of setting up participatory dialogues and synergistic collaborations. Four permanent round tables have been set up on different levels of action: planning and carrying out works, combating illegal discharges, preventing flooding and shared communication. Participatory involvement was also extended to customers with the first phase of the "A click for the Sarno" campaign, through which GORI set aside € 1 for each subscription to the "web bill" service to implement initiatives aimed at rehabilitating the river. More than 19,000 users signed up during 2021. The corresponding amount will be allocated to projects to be implemented, identified with Marevivo and shared with the mayors, which will be voted for by the users who participated in the campaign, in a contest launched by GORI.

As at 31/12/2021 the infrastructure of the water treatment and sewerage service **managed by AdF** included **291** sewerage lifting plants, **149 purification plants** (and 153 Imhoff tanks) and over **1,746 km of sewage networks**. In the ATO in which **Gesesa** operates, the infrastructure managed by the company includes **19 sewerage lifting plants**, **30 treatment plants** and **523 km of dedicated networks**. For the city of Benevento, the Municipality of Benevento is still planning the design of a centralised treatment plant, including connection outfalls.

QUALITY LEVELS REGULATED BY ARERA IN THE WATER SECTOR

The Regulatory Authority for Energy Networks and Environment (ARERA) defines the **specific and general levels of contractual quality for the water sector**[70]. With resolution 547/19, **the Authority** amended and supplemented the previous regulations outlining **an incentive system** divided into bonuses and penalties to be attributed from 2022 based on operators' performance. In view of the distribution of the incentives, in addition to calling for controls on operators on this issue, at the end of 2021 the Authority issued for consultation the update to the methods used to verify contractual quality information for the integrated water service with regards to control procedures and penalty amounts. Additionally, with resolution 639/2021 of 30 December, the Authority established certain flexible elements in the mechanisms used to assess contractual quality performance, including **cumulative evaluation of quality objectives on a two-year basis** (2022-2023).
Coinciding with the introduction of the new contractual quality incentive system, the water tariff method for the third regulatory period (2020-2023), regulated by Resolution 580/2019/R/Idr, **did not maintain the possibility**, already provided for the previous regulatory four-year period[71], **of accessing premiums relating to contractual quality in the event of the achievement of improved quality standards** with respect to those defined at the national level by Resolution 655/2015/R/Idr. Acea Ato 2 has **in any case maintained the improved levels of contractual quality standards**, as defined by the application submitted in 2016 by the Area Governing

70 For most of the services the regulation of contractual quality aspects is in force from July 2016 according to resolution 655/15/R/Idr or RQSII (*Regulation of the contractual quality of the integrated water service*).

71 Contractual quality premiums related to the achievement of improved quality standards with respect to those defined in Resolution 655/2015/R/IDR were introduced by Resolution 664/2015/R/Idr on the Integrated Water Service Tariff Method for the second regulatory period (2016-2019).

Body (Conference of Mayors of ATO 2 Central Lazio) and accepted by ARERA, and by the amendments subsequently made by resolution 4/20 of the Conference of Mayors relating to the updating of the Service Charter. In particular, the improvement standards concern **39 indicators out of the 47 established by the resolution**. **For some services** envisaged in the Service Charters attached to their respective concession agreements, **Acea Ato 5 and AdF also pursue and have maintained standards that are better than those imposed by the Authority**.
The timing of the delivery of data on specific and general contractual quality levels to the Authority shall be subsequent to the publication of this document. Therefore, **unconsolidated data for all companies are presented here**, based on the best estimates available at the time of publication, and are intended as **indicative of performance trends**; consolidated data will be published in the next reporting cycle (see Tables 28-32).
There is a mechanism for **automatic compensation of customers** in the event of non-standard performance on "specific" indicators, the value of which varies according to the delay in performance (see also the box describing investigations, rewards and penalties in the chapter Institutions and the Company).
The water companies, as required by the Authority, **communicate commercial performance data to users in their bills once a year,** Acea Ato 2, Acea Ato 5 and AdF also publish them online, and all publish **information on the quality of the drinking water distributed** on their websites.

Table no. 28 – The main specific and general levels of contractual quality in the water segment (2020-2021) – Acea Ato 2 (ARERA parameters, improvement standards and Acea Ato 2 performance - 2020 figures are consolidated, 2021 figures are not consolidated)

ACEA ATO 2 - CONTRACTUAL WATER QUALITY SEGMENT

SPECIFIC LEVELS OF QUALITY

SERVICES	ARERA STANDARDS	ACEA ATO 2 IMPROVEMENT STANDARD	average actual completion time for services	degree of compliance	average actual completion time for services	degree of compliance
			ACEA ATO 2 PERFORMANCE			
			2020		2021	
estimate for water connection with inspection	20 working days	15 working days	5.7	98.0%	5.9	98.1%
estimate for sewage connection with inspection	20 working days	15 working days	3.5	100.0%	3.7	98.7%
execution of the water connection with simple work	15 working days	10 working days	6.7	95.9%	4.3	100.0%
execution of the sewage connection simple work	20 working days	15 working days	/	/	8.3	100.0%
supply activation	5 working days	3 working days	5.8	88.0%	2.9	94.3%
reactivation or takeover of the supply without changing the meter rate	5 working days	3 working days	2.3	95.6%	1.5	97.3%
reactivation or takeover supply with changes to the meter rate	10 working days	6 working days	2	100.0%	1.0	100.0%
reactivation of supply following disconnection for late payment	2 working days	1 weekday	0.7	92.6%	0.8	98.1%
deactivation of supply	7 working days	3 working days	3.1	95.7%	2.1	95.9%
transfer of registration	5 working days	3 working days	0.2	99.6%	0.2	99.5%
estimates for works with inspection	20 working days	15 working days	4.9	98.7%	5.4	99.1%
completion of simple work	10 working days	6 working days	13.4	77.8%	4.2	90.0%
punctuality band for appointments	180 minutes	120 minutes	0.7	99.0%	0.8	99.2%
reply to complaints	30 working days	20 working days	6.2	99.5%	5.7	99.7%
reply to written enquiries	30 working days	20 working days	5.6	99.8%	5.4	99.6%
billing adjustment	60 working days	55 working days	6.3	100.0%	6.9	100.0%

GENERAL LEVELS OF QUALITY						
			ACEA ATO 2 PERFORMANCE			
				2020		2021
completion of complex water connection	90% of the services within 30 working days	90% of the services within 20 working days	27.6	84.6%	8.2	96.7%
completion of complex sewage connection	90% of the services within 30 working days	90% of the services within 25 working days	1	100.0%	16.2	93.9%
completion of complex works	90% of the services within 30 working days	90% of the services within 20 working days	43.1	76.2%	14.8	91.8%
maximum time for the agreed appointment	90% of the services within 7 working days	90% of the services within 5 working days	2.5	95.2%	2.8	92.7%
arrival at the location of the emergency call	90% of the services within 3 minutes from the telephone conversation with the operator	90% of the services within 2 minutes from the telephone conversation with the operator	2.6	97.9%	1.3	97.7%
reply to written billing adjustment requests	95% of the services within 30 working days from receipt of the request	95% of the services within 20 working days from receipt of the request	6.9	99.7%	6.0	99.6%
reply to the emergency call (CPI)	90% of the services within 120 seconds	90% of the services within 110 seconds	55	96.2%	55	96.8%

NOTE: the 2021 data are being consolidated and have still not been submitted to the STO or reported to ARERA. The symbol "/" is used when there are no services during the year.

Table no. 29 – The main specific and general levels of contractual quality in the water sector (2020-2021) – Acea Ato 5 – (ARERA parameters, improvement standards from the Service Charter, and Acea Ato 5 performance – 2020 figures are consolidated, 2021 figures are not consolidated)

ACEA ATO 5 - CONTRACTUAL WATER QUALITY SEGMENT						
SPECIFIC LEVELS OF QUALITY						
SERVICES	ARERA STANDARDS	ACEA ATO 5 IMPROVEMENT STANDARD (from SC)	average actual completion time for services	degree of compliance	average actual completion time for services	degree of compliance
					ACEA ATO 5 PERFORMANCE	
				2020		2021
estimate for water connection with inspection	20 working days	10 working days	10.8	72.5%	3.6	98.0%
estimate for sewage connection with inspection	20 working days	10 working days	18.3	94.5%	7.9	94.1%
execution of the water connection with simple work	15 working days		3.1	100.0%	1.9	99.3%
execution of the sewage connection simple work	20 working days		-	-	-	-
supply activation	5 working days		11.2	55.5%	2.9	97.4%
reactivation or takeover of the supply without changing the meter rate	5 working days		5.2	73.3%	1.4	98.9%
reactivation or takeover supply with changes to the meter rate (*)	10 working days		N.A.	N.A.	0.0	100%
reactivation of supply following disconnection for late payment	2 working days		1.0	99.5%	0.9	97.3%
deactivation of supply	7 working days	5 working days	6.7	77.4%	2.1	99.4%
transfer of registration	5 working days		0.4	99.6%	0.1	99.7%
estimates for works with inspection	20 working days		10.2	80.0%	3.3	99.3%
completion of simple work	10 working days		-	-	2.0	100.0%
punctuality band for appointments	180 minutes		1.5	99.7%	0.8	99.7%
reply to complaints	30 working days	20 working days	13.0	94.7%	10.0	98.7%
reply to written enquiries	30 working days	10 working days	11.4	97.0%	7.9	99.9%
billing adjustment	60 working days		9.0	95.0%	6.5	100.0%

GENERAL LEVELS OF QUALITY						
			ACEA ATO 5 PERFORMANCE			
			2020		2021	
completion of complex water connection	90% of the services within 30 working days	90% of the services within 20 working days	9.4	91.3%	12.6	90.4%
completion of complex sewage connection	90% of the services within 30 working days	90 of the services within 20 working days	11.0	75.0%	21.5	66.7%
completion of complex works	90% of the services within 30 working days		11.9	95.6%	11.8	85.7%
maximum time for the agreed appointment	90% of the services within 7 working days		5.8	76.3%	1.9	99.8%
arrival at the location of the emergency call	90% of the services within 3 minutes from the telephone conversation with the operator	90% of the services within 70 minutes from the telephone conversation with the operator	61.1	89.9%	96.5	87.9%
reply to written billing adjustment requests	95% of the services within 30 working days from receipt of the request	95% of the services within 10 working days from receipt of the request	18.3	74.5%	8.8	98.5%
reply to the emergency call (CPI)	90% of the services within 120 seconds		83.0	85.8%	105.0	80.6%

(*) In 2020 there were no services found that were the subject of a resolution.
NOTE: The symbol "-" indicates that the average time cannot be calculated because the service is on/off.

Table no. 30 – The main specific and general levels of contractual quality in the water sector (2020-2021) – GORI (ARERA parameters and GORI performance - 2020 figures are consolidated, 2021 figures are not consolidated)

CONTRACTUAL QUALITY WATER SECTOR- GORI

SPECIFIC LEVELS OF QUALITY						
SERVICES	ARERA STANDARDS	average actual completion time for services	degree of compli-ance	average actual completion time for services	degree of compliance
		GORI PERFORMANCE			
		2020		2021	
estimate for water connection with inspection	20 working days	8.46	95.8%	6.05	98.9%
estimate for sewage connection with inspection	20 working days	8.31	94.8%	36.47	98.2%
execution of the water connection with simple work	15 working days	24.5	77.8%	15.13	81.2%
execution of the sewage connection with simple work	20 working days	-	-	8.57	100.0%
supply activation	5 working days	13.14	84.5%	4.76	93.4%
reactivation or takeover of the supply without changing the meter rate	5 working days	2.57	92.7%	1.94	97.3%
reactivation or takeover of the supply with changes to the meter rate	10 working days	/	/	/	/
reactivation of supply following disconnection for late payment	2 working days	0.7	95.3%	2.55	97.4%
deactivation of supply	7 working days	4.17	92.2%	3.71	98.6%
transfer of registration	5 working days	0.87	97.2%	0.5	99.1%
estimates for works with inspection	20 working days	7.71	96.7%	5.48	99.4%
completion of simple work	10 working days	11.53	74.4%	17.23	62.5%
punctuality band for appointments	180 minutes	1.29	98.9%	0.91	99.1%
reply to complaints	30 working days	11.72	91.5%	13.9	85.8%
reply to written enquiries	30 working days	4.32	99.7%	6.5	95.9%
billing adjustment	60 working days	17.0	100.0%	1.2	100.0%

GENERAL LEVELS OF QUALITY					
		GORI PERFORMANCE			
		2020		2021	
completion of complex water connection	90% of the services within 30 working days	31.07	80.6%	25.39	77.7%
completion of complex sewage connection	90% of the services within 30 working days	29.83	76.2%	27.37	72.4%
completion of complex works	90% of the services within 30 working days	62.0	51.2%	41.44	66.3%
maximum time for the agreed appointment	90% of the services within 7 working days	5.3	83.4%	6.71	93.8%
arrival at the location of the emergency call	90% of the services within 3 minutes from the telephone conversation with the operator	1.44	96.3%	2.04	98.0%
reply to written billing adjustment requests	95% of the services within 30 working days from receipt of the request	5.87	97.5%	9.5	95.2%
reply to the emergency call (CPI)	90% of the services within 120 seconds	64.82	93.5%	52	97.4%

NOTE: The symbol "/" is used when there are no services during the year.

Table no. 31 – The main specific and general levels of contractual quality in the water segment (2020-2021) – GESESA (ARERA parameters, and Gesesa's performance - 2020 figures are consolidated, 2021 figures are not consolidated)

CONTRACTUAL QUALITY WATER SECTOR - GESESA

SPECIFIC LEVELS OF QUALITY					
SERVICES	ARERA STANDARDS	average actual completion time for services	degree of compliance	average actual completion time for services	degree of compliance
		GESESA PERFORMANCE			
		2020		2021	
estimate for water connection with inspection	20 working days	3.86	97.1%	5.14	71.3%
estimate for sewage connection with inspection	20 working days	/	/	/	/
execution of the water connection with simple work	15 working days	21.25	85.2%	4.17	94.4%
execution of the sewage connection with simple work	20 working days	/	/	/	/
supply activation	5 working days	71.32	31.8%	47.68	57.1%
reactivation or takeover of the supply without changing the meter rate	5 working days	2.05	97.5%	3.70	80.4%
reactivation or takeover of the supply with changes to the meter rate	10 working days	/	/	/	/
reactivation of supply following disconnection for late payment	2 working days	16.83	50.0%	91.51	89.3%
deactivation of supply	7 working days	2.49	98.4%	3.49	98.0%
transfer of registration	5 working days	0.63	99.0%	0.9	98.9%
estimates for works with inspection	20 working days	3.46	97.4%	3.84	96.4%
completion of simple work	10 working days	2.18	100.0%	2.26	97.1%
punctuality band for appointments	180 minutes	57.00	97.8%	3.0	95.4%
reply to complaints	30 working days	11.18	99.8%	9.5	100.0%
reply to written enquiries	30 working days	10.21	99.5%	8.8	100.0%
billing adjustment	60 working days	15.96	98.0%	3.3	100.0%

GENERAL LEVELS OF QUALITY					
		GESESA PERFORMANCE			
			2020		2021
completion of complex water connection	90% of the services within 30 working days	41.60	84.3%	12.76	95.2
completion of complex sewage connection	90% of the services within 30 working days	/	/	/	/
completion of complex works	90% of the services within 30 working days	3.0	96.4%	2.05	100%
maximum time for the agreed appointment	90% of the services within 7 working days	2.43	99.0%	3.5	97.6%
arrival at the location of the emergency call	90% of the services within 3 minutes from the telephone conversation with the operator	10.00	62.2%	28.21	72.8%
reply to written billing adjustment requests	95% of the services within 30 working days from receipt of the request	11.06	99.6%	14.1	100%
reply to the emergency call (CPI)	90% of the services within 120 seconds	84.29	87.5%	86.00	88.0%

NOTE: The symbol "/" is used when there have been no services during the year, whereas "-" indicates that the average time cannot be calculated because the services is on/off.

Table no. 32 – The main specific and general levels of contractual quality in the water sector (2020-2021) – AdF – (ARERA parameters, improvement standards from the Service Charter, and AdF performance – 2020 figures are consolidated, 2021 figures are not consolidated)

CONTRACTUAL QUALITY WATER SECTOR- AdF

SPECIFIC LEVELS OF QUALITY						
SERVICES	ARERA STANDARDS	AdF IMPROVEMENT STANDARD (from SC)	average actual completion time for services	degree of compliance	average actual completion time for services	degree of compliance
			AdF PERFORMANCE			
				2020		2021
estimate for water connection with inspection	20 working days		5.46	98.4%	6.34	99.1%
estimate for sewage connection with inspection	20 working days		5.93	97.9%	6.50	98.9%
execution of the water connection with simple work	15 working days		5.90	96.0%	6.62	94.6%
execution of the sewage connection simple work	20 working days		N.A.	N.A.	N.A.	N.A.
supply activation	5 working days		5.30	94.3%	5.93	92.4%
reactivation or takeover of the supply without changing the meter rate	5 working days		2.50	97.6%	2.05	97.7%
reactivation or takeover supply with changes to the meter rate	10 working days		/	/	/	/
reactivation of supply following disconnection for late payment	2 working days		0.71	97.6%	0.85	97.8%
deactivation of supply	7 working days	5 working days	2.32	99.1%	2.68	98.2%
transfer of registration	5 working days		0.1	99.9%	0.2	99.9%
estimates for works with inspection	20 working days		4.98	99.3%	6.47	99.2%
completion of simple work	10 working days		8.30	83.3%	3.88	95.3%
punctuality band for appointments	180 minutes		1.0	99.1%	1.4	99.4%
reply to complaints	30 working days	25 working days	13.3	98.9%	15.4	99.5%
reply to written enquiries	30 working days	25 working days	13.7	99.4%	15.3	99.5%
billing adjustment	60 working days		13.3	100.0%	11.7	100.0%

GENERAL LEVELS OF QUALITY					
		AdF PERFORMANCE			
		2020		2021	
completion of complex water connection	90% of the services within 30 working days	14.2	93.6%	13.8	93.2%
completion of complex sewage connection	90% of the services within 30 working days	21.7	90.5%	28.4	76.7%
completion of complex works	90% of the services within 30 working days	15.5	94.2%	13.9	90.5%
maximum time for the agreed appointment	90% of the services within 7 working days	3.0	99.8%	3.3	97.6%
arrival at the location of the emergency call	90% of the services within 3 minutes from the telephone conversation with the operator	6.0	95.1%	1.5	94.7%
reply to written billing adjustment requests	95% of the services within 30 working days from receipt of the request	15.8	100.0%	17.4	99.9%
reply to the emergency call (CPI)	90% of the services within 120 seconds	50	95.2%	43	97.5%

NOTE: The symbol "/" is used when there are no services during the year.

TARIFFS

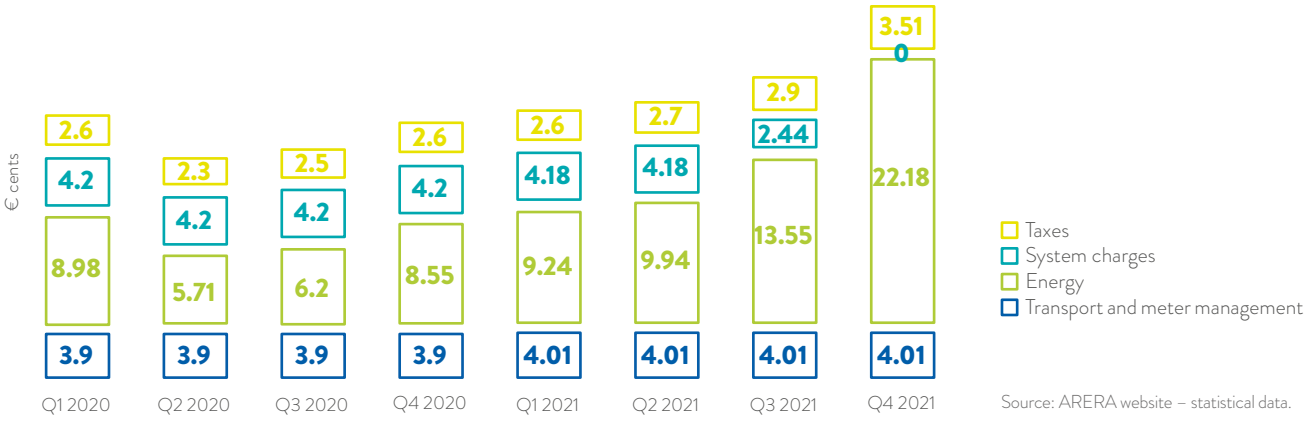
ELECTRICITY SERVICE PRICING

In Italy, there are two main types of electricity markets: the standard market service and the free market. In the standard market service, the operator of reference of the territory, which operates in a monopoly regime, offers the supply service to the customer at economic and contractual conditions regulated by ARERA. On the other hand, in the free market the services offered and related prices are the result of competition among all operators. In this context, customers choose their supplier and the offer that most meets their requirements. The legislation has established the gradual abandonment of the standard market service, setting the dates by which the transition to the free market system will become definitive, the full entry into force of which is now set for January 2024.

The **costs** of supplying electricity are made up of **four items of expenditure**: "energy" (supply and retail marketing), **transport and meter management** (costs for delivery to customers and reading consumption), **system charges** (costs for activities in the general interest of the electricity system, borne by all end customers) and **taxes** (consumption tax and VAT).
According to the latest ARERA data available, the number of customers still subscribing to the **standard market** service continues to fall and, in terms of **withdrawal points**, it accounts for a total of **43% of Italian domestic and non-domestic customers** (it was 47.7% the previous year).
The expansion of the **free market** is evident observing the volumes of electricity sold: free market customers, in fact, consume **84% of the total energy** intended for the end market[72] (82.7% in the previous year).
For a **"standard" consumption** of the standard market - equal to **2,700 kWh/year**, with a power of 3 kW - the **estimated total annual expenditure** for electricity, updated to the fees defined by ARERA in the last quarter of the reference year and excluding taxes, was **€ 515** in 2021, an **increase** compared to the previous year (€ 44 per year).

72 Based on the number of served collection points and the volumes sold in 2020 (*ARERA annual report September 2021*).

Chart no. 30 – Electricity price trend for a standard domestic customer (€ cent/kWh) (2020-2021)



Source: ARERA website – statistical data.

WATER SERVICE PRICING

By Resolution no. 580/2019/R/IDR of 27 December, the Energy, Networks and Environment Regulatory Authority (ARERA) approved the **Water Tariff Method (WTM-3) for the period 2020-2023**, the guiding principles of which are to overcome *the Water Service Divide*, making operating and management costs more efficient, promoting environmental sustainability and increasing the public's awareness of their water consumption habits. Moreover, the added tools and checks envisaged ensure that any **tariff increases are only possible as a result of investments actually made** or **certified improvements in management**.

Table no. 33 – Average water prices applied (2021)

Company	€/m³
Acea Ato 2	1.86
Acea Ato 5	2.69
Gesesa	1.65
GORI	2.39
AdF	3.89

CUSTOMER CARE

Acea Energia for sustainability: Electricity and gas offer **100% Eco** and **Acea e-mobility App**

The **"navigable" web bill** for the companies operating in the **water segment**

Acea Ato 2 opens the first **Waidy Points** in the territory

About **2,300 GWh of "green" energy** sold by **Acea Energia** to customers of the free market, + 92% compared to 2020

152 tonnes of paper/year saved, +44% compared to the 2020 figure, thanks to customers of the electricity and water services who have chosen **electronic billing**

THE CUSTOMER CARE POLICY

Attention to the customer is of fundamental importance to Acea, which intends to improve the "customer journey", the experience customers have when they come into contact with the Group. The **operating companies** pursue this objective in their **daily relations with customers**, while at the Parent Company the **Customer Listening Unit** ensures the monitoring and measurement of customer satisfaction with services, to support the companies with finding possible improvement actions. In 2021, customer satisfaction

surveys extended the scope of the survey to include brand awareness, usage and satisfaction with the **new digital channels** (see the section on *Perceived quality*).

In addition, the Customer Listening Unit, in conjunction with the operating companies and through an institute specialising in demographic research, carries out **mystery client surveys** to **check the quality of customer contact channels**: in 2021, alongside the usual surveys on **telephone and branch services**, Acea Energia's online chat channel was monitored and, on an experimental basis, GORI's video call service. The results are shared with Service Managers and contact operators and facilitate the identification of areas for improvement in each contact channel to take any necessary corrective measures.

Through the **unit ADR Body - Consumer Associations Coordination Unit** within the Parent Company, Acea monitors **how requests made by Consumer Associations are handled**. Although, due to the continuing COVID-19 health emergency, the Holding Company Unit was unable to hold face-to-face meetings, it **organised online meetings** with the main Consumer Associations to gather requests from local communities and continued to raise awareness for the use of **exclusively dedicated** digital and telephone channels, **implemented and managed by the Companies to respond adequately to the new needs emerged since the beginning of the pandemic.**

The Consumer Associations recognised by the National Consumer and User Council (CNCU) also support and represent customers who intend to resort to a **joint settlement procedure** for the out-of-court settlement of **commercial disputes**, used by Acea for several years. Following the **Memorandum of Understanding for ADR** (Alternative Dispute Resolution) conciliation signed **by 19 consumer associations** and the main Group companies[73], the **ADR body**[74] was set up, which allows customers of Acea Energia, Areti, Acea Ato 2, Acea Ato 5 and Gesesa to access **out-of-court dispute resolution through the ADR procedure**. In order to provide a better service, a pilot phase of surveys to measure customer satisfaction with these services was launched in 2021. During the year, the Body received a total of **345 requests for procedures** - **222 for the water sector and 123 for the energy sector** -, a **figure that was down by 17.7%** compared to the previous year (419 requests in 2020); of these, in accordance with the law and the Regulation, 237 were assessed as proceeding and 108 as not proceeding.

GORI, which has long signed a **Memorandum of Understanding** for the conciliation of disputes with local consumer associations, also handled **122 conciliation requests** in 2021 and concluded **385 ARERA conciliation requests**.

AdF has a relationship of constant collaboration and comparison with the Consumer Associations active in the territory. In 2021, **meetings** were organised **with the representatives of the local Associations on an IT platform to present and share the major regulatory changes**, including the closure of the tariff reform envisaged by the Integrated Water Service Fees Text (TICSI), the entry into force of the new Integrated Water Service Charter, the new Conciliation body activated by the Tuscany Water Authority.

The **judicial disputes that took place during the year** between Acea and the customers is explained in the dedicated box.

DISPUTES WITH CUSTOMERS 2021

Legal proceedings **brought by customers** against companies of the Acea Group mainly concerned disputes relating to **charges for service supply**, **adjustments**, **pricing structures and service activation delays**. There were **612** such disputes in **2021**, broadly **in line** with the 2020 figure (576 disputes started in the year).

As at **31 December 2021,** the **total number of disputes pending with customers** (including disputes initiated in previous years) **amounted to 1985,** down slightly with respect to the previous year (2,181). The situation is affected by the general slowdown in services, including judicial services, resulting from the health emergency. This type of litigation is the one that can be resolved most quickly and with a less costly procedure.

Acea Energia has defined and applies **specific procedures**, depending on the channel used, to combat "**disputed activations/contracts**" and "**unsolicited supplies**"[75].

For **customers of the free market**, in the event of a contract proposal signed using **door-to-door sales or by telephone**, the Company carries out procedures to **verify the correct behaviour of the sales operator**, the clear presentation of the content of the contract signed, and, above all, the customer's awareness of having made a choice by means of a confirmation call aimed at limiting the risk of misunderstanding and belated exercise of the right of withdrawal. Acea Energia **checks** the **completeness and absence of alterations of all printed contracts** and **listens to all the telephone records produced by the sales reps**. In the event of issues being detected, the IT systems prevent continuation of activation of the offer.

The **digital sales channel** currently in use at the physical channel shop in shop envisages elements, such as signing the contract with a biographometric signature using **a tablet and an app**, the digital acquisition of pre-contractual and contractual documents and their transmission to the Company's back-end systems, **aimed at eliminating the risk of errors and/or** tampering.

A new digital sales process has been implemented with electronic signature based on a **one-time password (OTP) for the telemarketing channel**, and on an experimental basis, for physical networks. The customer contacted, who has expressed interest in receiving a contract proposal, **can receive in advance**, at his/her e-mail address, **all the pre-contractual and contractual material in digital format** and proceed only later, if desired, with the digital signature of the contract, by entering the OTP received via SMS on the mobile phone number indicated.

73 The Protocol was signed in 2016 between the Associations and the companies Acea Energia, Areti, Acea Ato 2 and Acea Ato 5; since December 2020, Gesesa has also joined the ADR body. Three other Group companies active in the water sector, not included in the scope of the NFS, are signatories of the Protocol, and have received a total of 22 requests for ADR procedures, 13 of which are considered eligible.

74 Since February 2017 the ADR Body has been included by resolution in the list maintained by the Authority.

75 In compliance with ARERA resolution 228/17 and Article 66 quinquies of the Consumer Code.

Signing of the contract by digital signature is the only method envisaged for acceptance of the proposal and this **reduces the risk** of **persuasive phenomena** induced by the sales network.
With the **2021 Agency Mandates** Acea Energia introduced a specific annex ("Penalties") **to regulate the sanctioning process** of the Agencies, providing for a broader and more articulated range of violations. As part of the agency mandate that governs the relationship with the network of sales agents, Acea Energia verifies performance. In 2021, it **analysed 926 contract proposals**, **which were the subject of complaints** for "disputed activations/contracts" or "unsolicited supplies" or other violations provided for in the "Penalties" annex to the mandate. As a result of the verification activities, intensified in the year, **567 cases of "unfair commercial practices"**, nearly 61% of the cases analysed, **were reported** to the Agencies. As is customary, Acea Energia carried out a **mandatory training programme for sales representatives** (see the Suppliers chapter) and maintained, in the aforementioned agreements, **bonus/malus mechanisms related to the quality of the** contracts acquired.

Acea Energia has undertaken important initiatives aimed at improving the digital channels available to customers and **a commercial and communication strategy** that has had **sustainability as one of its pillars**, introducing new offers and value-added services. In particular, **a catalogue of 100% Eco-sustainable electricity and gas offers was launched** and **a brand shared** with a telephone company: **WindTre Luce&Gas Powered by Acea Energia was created**.
With the new brand, highly innovative for its configuration, Acea Energia introduces a **model of collaboration** aimed at enhancing the commercial potential of the WindTre brand and the strength of Acea Energia in the management of the Light & Gas service, with the aim of proposing to customers an offer marked by transparency, reliability and proximity, thanks to the strengthening of sales channels available. The partnership, launched during the year, will come into full effect in 2022.
A major communication campaign, carried out on digital platform, press and billboards, was dedicated to **promoting Acea Energia's entry into the world of electric mobility** (see the dedicated box) and a second communication campaign, with testimonials, carried out through press, digital, social, TV and outdoor, aimed at **promoting the company's sustainable mission**, engaging and raising customer awareness **with the launch of the 100% Eco offers** mentioned above (see the box dedicated to commercial offers and the paragraph Communication, events and solidarity); the campaign was reinforced by a **competition** open to all customers - "a win that will make ECO" - with electric cars up for grabs.

ACEA ENERGIA LAUNCHES THE NEW APP: ACEA E-MOBILITY

In 2021 Acea Energia entered the world of services dedicated to sustainable mobility, contributing to the spread of a new culture of mobility and developing a technological solution that has allowed the development of an App dedicated to the optimal use of electric charging stations.
The **Acea e-mobility** App is characterised by a number of strengths:

- **widespread presence**, with more than 10,000 easily identifiable recharging points around the country;
- the **free booking service**, as a promotion of the year for customers;
- digitalisation: **top-up and payment via Card or App**;
- **assistance 24 hours a day and 7 days a week** for using the app and for information on prices, payment methods, invoices and problems with the recharging service or the charging stations.

Using the App, customers can geolocate the nearest charging station, book it and recharge their car in a smart way. The offer is based on two different tariffs, depending on the type of charging station, for quick or fast recharges.

Communications were also carried out in the press to further spread awareness of the Acea Energia brand and digital campaigns to promote the "**digital consultant**" service and the "**boiler**" product, which benefited from the tax bonus for the customer (see box on commercial proposals). Particular attention was paid to the acquisition of "**multi-site customers**" in various industries, from banking to services to ensure a **multi-year customer base** and initiatives were launched to offer **value-added services** to employees of this type of customer, proposing "welfare" commercial offers for the supply of electricity and gas.

In 2021, with **a leap forward** compared to the growth trend already seen in recent years, the **"green" energy sold**[76] by Acea to free market customers (estimated at 2,300 GWh) **increased by 92%** compared to the consolidated volumes of 2020 (equal to 1,198 GWh). The **share** of this item out of the **total energy sold** in the year to free market customers (about 6,075 GWh, see also Environmental Accounts) **reached 38%**. In addition to the launch of new offers, the increase in the estimated amount of "green" energy sold was also due to the activation of contracts previously stipulated in the industrial sector, with effect from January 2021.

76 Like the 2020 figure, the figure for G.O. certified green energy sold in 2021 by Acea Energia and AEMA also includes the main Group companies' internal consumption, which contributes approximately 420 GWh out of an estimated total of 2,300 GWh. The final calculation is expected in March 2022, and the consolidated data will be updated in the next reporting cycle.

ACEA ENERGIA'S 2021 COMMERCIAL PROPOSALS FOR THE FREE MARKET: 100% ECO AND NEW SERVICES

In 2021 Acea Energia introduced **important new features** in its commercial offer, such as 100% Eco light and gas and value-added products such as boilers, air conditioners and wall-boxes.
Acea Energia's **sustainable offers** include **100% Green Light** and **0% CO_2 Gas**, in line with the Acea Group's objectives of environmental protection and commitment to the territory.
Electricity has a "Guarantee of Origin" electronic certification that **attests to the renewable origin of the sources used for its production**. Gas **offsets the carbon dioxide emissions** produced by consumption through the **purchase of certified carbon credits** (VER - Verified Emission Reduction), which help to fund and support **mitigation projects** (Verified Carbon Standard) in Peru and India with concrete benefits for local communities.
The structure of the offer portfolio maintained maximum **flexibility towards customer needs**, with indexed offers (e.g. wholesale price), fixed price offers and exclusive offers for the web channel.
Finally, in compliance with the provisions of ARERA, in its product catalogue Acea Energia has prepared the differentiated **PLACET** offers – Free Price at Equivalent Protected Conditions – for families (domestic use) or small businesses (non-domestic use).
During the year, sales of so-called 'VAS' (value added services) were consolidated, such as **high energy efficiency boilers and air conditioners**, to reduce consumption, with a view to sustainability. With the purchase or replacement of obsolete equipment with that offered by Acea Energia, **the customer can take advantage of the transfer of credit** in accordance with current regulations. The offer proposed by Acea Energia consists, in addition to the physical asset, of services such as consulting, installation and assistance, aimed at ensuring **a "turnkey" solution**.
The year 2021, with the new app **Acea e-mobility**, marked the entry of Acea Energia also in the electric mobility market, to invest in the spread of the culture of sustainable mobility supported by smart technology.

The **"Acea con Te" loyalty program**, for domestic customers on the free market, recorded a **66% increase in registered customers** in 2021 compared to 2020, confirming the upward trend. During the year, the limitations of activities caused by the health emergency did not allow tickets to events to be given away; however the **Emozioni da Prima Fila** [Front Row Excitement] competition continued throughout, by proposing a new format of remote events. Acea Energia has continued this activity, the heart of the programme, by offering prizes to registered customers in the home, kitchen, children, hi-tech, personal and voucher categories. Also significant was the launch of the **partnership with Gambero Rosso**: a co-marketing agreement to convey a **sustainable food and wine culture** to those enrolled in the programme. Subscribers can take advantage of ad hoc events on the Gambero Rosso Academy training platform, as well as specific awards and formats in the wine, travel and food sectors.
Water companies have also stepped up communication initiatives aimed at customers. In line with the **innovation and digitalisation strategy** pursued at Group level, **Acea Ato 2** carried out communication and awareness-raising campaigns to promote the new digital services, which continued on several occasions during the year, using the main media channels (press, web, radio commercials). In January 2021, the campaign on the new **digital branch** service was launched, allowing transactions traditionally handled at physical branches to be carried out from home via video call. Some of the most important municipalities in the ATO 2-Central Lazio area have contributed to publicising the new service on their institutional and social channels. To promote the MyAcea customer area, enriched with new features, a campaign was launched in July 2021 in the press, outdoor, digital and radio, dedicated in particular to the new web bill. Finally, a press, digital and outdoor campaign was carried out – particularly in the province – to inform customers about the opportunity provided by the **water bonus**, dedicated to families in economic difficulty, which allows them to save up to 100% on their annual water bill. The claim "**we value your needs more**" and simple and direct language were chosen to instil confidence, and so encourage potential beneficiaries to apply for the bonus.
In 2021 **Acea Ato 5** continued the project undertaken in 2020 aimed at making customers aware of specific issues, such as communicating meter readings and mitigating the risk of meters freezing, and informing them about the planned replacement of the meters. In addition, the "Water Identity Card" project continues to be implemented, allowing users to provide their residential address in order to have access to data and information on the quality of the water supplied, including an indication of the values of the main analytical principles that characterise the water in the area of interest. The document is available both digitally and in a printable version.
In 2021, **AdF** created the communication campaign "**We value your choices**", to promote the **loyalty bonus**, a one-off incentive for the most virtuous users who have activated both the web bill and bank or post office direct debits for more than twelve months. In this way, AdF wanted to highlight the choices made by customers in terms of **sustainability**, for the paper savings resulting from activating the web bill and for the relationship of trust with the Company with the activation of the direct debit system. In addition, in 2021, AdF allocated a Solidarity Fund to SME users (see dedicated box).
In 2021, **GORI** proposed campaigns aimed at customers, for example on the correct protection of meters and systems from frost or on the quality of water distributed, transmitting them on various channels and using videos and other media for the web and the press.

ADF ALLOCATES A SOLIDARITY FUND TO SME USERS

In the last quarter of 2020, following the wishes expressed by its members, **AdF set up a call for tenders for a Solidarity Fund** to support **local businesses** affected by the lockdown due to the health emergency, which nevertheless **continued to consume water** to keep running efficiently and recorded losses of no less than 20% with respect to turnover in the corresponding period of the previous year. After AdF had sent precise communications, even through Trade Associations, to explain the prerequisites for access to the fund, **179 applications were processed**, from 37 municipalities out of 55 in the managed territory, **96 of which met the necessary requirements** to benefit from the fund. Therefore, **in 2021**, **AdF disbursed about € 40,000** and allocated the remaining availability of the fund, equal to **about € 260,000**, **to the amortisation of the fixed quotas (aqueduct) for artisan and commercial businesses**, equal to two monthly payments of the aforementioned quotas (2020 tariff) **in favour of 20,863 active artisan and commercial users and invoiced in 2020**.

CONTACT CHANNELS AND PERFORMANCE

In all customer relations, Acea is committed to **guaranteeing the respect of privacy in the management of personal data**. In particular, Acea keeps updated safeguards on the issue of privacy to better respond to the evolution of the relevant legislation, in line with the European regulations (General Data Protection Regulation - **GDPR**)[77] on the protection of personal data (see in-depth analysis in *Corporate Identity*, The Internal Control and Risk Management System).

In addition to **traditional contact channels** (call centre and branches), Acea makes available to customers **digital contact channels** that are more advanced every year. The health emergency situation, which was triggered in 2020 and will continue in part in 2021, has in fact made it essential to spread the use of remote channels, spurring companies to continually improve them. During the year, therefore, all Group companies managing customer relations implemented initiatives aimed at improving remote contact channels and increasing the digitalisation of commercial processes.

The **MyAcea self-care platform**, also available **in the form of an App** for mobile devices, allows customers to **manage all their water**, **electricity and gas needs with a single account**, **facilitating the user experience** and at the same time **expanding the range of actions available**, such as the new graphic design which makes it more user-friendly and intuitive, the possibility of booking appointments at physical and digital branches, and the digital drawer which allows them to view contractual documents and payment reminders. The companies in charge of the different services ensure the processing required.

The MyAcea web area recorded approximately 10,000 log ins (cumulating those for the water service and the free energy market) with **452,126 unique users connected in 2021**; while the Rome Electricity Service customer area, for the standard market service, had approximately 3,800 daily log ins **with 33,943 unique users connected**.

The MyAcea app, installed by about 361,000 people, saw further growth of the user base, with **an increase of 24.5% in 2021** compared to the previous year (roughly 290,000 people in 2020).

In 2021 Acea Energia implemented new features on the portal for "large customers" to access information about supplies, payments, contracts, invoices and consumption data. In particular, a feature has been introduced to allow customers to access energy market data, while bulk uploading of technical and commercial services will be available in 2022.

Among the customers of Acea Energia, **the MyAcea App was installed on 207,962 devices** (Android and iOS) **in 2021** while **the App dedicated to the standard market**, Rome Electricity Service, was installed on **37,679 devices** (Android and iOS) in the year.

An important process was begun by **Acea Ato 2** to modernise and digitalise the experience customers have when using the services. Among the main initiatives undertaken:

- the development of the **digital branch**, the service that can be used, upon reservation, via computer equipped with a webcam or via smartphone. With a view to overcoming the digital divide, the Company has also made available, by appointment, access to **local branches**, known as "**Waidy Points**" (see the dedicated box below);
- the **development of an integrated customer relationship management platform**, **SalesForce**, with an omnichannel perspective; the project launched in 2021 will be completed in the following two years; the platform also includes the development of a tool (SalesForce dunning) aimed at streamlining the solicitation process in the event of credit recovery.
- digitisation of two important commercial processes (transfer and takeover), to make them digitally usable with the possibility of finalising the contract by accepting a link received by email;
- the development of the **new CTI Genesys telephony platform** and the consequent transfer of the contact centre service; the process started in March 2021 with the definition of the requirements of the new platform and is currently being implemented and tested. The tools accompanying the new platform will enable a better customer experience and simplify contact centre operations.

At 31/12/2021, there were **345,335 users registered in the MyAcea customer area pertaining to Acea Ato 2**, an **increase of around 12%** (307,885 in 2020). This figure corresponds to 49% of the customers with active water supplies at 31/12/2021 (705,607).

Acea Ato 5 has renewed its commitment to implementing more effective customer management systems and improving communication; the **digital branch**, the system of video calls on appointment and assistance from an operator, was activated at the end of 2020, flanking the other remote channels, such as toll-free numbers, the My Acea app, e-mail and the web portal. In 2021, the company also carried out information campaigns, both in the press and via email and text messages, to promote the **use of remote contact channels** (toll-free number, dedicated numbers, MyAcea platform and app, website and email) and the **new interactive bill**. **Subscriptions to the relevant My Acea area** increased to a total of **56,623 users**, **29% more** than the 2020 figure (43,829 users), accounting for around 28% of total active contracts in the year.

77 Regulation EU 679/2016 (GDPR).

AdF continued to promote the use of the MyFiora customer area through its 2021 advertising campaign "**Simple and fast? MyFiora"**, conducted in traditional and digital media. This contributed to an increase in the number of registered customers to **52,847**, **up 25.4%** on the 2020 figure (42,144 registered). The customer area has also been enriched with new features, thanks to the release of the "**Digital Hub**", which allows users to have a quick and immediate overview of the most relevant news about the services available. In order to expand its digital service offering, AdF has activated, as of February 2021, a **chat** facility, through which, at set times, customers can receive assistance and support in real time. The tool, which is still in the **experimental phase**, is very much appreciated by users, who gave an average rating of **96/100** out of the total number of interactions recorded. Lastly, **social media** are increasingly used by clients to interact with AdF; the **community management** service, developed both in terms of the editorial plan and the moderation of requests, has been constant and regular, in order to increase user engagement. The Company has also invested in the development of the telephone channel, reinforcing the **digitalisation of commercial processes**, adding "takeover" to "transfers"; this development has contributed to reducing processing times and optimising call centre performance. Finally, AdF has activated an **advance warning service**, with notifications sent by e-mail and text message to **all customers** affected by **planned interruptions of supply** over the next 24 hours.
GORI once again carried out communication activities aimed at increasing adherence to digital services (MyGORI and web billing, **including the new interactive bill**), and recorded an **increase of around 35%** in the number of registered users of the **MyGORI** reserved area during the year, compared to the figure for the previous year (119,370 registered customers), reaching **160,843 registered users** as at 31 December 2021. **Gesesa** has repeated in 2021 the information campaigns on toll-free numbers, through social media and traditional media (outdoor) and the two campaigns on how to submit the meter reading and on the online area MyGesesa. As at 31/12/2021, **the MyGesesa reserved area** reached **9,009 registered users** (it was 7,400 in 2020).

On the website **www.acea.it** dedicated to the **free market** and on the website **www.servizioelettricoroma.it** dedicated **to the protected market of Acea Energia** there are **guides to reading the bill**. Guides for reading bills are also available for customers of the **water service**, found in the **Water section** of the Acea Group website www.gruppo.acea.it.
In 2021, **the project for restyling and revising the bills of all the water companies in the Acea Group was completed**, which included the introduction of a renewed graphic layout, the simplification and rationalisation of the content, the new e-mail template for the delivery of the web bill, designed to convey to users the image of a company that is digitally ready and attentive to sustainability issues. The **new interactive bill** has also been introduced, which complements the web bill in PDF format, **designed as a navigable dashboard available to the customer**. The service was released in January 2021 on a pilot of 7,000 Acea Ato 2 households, and **during the year it was made available to users** with the web billing service of the Group companies operating in the water sector.

The electronic invoice, in the new interactive configuration usable via PC, smartphone and tablet, is rich in new content, showing the main information elements on the home page (water user data, billing period, actual billed consumption, amount to be paid, payment status), allowing the customer to easily and immediately understand the dynamics of their consumption and related expenditure.
To illustrate the digitalisation process undertaken, Acea Ato 2, as already mentioned, launched an advertising campaign in 2021, present on the main web and print media, a storytelling campaign based on three themes: digital branch, MyAcea and electronic invoice. At **31/12/2021**, the number of **Acea Ato 2 users with electronic invoicing** was **358,707** (about **55% more** than the figure of 230,049 users with web billing in 2020), corresponding to 52.5% of active users in the year; thanks to electronic invoicing, the **paper saved** by the company **in the year** amounted to **63.6 tonnes**[78].
AdF has regularly promoted the activation of the web bill, including the new interactive bill, and digital payments through targeted communication campaigns in traditional and digital media. At the end of 2021, the total number of users with an active **web bill** was **83,277**, about **36% of total users**, an increase of **8.5%** compared to the previous year (76,759 users), with a **paper saved in 2021** amounting to **9.9 tonnes**.
In 2021, **GORI** launched campaigns aimed at activating the web bill and promoting the new interactive bill, thanks to which **subscriptions to the service reached 197,790** (**+72.7%** compared to 114,469 users with a web bill in 2020), saving **17 tonnes of paper per year**.
Acea Ato 5 has promoted the use of digital channels and the activation of the new interactive bill, emphasising its combination with, among other advantages, the regularity of receipt of the invoice. The communication campaign was launched in the Acea Ato 5 territory in July 2021 and consisted of 10 appearances in the press, over 10 million impressions on digital media and was aired 1,500 times on the radio. As of 31/12/2021, there were **47,623** customers using the web billing service (**37.4% more** than the 34,654 customers in 2020); this generated a saving of **5.7 tonnes of paper per year**.
Gesesa has continued to raise awareness of the web billing service through direct telephone contact with users; as of 31 December 2021, there were **8,206** users with the service active (**+6.7%** compared to 7,690 users in 2020), **saving 1.4 tonnes of paper per year**.
Thanks to the awareness and communication initiatives implemented by **Acea Energia**, at 31/12/2021, there were **394,655 active supplies with the web billing option** (in detail, 226,941 for the free market and 167,714 for the standard market service), **an increase of 14.4%** compared with the 2020 figure (344,946 supplies with web billing). In terms of environmental protection, this equates to **a saving of paper of 54.4 tonnes/year**.

Overall, therefore, thanks to the **web billing service offered by Group companies and the customers who activated it**, **152 tonnes of paper were saved in the year**, **44% more than the 2020 figure** (105.5 tonnes of paper).

Acea Ato 2 has **internalised**, since July 2020, t**he management of the contract with the external supplier of the contact centre service**. The service is carried out according to the One Call Solution (OCS) approach, in order to meet the needs expressed by customers through a single contact.

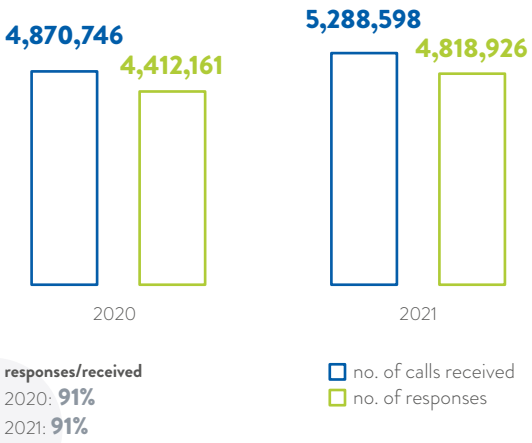
78 The figure shows a significant increase, also as a result of the change in billing frequency for some users (from quarterly to bimonthly).

The quality of the telephone service is monitored and the **contact staff is trained and attend seminars** on procedure and how to interact with the customer. Acea Ato 2, moreover, **through the external supplier**, manages the **chat service** to support customers who surf the website and, after registering, use the services available in the MyAcea customer area. In **Acea Ato 5**, the contact centre service was provided as a service by Acea Ato 2, with the collaboration of the external supplier, until June 2021; from the following month, the management of the contact centre was internalised by Acea Ato 5, with the aim of directly monitoring the specific needs of the area, and the external supplier was used for some remote channels for commercial use. The Company then prepared a public tender for the award of the contact centre service, with a One Call Solution perspective, to a new supplier, which will start operating in the first months of 2022.
Acea Energia internally manages the **social media channel** (Facebook) for free market customers and the dedicated **chat channel**, while for the standard market service (Rome Electricity Service) the chat channel is managed by the external supplier; it also manages the toll-free numbers for the free market and the standard market service, outbound campaigns, back office customer care activities, the toll-free number for making appointments at the branch, the Pedius toll-free number and the Premium toll-free number.

In 2021, the new customer management application (CRM), based on the SalesForce platform, went into production; this milestone enabled Acea Energia to optimise operations with a positive impact on the performance of contact channels.

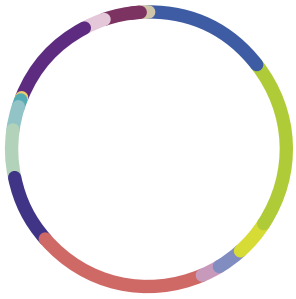
In 2021, **the Group's toll-free numbers received more than 5.2 million calls**, **an increase of 8.6%** compared to 2020 (approximately 4.8 million calls); the figure, which has been on an upward trend over the last two years, is consistent with the greater use of remote contact channels (toll-free numbers, apps, web, digital branches), highlighted in relation to both restrictions on access to branches and a progressive greater familiarity of customers with digital channels.
The **overall service level**, despite the increase in the number of calls received in the year under review, was 91%, in line with the performance recorded in 2020 (see Chart 31 and Tables 34 and 35 for the performance of individual companies, at the end of this section).
Acea Energia provides customers with the **Pedius App** (free of charge and available for all devices), through which **people with hearing impairment** can contact the call centre - on a telephone line with a dedicated priority queue - by writing text messages in chat, which are read to the operator by a computerised voice, while the operator's answers are returned to users in written form.

Chart no. 31 – Total telephone traffic of Acea toll-free numbers (2020-2021)



NOTE: the 2020 figures have been slightly adjusted to consolidate Acquedotto del Fiora's data; the 2021 figures include Acea Energia's new commercial toll-free number, activated in July following the agreement with Windtre.

Chart no. 32 – Percentage distribution of telephone traffic received by Acea toll-free numbers (2021)



14.6% electricity protected market sales - Acea Energia
19.7% electricity and gas free market sales - Acea Energia
4.1% electrical faults - Areti
3.0% public lighting faults Rome - Areti
2.3% cemetery lighting- Areti
20.0% water sales - Acea Ato 2
8.1% water faults - Acea Ato 2
5.5% water sales - Acea Ato 5
2.8% water faults - Acea Ato 5
0.7% water sales - Gesesa
0.3% water faults - Gesesa
11.1% water sales - GORI
2.5% water sales - GORI
4.0% water sales - AdF
1.1% water faults - AdF

NOTE: Acea Energia's tool free number for the free market, electricity and gas, also includes the volumes handled by the new toll free number, activated in July 2021, as part of the agreement with Wind3.

The opening of **physical branches** was organised to ensure **maximum safety for users and staff**, with **customers allowed entry by appointment only**, and this, together with the further development of remote channels, continued to result in **much lower number of visitors** than in pre-pandemic years.
The **branches** at **Acea's headquarters in Rome**, in Piazzale Ostiense, for the electricity, gas and water services managed by **Acea Energia** and **Acea Ato 2**, **allowed entry to a total of 50,254 customers** in 2021 (the figure for 2020 was 88,723 customers and that for 2019, before the pandemic emergency, 204,542 customers), with **service levels close to 100%**. In compliance with health safety measures, as already mentioned, branches allowed entry by appointment only.
If the total figures for **all companies in the perimeter** are considered, **121,674** customers were allowed entry at the branches (163,527 customers allowed entry in 2020 and 555,496 in 2019). See Table nos. 34 and 35 for the performance over the last two years of the individual Companies.

The **digital branch**, activated in the last quarter of 2020 also for water companies, **consolidated its operations in 2021**. In particular, for **Acea Ato 2**, the digital branch has **established** itself as a contact channel able to offer the same services provided by the physical branch, **reaching an average of about 2,000 appointments per month**, which **exceeds the number of appointments managed at the physical branch** at headquarters. Acea Ato 2 has also activated the first **Waidy Points** in 2021 (see box with details).

ACEA ATO 2 OPENS WAIDY POINTS IN THE TERRITORY

With a view to overcoming the digital divide, Acea Ato 2 has made the digital branch service available at local branches known as "**Waidy Points**". These are **digital workstations** equipped with an **internet connection**, **touch screen** and all the necessary hardware tools to manage a video call appointment, to be booked by contacting the sales toll-free number, serving customers who do not have IT tools. Waidy Points have a '**digital facilitator**' to provide support during the connection phase, combining innovation with proximity to customers who are less familiar with such channels.
The first six Waidy Points will be operational from May 2021 at the territorial branches of Tivoli, Frascati, Velletri and Subiaco, and new openings are planned in other municipalities of ATO 2.
Acea Ato 2 also guarantees for the Waidy Points compliance with the service levels provided by the Integrated Text for the regulation of the contractual quality of the Integrated Water Service (RQSII), applying the improvement standards defined by the Service Charter.

Also for AdF, access to the two AdF Points in Grosseto and Siena was allowed by appointment[79], which could be booked through the sales toll-free number, the website or directly at both locations. Customers were also able to use the **digital branch** by appointment, assisted by a commercial operator via **video call**. This new method of contact has helped to increasingly transform the interaction with the customer into **a moment of listening more attentively to specific needs**. The customer clustering process, which began at the end of 2020, has led to the definition of new professional figures specifically dedicated to the management of specific customer segments (Member Municipalities, Businesses, Condominiums, industrial waste) through confidential contact channels.
Gesesa has launched the campaign "**Gesesa for you**", to promote the new digital service "**Prenotami**" (Book me), with which customers can choose the day and time to access the branch by appointment.
In 2021, the development of digital channels actually strengthened the ability of Group companies to remain close to their customers, and allow them to access services without the need to physically go to the branches.

Operating Companies also handle **written complaints**, **following the processing of cases using information systems**: **from reporting to resolution**.
For the **energy service**, the "replies to written complaints/enquiries" both by the sales Company and the distribution Company, are services included among the **levels of commercial quality** subject to regulation by the national Authority (see sub-paragraph Quality levels regulated by ARERA in the electricity sector). Likewise, for the **water service**, **the contractual quality levels**, specific and general, introduced by the Authority, also provide for management procedures and response times to enquiries, written complaints and requests for billing corrections (see sub-paragraph *Quality levels regulated by ARERA in the water sector*).
For the **public lighting service**, responses to **written complaints/enquiries** are handled directly by Areti. In 2021, a total of **3,704 complaints/enquiries** were received; this figure is slightly up on the 3,462 recorded in 2020; the company **replied to 93%** of them by 31 December.

79 For the use of branches by appointment, the Authority has introduced an additional standard, linked to the maximum time of appointment at the branch. The maximum time for the agreed appointment at the branch is the time between the day on which the Operator receives the request for an appointment at one of its branches from the end user and the day on which the appointment is made available at that location.

Table no. 34 – Energy: performance of toll-free numbers and branches (2020-2021) (*)

TOLL-FREE NUMBERS (*)			
	u. m.	2020	2021
COMMERCIAL TOLL-FREE NUMBER (Acea Energia) - STANDARD MARKET SERVICE			
total calls received	no.	704,705	774,011
total answers	no.	669,300	740,472
service level (% of answers to calls received)	%	95.0%	95.7%
average waiting time	min. sec.	2'03"	1'48"
average conversation time	min. sec.	6'06"	6'03"
COMMERCIAL TOLL-FREE NUMBER (Acea Energia) - FREE MARKET (energy and gas) (**)			
total calls received	no.	874,990	1,042,053
total answers	no.	790,935	971,657
service level (% of answers to calls received)	%	90.4%	93.2%
average waiting time	min. sec.	1'36"	1'22"
average conversation time	min. sec.	7'18"	7'13"
FAULT TOLL-FREE NUMBER (Areti)			
total calls received	no.	202,639	214,186
total answers	no.	200,612	209,074
service level (% of answers to calls received)	%	99.0%	97.6%
average waiting time	min. sec.	0'51"	1'46"
average conversation time	min. sec.	3'08"	3'37"
PUBLIC LIGHTING - FAULT TOLL-FREE NUMBER (Areti)			
total calls received	no.	147,878	160,998
total answers	no.	146,399	156,758
service level (% of answers to calls received)	%	99.0%	97.4%
average waiting time	min. sec.	0'44"	2'12"
average conversation time	min. sec.	2'49"	3'00"
CEMETERY LIGHTING - COMMERCIAL TOLL-FREE NUMBER/FAULTS (Areti)			
total calls received	no.	96,183	121,817
total answers	no.	89,874	120,013
service level (% of answers to calls received)	%	93.4%	98.5%
average waiting time	min. sec.	0'49"	8'03"
average conversation time	min. sec.	4'34"	4'34"
BRANCHES (***)			
ACEA ENERGIA - STANDARD MARKET SERVICE BRANCH			
tickets issued	no.	34,258	13,594
customers served	no.	32,369	13,562
service level (% customers served/tickets issued)	%	94.5%	99.8%
average waiting time	min. sec.	8'40"	3'17"
average service time	min. sec.	11'34"	7'07"
ACEA ENERGIA - FREE MARKET BRANCH (energy, gas and offers)			
tickets issued	no.	32,880	19,262
customers served	no.	32,250	19,234
service level (% customers served/tickets issued)	%	98.1%	99.9%
average waiting time	min. sec.	4'46"	4'13"
average service time	min. sec.	11'44"	8'49"

(*) The volumes of channels subject to sector regulation are consistent with the calculation methods envisaged for reporting to ARERA. For example, for the toll-free numbers of Acea Energia and Areti, the average waiting time is the time that passes between answering, even if it is made through an automatic answering machine, and the beginning of the conversation with the operator or the end of the call if the caller hangs up before the beginning of the conversation with the operator.
(**) Includes data from the "WindTre Luce and Gas powered by Acea Energia" partnership service, active from 12 July 2021.
(***) Figures of branches were highly influenced in 2020 by closures imposed by the Covid-19 health emergency, which shifted contacts with customers predominantly to digital channels; in 2021, the number of visitors at branches was limited to those with appointments.

Table no. 35 – Water: performance of toll-free numbers and branches (2020-2021) (*)

TOLL-FREE NUMBERS	u. m.	2020	2021
COMMERCIAL TOLL-FREE NUMBER (Acea Ato 2 - city and province of Rome) (**)			
total calls received	no.	1,021,728	1,059,740
total answers	no.	905,658	952,917
service level (% of answers to calls received)	%	88.6%	89.9%
average waiting time before answer	min. sec.	2'22"	2'17"
average conversation time	min. sec.	4'25"	4'30"
FAULT TOLL-FREE NUMBER (Acea Ato 2 - city and province of Rome) (***)			
total calls received	no.	462,063	427,973
total answers	no.	460,352	423,858
service level (% of answers to calls received)	%	99.6%	99.0%
average waiting time before answer	min. sec.	0'16"	0'15"
average conversation time	min. sec.	2'34"	3'02"
COMMERCIAL TOLL-FREE NUMBER (Acea Ato 5 – Frosinone and province)			
total calls received	no.	248,266	293,023
total answers	no.	210,167	249,970
service level (% of answers to calls received)	%	84.7%	85.3%
average waiting time before answer	min. sec.	2'19"	2'42"
average conversation time	min. sec.	3'56"	4'09"
FAULT TOLL-FREE NUMBER (Acea Ato 5 - city and province of Frosinone) (***)			
total calls received	no.	138,916	149,171
total answers	no.	128,190	120,255
service level (% of answers to calls received)	%	92.3%	80.6%
average waiting time before answer	min. sec.	0'40"	0'53"
average conversation time	min. sec.	2'20"	3'55"
COMMERCIAL TOLL-FREE NUMBER (GESESA - city and province of Benevento)			
total calls received	no.	27,078	38,475
total answers	no.	21,166	28,264
service level (% of answers to calls received)	%	78.2%	73.5%
average waiting time before answer	min. sec.	2'34"	3'08"
average conversation time	min. sec.	4'38"	5'00"
FAULT TOLL-FREE NUMBER (GESESA - city and province of Benevento)			
total calls received	no.	15,814	16,708
total answers	no.	13,046	14,007
service level (% of answers to calls received)	%	82.5%	83.8%
average waiting time before answer	min. sec.	1'25"	1'12"
average conversation time	min. sec.	2'17"	2'27"
COMMERCIAL TOLL-FREE NUMBER (GORI - Naples and Salerno provinces)			
total calls received	no.	505,439	588,292
total answers	no.	389,950	458,648
service level (% of answers to calls received)	%	77.2%	78.0%
average waiting time before answer	min. sec.	4'52"	4'51"
average conversation time	min. sec.	5'33"	5'09"
FAULT TOLL-FREE NUMBER (GORI - Naples and Salerno provinces)			
total calls received	no.	153,900	131,595
total answers	no.	141,000	125,845
service level (% of answers to calls received)	%	91.6%	95.6%
average waiting time before answer	min. sec.	1'03"	0'52"
average conversation time	min. sec.	3'08"	3'26"

COMMERCIAL TOLL-FREE NUMBER (AdF - provinces of Grosseto and Siena) (****)			
total calls received	no.	199,863	212,763
total answers	no.	177,622	190,833
service level (% of answers to calls received)	%	88.9%	89.7%
average waiting time before answer	min. sec.	3'02"	2'18"
average conversation time	min. sec.	5'10"	5'50"
FAULT TOLL-FREE NUMBER (AdF - provinces of Grosseto and Siena) (****)			
total calls received	no.	71,284	57,793
total answers	no.	67,890	56,355
service level (% of answers to calls received)	%	95.2%	97.5%
average waiting time before answer	min. sec.	0'50"	0'43"
average conversation time	min. sec.	3'32"	3'35"
BRANCHES (*****)			
ACEA ATO 2 (Rome - head office branch) (**)			
tickets issued	no.	21,585	17,398
customers served	no.	21,536	17,293
service level (% customers served/tickets issued)	%	99.8%	99.4%
average waiting time	min. sec.	4'00"	1'00"
average service time	min. sec.	17'35"	18'55"
ACEA ATO 5 (2 branches city and province of Frosinone)			
tickets issued	no.	23,945	14,896
customers served	no.	23,945	14,896
service level (% customers served/tickets issued)	%	100%	100%
average waiting time	min. sec.	10'00"	1'15"
average service time	min. sec.	9'50"	16'12"
GESESA (1 branch Benevento and province) (******)			
tickets issued	no.	n/a	5,563
customers served	no.	n/a	5,562
service level (% customers served/tickets issued)	%	n/a	100%
average waiting time	min. sec.	n/a	0'42"
average service time	min. sec.	n/a	14'42"
GORI (6 branches in the provinces of Naples and Salerno)			
tickets issued	no.	42,609	44,602
customers served	no.	40,397	42,103
service level (% customers served/tickets issued) (****)	%	98.4%	94.4%
average waiting time	min. sec.	14'32"	13'13"
average service time	min. sec.	10'21"	16'43"
AdF (7 branches in the provinces of Grosseto and Siena) (*******)			
tickets issued	no.	7,253	6,359
customers served	no.	7,253	6,359
service level (% customers served/tickets issued)	%	100%	100%
average waiting time	min. sec.	6'00"	2'00"
average service time	min. sec.	13'00"	15'00"

(*) The volumes of channels subject to sector regulation are consistent with the calculation methods envisaged for reporting to ARERA. For example, for the fault toll-free number, 'total answers' means, in line with the Authority's guidelines, 'total answers within TMA' and 'service level' means the% of calls with TMA within the standard.
(**) the 2021 figures of Acea Ato 2 for both toll-free numbers and the branch are being consolidated and have not yet been communicated to the Authority.
(***) Calls handled by the automatic system or terminated by the customer during navigation within the interactive voice responder are also considered as answers. The figures of the 2021 fault toll-free number are still being consolidated.
(****) The 2020 figures have been adjusted for consolidation in line with what has been communicated to the Authority (for commercial toll-free number: total calls received, total answers, service level), while the 2021 figures are being consolidated and have not yet been communicated to the Authority.
(*****) Figures of branches were highly influenced in 2020 by closures imposed by the Covid-19 health emergency, which shifted contacts with customers predominantly to digital channels; in 2021, access to branches was only allowed to those with appointments.
(******) The closure of branches in 2020, due to the health emergency, and a technical failure of the queue manager meant that the data needed to monitor trends in waiting times were not available; even the 2021 data must be considered partial.
(*******) The 2020 data have been adjusted for consolidation in line with what has been communicated to the Authority (for the branches of Grosseto and Siena provinces: tickets issued, customers served, service level, average service time), while the 2021 data are being consolidated and have not yet been communicated to the Authority. The 2020 values in relation to the branches refer to 7 branches in the first two months and 2 branches, with appointment-based access, in the second half of the year, after the lockdown. For 2021, the values refer to 2 branches accessible by appointment only.

COMMUNICATION, EVENTS AND SOLIDARITY

18° Press, Outdoor & Promotion Key Award for the ***Acea un'innovazione lunga 111 anni*** campaign, communicating the Group's values and commitment to the territory

Acea Green Cup, first edition 2021: awarding the **Group's most sustainable projects**

Acea Scuola 2021 online edition: approximately **25,000 users** viewed **Siamo Energia!**

Launch of the **Acea Museo Immersivo - MIA**: a virtual journey celebrating the Group's history and documentary heritage

COMMUNICATION

The **Communication Function** of the **Holding directs and coordinates communication and information strategies and initiatives**, defining the **development of the Group image**. It oversees **information coverage by journalists** and looks after the management of **relations with the media**, including the drafting and dissemination of non-price-sensitive press releases, the preparation of press reviews and the organisation of press conferences for the various business areas. It also coordinates **communication activities and internal dissemination** of documents, news and editorial content, **brand enhancement**, **management of** corporate identity , creation of **institutional**, **advertising and commercial campaigns**, organisation of **public or institutional** events, development and management of **environmental education and solidarity projects**, as well as special projects and external events aimed at **strengthening the bond between Acea and the territory**.
In-house expertise also covers the design and production of **photographic and video services,** management of the **Group's modern and historic documentary and photographic archives,** and the **promotion of Acea sites/plants for educational and cultural purposes**.

The Communication Function also defines **digital strategy** and **digital identity**, in line with the strategic guidelines defined by Top Management, the positioning of the Group in the digital ecosystem, through the design, development and management of **the institutional website** and the websites of the Companies that align with the corporate identity. It is responsible for the operational management of **social media channels** to **disseminate and enhance**, **in addition to news and information about the Group**, **brand awareness**, **the Group's values and mission** and the initiatives it carries out.

In 2021, the Group's **advertising communication focused on innovation and value creation**, with special attention to the territory and people. In April, **with the aim of enhancing the Group's brand reputation**, a campaign entitled **"Acea**, **111 years of innovation"** was launched in the main national and local newspapers, both online and in print, with the aim of illustrating how Acea's values are evident and recognisable throughout its history (see the dedicated box).

ACEA UN'INNOVAZIONE LUNGA 111 ANNI (ACEA, 111 YEARS OF INNOVATION)

In response to the need to enhance the Group's brand reputation, **with its *Acea 111 years of innovation campaign***, **Acea** has **designed and developed**, entirely with internal resources, an **institutional campaign** in the main national and local newspapers, online and in print. The aim was to **communicate Acea Group's values**, **by underlining its closeness to the area and people** that characterises it, and the **important path of innovation undertaken**, which supports the improvement and effectiveness of the public utility services managed: from water to energy, up to the treatment and enhancement of waste.
Acea accompanies its customers towards a more sustainable tomorrow and contributes to making the cities in which it operates smarter. The payoff chosen for the campaign is 'The future is our environment'. This was a very substantial communication effort, lasting over one month, with a total of **50 appearances in the press** with high-impact print formats and over 10 million web impressions. With this national campaign, **on air on 26 April 2021**, Acea wanted to communicate its great commitment to creating value for the country every day.
In September, **the campaign was awarded** the **18° Press**, **Outdoor & Promotion Key Award** for the Transport and Energy category.

The year's communication was also characterised by a focus on innovation. Starting in January, in fact, the **Digital Branch** campaign went on air for three months to communicate the digitalisation of the Water Area through the new branch available to customers, and in July, to encourage customers to use digital channels, a **campaign dedicated to the web bill** was created for Acea Ato 2 and Acea Ato 5, to communicate the characteristics of the new interactive digital bill: immediacy, digitalisation and simplicity. The campaign was in print, outdoor, digital and aired on the radio. Lastly, in April, **an important information campaign was launched** for the same companies operating in the water sector, using various forms of communication (press, digital, BTL and posters) **to encourage the use of the social water bonus**.
To support the communication of the energy industrial area (commercial & trading), a campaign for **Acea Energia** was launched in April 2021: **E-Mobility**, aimed at underlining its commitment to sustainable mobility, with the launch of Acea's **new e-mobility app**, full of services that facilitate the use of electric vehicles. The campaign was developed in targeted and crossing actions involving several media (print, digital programmatic and reservation, outdoor). **Acea Energia's 100% Eco Green** communication campaign was also launched in June and July, aimed at improving brand reputation by highlighting the company's increasingly clear-cut decisions to **protect the environment and reduce carbon dioxide emissions** (see box in the Customer Care section). The campaign, which had a significant media response involving two exceptional testimonials, Emanuela Fanelli and Frank Matano, was developed in targeted and crossing actions that involved several media, with over 1,300 radio spots, press, video strategy on digital, TV commercials and 1,800 outdoor installations.

The Group's commitment to students also continued in 2021 with the creation in June of the entirely digital event "***Acea School We Are Energy! Turn off the light and turn on your imagination***", a training course that enabled teens to experience and learn about the world of energy, alternative energy sources and to raise their awareness of a more conscious use of energy, also to protect environmental resources (see the dedicated box).

DIGITAL EDITION 2021/2022 OF ACEA SCHOOL
WE ARE ENERGY! TURN OFF THE LIGHT AND TURN ON YOUR IMAGINATION

After the first **digital edition** of the educational event to **raise awareness of environmental sustainability**, which for years has involved thousands of people, **Acea has renewed the appointment in 2020**, **dedicated in 2021 to the world of energy**.
For this edition, Acea **wanted to reserve the preview of the event to its employees**, opening it afterwards to the entire national territory in the period from 10 to 17 June, **reaching about 25,000 users**; the project **will be proposed to the students** of Rome and the Metropolitan City **in the first months of 2022**.

Users of the initiative were able to access the event via the dedicated Acea web page. The route, with a 3D video game-style setting, is divided into three "worlds": Energy, Artistic Lighting and Sustainability, wanted to offer participants a multimedia experience to learn about the innovative actions, renewable energy projects and digital technologies implemented by the Group, in order to make them aware of the complexity of sustainability and energy saving, while enhancing the beauty of public and artistic lighting. The talented Valerio Mazzei took part in the event as guide.

The possibility of **using remote access** also concerned two other important events **organised by Acea in 2021**: in July, the **Innovation Day** entitled Builders of the Future was held, viewed by about 5,000 people in live streaming and about 200,000 social media views online and offline. In November, the **Sustainability Day** was on the subject of 'a fair and sustainable ecological transition', broadcast via streaming on a dedicated platform and live on CorriereTV with over 900,000 video views (see the in-depth boxes in the Institutions and the Company chapters, where the Group's commitment to research and innovation is illustrated, and in the Strategy and Sustainability chapter of *Corporate Identity*).
In September, with the collaboration of Marevivo and 100Vele, the Group also organised the first **Acea Green Cup**, in the area in front of the Port of Ostia, a regatta reserved for Group employees was held with the aim of raising awareness of sustainability and environmental protection throughout the Acea world (see box with details).
Also in September, Acea launched MIA, Acea's **Immersive Museum**, which allows visitors to retrace, thanks to a dedicated portal, over 110 years of the company's history and, in parallel, that of the city of Rome (see the dedicated box).

ACEA GREEN CUP 2021

Acea organised a sailing race on 26 September 2021 dedicated to the Sustainable Development Goals of the 2030 Agenda. The **Acea Green Cup** regatta, organised in collaboration with Marevivo and 100Vele, sponsored by the Ministry of Ecological Transition, saw the participation of 14 crews made up of Acea Group employees from 21 companies, who competed over a 4.5-mile course. The occasion was intended to strengthen the sense of teamwork and also to **highlight the projects implemented by the Group with positive effects on the natural environment and the social context**. In addition to competing in the sports competition, **each participating team also presented a project in an internal contest**, which rewarded the projects judged to be the most valid in terms of sustainability. Among the projects presented: the digital branch of Acea Ato 2, which helped ensure continuity in customer relations during the closure of physical branches imposed by the health crisis; AdF's circular economy protocol, in support of local businesses; GORI's Energies for the Sarno, for the protection of the river ecosystem; and many others. A special mention went to the Vaccination Hub, set up by Acea in the former car park and open to all residents.

ACEA LAUNCHES THE MIA

The **Acea Immersive Museum** was presented at a press conference held on 30 September 2021 at the Montemartini Power Station. This is a virtual tour, on a dedicated platform, which through photographs, videos, plans, charts, 3D images and the reproduction of paper documents and artefacts allows us to retrace the evolution of Acea and the Capital. The immersive museum was created thanks to a major redevelopment and digitisation of the company's historical documentary heritage, which is still in progress and includes: **more than 30,000 photographs**, almost 500 registers of minutes and resolutions, thousands of technical documents. Acea's historical archive also includes the 14,000 volumes of the company library and about **80 historical film clips**. Browsing the platform, in addition to accessing the virtual exhibition consisting of 12 rooms, it is also possible to view the unprecedented archival heritage through theme photo galleries and to enter a digital "Conference Centre" where you can watch the cultural events that will be organised by the company. The new portal is already active and can be found at www.museodigitale.gruppo.acea.it.

The Communication Department is responsible for **Acea's presence at events such as Ecomondo and Maker Faire** (see the dedicated boxes in Relations with the Environment, *Environmental Sustainability and the Main Challenges* and the chapter Institutions and the Company), as well as at **conferences and other initiatives**, referred to below. It also **coordinates visits to the Group's plants**, which before 2020 had been a frequent destination for visitors interested in technical and scientific aspects, as well as students, thanks to the willingness of the employees responsible for guiding them around the sites, but which in 2021, due to the **continuing Covid-19 pandemic emergency**, **were unable to receive visitors**.

The Group's digital strategy and digital identity, as mentioned, are defined within the Communication Department by the **Digital and Corporate Media** Unit, which manages communication on digital channels. The **corporate website** (www.gruppo.acea.it) therefore expresses the **Group's values**, **mission and industrial positioning**.
The Group's website tells the story of the company, highlighting its commitment to **sustainability** and **innovation**, transversal elements that increasingly characterise its way of working to guarantee the greatest efficiency in services rendered to customers, thanks also to the quality of the work of its people and its **daily commitment to the territories in which it operates**.
In addition to **corporate content**, the site features an **area dedicated to Acea's services and initiatives**. Through an in-depth **analysis of positioning and digital strategy**, the information on the site is organised clearly. In addition, it provides a smooth and intuitive navigation, with a particular attention to **visual communication**, also thanks to distinctive graphics, consistent with the Group's brand identity.
Acea's commitment to effective communication, in terms of the transparency and quality of the content available on its institutional website, has also been recognised in its placement in sector rankings. The result of the work on the Group's entire digital ecosystem has further strengthened Acea's presence **in the top 10 of Webranking Italy 2021-2022**, the research conducted by Lundquist and Comprend that assesses the **transparency of corporate and financial communication on the digital channels** of the main Italian listed companies. Compared to last year, the Group **moved up two places to eighth place** and gained an additional star, thus entering the **category of "5-star companies"** for the first time. Acea was mentioned in the **best practice ranking for the presentation of the company** in the Getting to Know Acea section of the website (www.gruppo.acea.it/conoscere-acea). The research showed that the business areas and the mission are described in a clear and transparent way, thanks also to precise data and infographics that give substance to the information and make it easier to understand.
During the year, the **Acea website** highlighted the **initiatives un-**

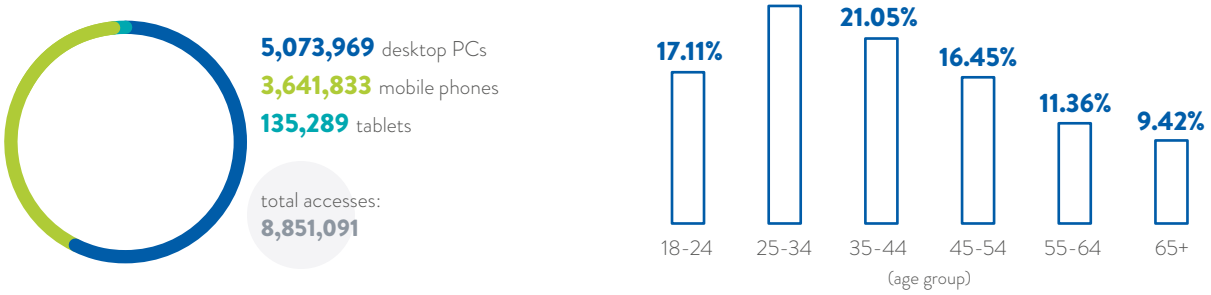
dertaken to ensure the continuity of services and express closeness to the community, in the face of the **continuing health emergency caused by Covid-19**, through the constant **updating of the page dedicated** to this information, including the **opening of the Acea Vaccine Hub**.
The website gave space to the **main events of 2021**, organised by the Company or in which the Group took part, mentioned above, and highlighted **the events to which the Company has long linked its brand**, through sponsorships (see the dedicated paragraph below), such as the **Rome Marathon** and the **Film Festival**. Also worth mentioning are the **2021 Christmas light decorations**: Acea joined the campaign **"Christmas in Rome - Let's give the gift of a sustainable city"**, **promoted by the FAO and Roma Capitale** to **raise awareness on the 17 SDGs of the 2030 Agenda**.

In 2021, **the section of the website dedicated to "stories"** was enriched with new content, telling the story of the Acea Group and its commitment to the community and the territory, combining the human dimension, technology and sustainability. In particular, as well as being dealt with in the reference section **"Our Commitment"**, **sustainability** is highlighted on all pages of the website as a key element for the Group's growth and value creation, with **references to dedicated initiatives and projects in each area**.
In addition, the website also highlighted the **artistic lighting projects** of monuments and the main **symbolic lightings** that concerned activities to **raise awareness among citizens** for the prevention of diseases such as breast cancer or other events with a high social impact (photo gallery on the corporate website).

Every year, on the occasion of the **Shareholders' Meeting**, the Acea Group's "Navigable Financial Statements" are published on the website, making the **Consolidated Financial Statements** and **Sustainability Report** available for viewing in interactive mode, with open data and multimedia content. The online reports present Acea's results, values and projects and allow visitors to **grasp the multiple connections that link the two annual reports on one screen**.
The website also performs a **service function**, with the **timely publication of notices** about any water stoppages affecting the areas where the Company operates. For several years, it has provided data about **emissions**, monitored in real time, from the Group's two **waste-to-energy** facilities and the **Tor di Valle power plant**, and the **main parameters of the quality of the water** supplied by companies that operate in the water industry can be consulted online. Lastly, the company website has given visibility to the **environmental video declarations** that illustrate Acea Ambiente's commitment to safeguarding the territory and reducing CO_2 emissions, for which the company received a special mention from ISPRA during the Ecomondo event.

In May 2021, **Areti's new website (**www.areti.it**) went online**. It features information content aimed at electricity distribution users, **offering smooth navigation and an effective user experience** as well as quick and clear access to a single reserved area to manage utilities and services. The website also aims to effectively disclose the company's projects, and devotes, for example, an area to the 2G meter replacement plan. In addition to **creating a digital identity consistent with the company's brand**, a content strategy was defined for positioning Areti on search engines.
In addition, the mini-site of **Acea Innovation** (www.aceainnovation.it), the Group company dedicated to the development of innovative services associated with the world of energy and ecological transition, **went online in July 2021**. The mini-site, **hosted within the Group's website**, was created to introduce Acea Innovation to a wide audience and as a contact tool for customers interested in the services offered: **sustainable mobility**, **widespread composting and energy requalification**. To this end, the most effective customer journey has been studied and a form has been created through which the user can leave his data to be contacted. In order to strengthen the Company's image, an ad hoc visual and digital identity was created, aligned with the Group's brands and digital guidelines.
The Group's website is active on the domain www.gruppo.acea.it. During the year, there were approximately **31.8 million page views** (an increase of about 7% compared to 2020), representing **8.8 million hits**. The **desktop** connection mode prevails, accounting for **57.3% of accesses** (5,073,969), and the increase in access to the site via **mobile** phone is confirmed, with 3,641,833 accesses or **41.2% of accesses in 2021** - the figure was 37.2% of accesses in 2020 - while access via **tablet** remains low, 135,289 accesses in the year, or **1.53%**. Most visitors are in the **25-44 age group**.
On **Acea Energia's website** (www.acea.it), **more than 2.9 million hits were recorded in 2021**, an increase of about 12% compared to 2020. Again, access was predominantly from desktops (51%), mobile phone use is growing (47% of accesses compared to 39% in 2020), while access from tablets remained stable at 2%. The site, dedicated to the **sale of electricity and gas for the free market**, has sections dedicated to "**guides**" and "**stories**", where useful information is provided to users on topics such as **innovation in the energy sector**, **wind energy**, **e-mobility**, **energy saving,** etc., which account for about 15% of total access to the site; **navigation is user friendly**, to encourage the customer journey and interaction with all touchpoints. In 2021, particular visibility was given to Acea Energia's offers focused on sustainability and environmental protection, with the **100% ECO** offer (see Customer care section).
The www.servizioelettricoroma.it website, which is **dedicated to Acea Energia's customers with standard market service**, had **534,796 hits** in 2021, up 33% on 2020 (around 400,000 hits), with 66% connected via desktop, 32% via mobile phone and 2% via tablet.

Chart no. 33 – Acea 2021 corporate website by access modes and age groups



The strengthening of Acea's presence on social media continued in 2021 (see the dedicated box), with careful planning, a storytelling strategy and content declined for each channel with the aim of highlighting the elements that have characterised Acea's commitment during the year, in line with the communication tone of the Group's institutional website.

ACEA NUMBERS ON SOCIAL MEDIA

Acea **has consolidated its presence on the main social channels during 2021**. Here are the key figures:
The Acea Group's **Facebook** channel, which focuses on corporate content and supported cultural events, has reached a fan base of around 6,302 followers, an increase of 34.4% compared to 2020, and achieved **over 4.8 million clicks**, including video views. Thanks to constant moderation, **user enquiries** received on the page are **directed to the dedicated support channels**.
The **Instagram** profile, with direct and informal communication aimed at talking about Acea's commitment to the area, counts about 4,771 followers (+31% compared to 2020) and received 13,073 clicks.
The **Twitter** profile, which is one of the main touchpoints for interaction with **institutional stakeholders** and **updates on corporate content and Group results**, has over 4,783 followers (+6.1 compared to 2020) who interact with Acea through comments and shares (14,993 interactions).
The **LinkedIn** profile shows a steady increase in the number of followers, which now stands at **61,145** (almost **32%** more than in 2020), with 22,538 interactions over the year. On this channel Acea reinforces its role as a multi-utility company in order to attract talented and skilled workers.
The **YouTube** profile, where Acea's videos are collected, has 1,080 subscribers (+14.4% compared to 2020).
The Group is also present on **Facebook** and **Instagram** with **Acea Energia**. Both channels were used for the promotion of electricity and gas offers and for the dissemination of commercial initiatives on the free market, also with the support of **special influencer marketing projects**. Facebook and Instagram respectively reached 14,405 (+2.6% compared to 2020) and 1,125 followers (+60.4% compared to 2020) and both have become important touchpoints for **managing customer requests**, also by inviting customers to use online services available in the MyAcea customer area of the website www.acea.it.

The **Media Relations Unit** oversees **relations with the national and local media**, with a view to mutual respect of roles and cooperation, in order to convey, through the media, the correct corporate image and position of the Group. Through press articles, television, radio and web reports, the Unit guarantees **media coverage of Acea's main events and initiatives**, including those in the field of value liberality and sponsorship, enhancing **corporate communication** content. Moreover, to highlight the main news stories concerning the Group, **starting from October 2021**, in collaboration with Acea Communication and Internal Communication, the Unit is in charge of the creation of videos on **Acea News,** published weekly **on the intranet and on the corporate website**.
Press releases and **press conferences** in 2021 disclosed **the economic results achieved**, **the initiatives carried out** by the Group and **information of public interest** relating to the provision of services. Together with Digital and Corporate Media, in coordination with other Functions/Departments of the Holding Company, such as Investor Relations & Sustainability, Legal and Corporate Affairs and Administration, Finance and Control, Media Relation handles the **dissemination of press releases relating to major corporate events**, such as the **Shareholders' Meeting**.

The link **with the operating companies** also allows the Unit to **provide feedback to reports of inefficiencies** coming from the media, interacting with press editors willing to publish the company's replies.
Media Relation manages the national and local **press review** on a daily basis, making it **available through the company's Intranet**. This activity is complemented by the transmission of additional and timely information about the Group or relevant to the business managed, thanks to the regular **monitoring of press agencies** and the web (**web** news, social media and blogs).
Among the **communications** that **accompanied Acea's initiatives of particular importance during the year** are, **by way of example**:

- releases during the year, starting in January, concerning the **electric mobility sector and Acea Innovation's agreements with some Italian municipalities for the installation of charging infrastructure**. These include initiatives in Terni, Taranto, Baselga di Piné and Benevento;
- communications, between April and July, of **Acea Energia's initiatives**, with the launch of the **App dedicated to recharging electric vehicles**, the promotion of the 100% **green electricity and gas offer** and the launch of the **commercial partnership with Windtre**;
- communication actions, from May onwards, relating to the **opening and services of the Acea vaccination hub**, on company premises in Piazzale dei Partigiani made available to citizens;
- the communiqué, in June, with the Carabinieri concerning **the installation of the SmartComp at the Salvo d'Acquisto barracks**;
- releases, between June and September, which focused on innovative research, circular economy and engineering design. In June, **the European funding for the Promisces project** won a call for proposals in relation to Horizon 2020; in August, Acea Elabori obtained **ICMQ BIM certification**; and in September, the launch of the **BIOREF experimental platform** with the CNR to develop new solutions for the recovery of organic waste;
- actions linked to the celebration and exploitation of **Innovation Day** (in July) and **Sustainability Day** (in November), organised by Acea;
- the events and announcements relating to the **work** carried out **throughout the year to upgrade the lighting**, **both artistically and functionally**, in collaboration with the Municipality of Rome, in places such as the Torretta Valadier at Ponte Milvio, Porta San Sebastiano and Piazza Farnese, as well as turning on the Christmas lights in Via del Corso, organised by Acea, and the lighting of the Cestia Pyramid in collaboration with ASviS, on the occasion of the fifth edition of the Festival of Sustainable Development;
- the October press release, during Ecomondo, which presented **the agreement with INSTM (Inter-university Consortium for Materials Science and Technology)** in view of the circular economy and the **Gasiforming patent**, for the transformation of non-recyclable plastics into eco-fuels, as well as the signing of the **memorandum of understanding with Ancitel Energia e Ambiente** for ecological transition.

EVENTS AND SOLIDARITY

The **economic value distributed to the community** (in terms of sponsorships, trade fairs, conferences, etc.) in 2021 is approximately **€ 8 million**[80] (it was € 7 million in 2020). Of this amount, some € 900,000 thousand have been earmarked for sponsoring cultural, social and sporting events. **Allocations by way of donations** for major initiatives amounted to approximately **€ 2 million** (€ 1.97 million in 2020).

Acea offers its services, such as the **supply of electricity and water or switching on/off public lighting**, on the occasion of events, or even in special circumstances of a solidarity and symbolic nature, such as, for example, special lighting/ switching off of the Coliseum, as part of the campaign to raise awareness of the fight against the death penalty or on World Blood Donor Day, of the Senate Palace, for the International Day for the Elimination of Violence against Women or on the occasion of the "Earth-Hour", and of Lazio Region Palace or other emblematic buildings, on the occasion of particular anniversaries, such as the Pink October campaign and many others, as on the occasion of the Festival of Sustainable Development, with the special lighting of the Cesta Pyramid. These services, referred to as **'technical sponsorships'**, had **a total economic value of around € 336,000 in 2021**.

The company participates in the main events related to its business activities and supports, every year, **including with sponsorships,** initiatives considered of high cultural and social value **for the development of the areas it operates in and for the benefit of the community** (see also the boxes at the end of the section). The **Sponsorship and Value Liberality** Function **advises on and manages requests** from the entire region and from the Group's corporate structures, **to submit them to the Executive Committee**, a body with responsibility for Institutional Relations, Sponsorships and Donations. The sponsorship initiatives approved by the Executive Committee are subject to an *Integrity Due Diligence*, for an ethical and reputational assessment of the proponents, according to best practices.

In view of the continuing pandemic emergency, **Acea has continued to support hospitals and public assistance structures**, allocating to them a portion of the funds allocated to sponsorships (see the dedicated box) and during the year carried out numerous other solidarity initiatives in the areas where it operates to support the most vulnerable (see also the initiatives, such as the "Solidarity Taxi" illustrated in the Diversity, Inclusion and Welfare section in the Personnel chapter).

ACEA'S FIGHT AGAINST THE COVID-19 EMERGENCY

Again in 2021, **Acea continued to support the local entities that have been working in the front line**, through intense economic and technical support. It therefore approved appropriations for the Biomedical Campus for the construction of the Vaccine Centre, to serve the community, and donations for the Policlinico Gemelli for the renovation of the Pneumology Department and the Bambino Gesù Paediatric Hospital for the creation of a Molecular Diagnostic Laboratory. It has also installed donated tablet recharging stations at the Policlinico Umberto I for use by patients who have contracted Covid-19 and have been admitted to the hospital.

ACEA SUPPORTS THE *ENERGY IN THE SUBURBS* PROJECT

On 14 December, the **Manifesto "Together to fight energy poverty"** was presented at the Stables of Palazzo Altieri in Rome. It was **promoted by the Energy Bank** and endorsed by companies, organisations, associations and non-profit organisations. The aim of the initiative was to raise awareness among public opinion and institutions and to put in place concrete actions to tackle vulnerable situations on this issue through the creation of **a network of stakeholders who share the Bank's mission**. Consumer and environmental associations, third sector organisations and the main Italian multi-utility companies, including Acea, have joined the Manifesto.

In this context, **in 2021** Acea supported the "**Energy in the suburbs**" project, an initiative sponsored by Lazio Region and carried out with Energy Bank and numerous other institutional, business and third sector partners, to tackle situations of energy poverty and support families in difficulty living in Rome's suburbs, particularly in the Alessandrino and Torpignattara districts.

In compliance with restrictive and safety measures, which have continued into 2021, **Acea has continued to support cultural and socially interesting events**, with the aim of **supporting the revitalisation of the area** and **helping to return places of social encounter**, whether physical or virtual, to the citizens after the long period of isolation.

Among the main events supported in 2021, two major exhibitions stand out: the ***Klimt*** exhibition. ***The Secession and Italy***, open in Rome from October 2021 to March 2022 at Braschi Palace, which made some 200 works by the great Austrian painter and other artists in his circle exceptionally accessible, tracing the artistic stages and relations with Italy. Also, the exhibition ***1849-1871 Roman Jews between segregation and emancipation***, set up at the Jewish Museum of Rome, between November 2021 and May 2022, has been showing about 70 works by Jewish soldier-painters together with masterpieces of 19th century Italian art, including paintings, sculptures, manuscripts and photographs aimed at bringing to mind the events that led to the breach of Porta Pia and the proclamation of Rome as capital city.

In 2021, in order to promote the resumption of theatrical, musical and cinematographic activities, Acea once again became a private partner of the **Rome Opera Theatre** Foundation and sponsored shows at both the Opera Theatre and Caracalla; it also sponsored the 2021 editions of the ***Two Worlds Festival of Spoleto***, the ***100 Città in musica*** initiative, the ***Film Festival*** at Rome's Auditorium Parco della Musica, and other similar local initiatives, such as the 2021

80 This item also includes expenses incurred for 'trade fairs and conference' but not 'technical' sponsorships.

Etruria Eco Festival, the 2021 Tolfa Jazz Festival, etc.
Alongside entrepreneurial initiatives for young people and the **promotion of innovation**, **Acea** sponsored the ***Technology and Scientific Research Week***, held at the Ettore Majorana Industrial Technical Institute in Cassino. Together with the National Association of Young Innovators, it **awarded the ANGI 2021 Prize**, which conveys a message and commitment to technological development to the **best innovation leaders** and supported the creation of an exhibition and relevant catalogue to present the projects of the **Italian Smart Design** competition.
Among the main sporting events of the year, Acea associated its brand with the Rome Marathon – **Acea Run Rome The Marathon** – and the **Rome-Ostia Half Marathon**; both events, of great importance for the capital, could in fact be held again on 19 September and 17 October 2021, respectively, after being suspended in 2020 due to the pandemic situation. Acea has sponsored numerous other sports initiatives and some teams, such as Frosinone Soccer, Virtus Basket Siena, Santa Lucia Basket, the Italian wheelchair basketball team, and has supported, as every year, initiatives aimed at children such as **School Volleyball - Acea Trophy** (see the dedicated box) and **Acea Camp**. **Started in 2015** from **an idea of Carlton Myers and thanks to the support of Acea**, every summer, at the end of the school year, the latter initiative has offered the opportunity to thousands of children, aged between 6 and 16, **to practice more than a dozen different individual and team sports**, at a sustainable cost for families and accepts, first of all, those with greater economic difficulties.

VOLLEYBALL SCHOOL - ACEA TROPHY: NEW FORMAT 2021

With a focus on the promotion of the values conveyed by sports, every year Acea supports events that concern children in particular, combining them with awareness of sustainability issues. In particular, the 2021 edition of the **School Volleyball Tournament - Acea Trophy**, dedicated to **high schools in the city and province of Rome** and organised by FIPAV Lazio (Volleyball Association), was presented with the claim **"V as in School Volleyball**. **V as in Values**". Due to the health emergency, it was not possible to hold the school tournament in its traditional form, but the organisers wanted to continue to involve thousands of young people by organising **28 online seminars** as distance learning, with high-profile speakers and testimonials from the world of sport. The event took place between 8 March and 26 April and the students addressed topics such as: Conscious use of water; Zero Hunger - Sustainable Development Goals; Conscious use of the web and social media with reference to grooming and sexting; Bullying and cyberbullying; The values of sport; Blood donation; No to addictions: drugs, alcohol and youth gambling. The Acea School Volleyball Trophy 2021 poster reads as follows: "Combining education with sustainability issues and the preservation of natural resources with sports competition offers young people an educational, interdisciplinary and social experience. A path of values that Acea has always promoted." Acea President Michaela Castelli said: "For the 2021 edition as well we aim to combine sports with education and raising awareness in the new generations on the issues of sustainability and protection of natural resources, in particular water. With various webinars and educational events we will tell children why water is a universal good."

The following boxes describe the **main events supported by the Acea Group in 2021**, through sponsorships or donations.

2021: ACEA FOR CULTURE, INNOVATION AND SUSTAINABILITY

sponsor of the exhibition "**Klimt**, **the Secession and Italy**", held at the Museum of Rome - Braschi Palance, from 26 October 2021 to 27 March 2022, dedicated to the famous Austrian painter (ZètemaProgetto Cultura Srl)

sponsor of the exhibition "***1849-1871 Roman Jews between segregation and emancipation***", held at the Jewish Museum of Rome, between November 2021 and May 2022, aimed at bringing to mind the events that led to the breach of Porta Pia and the proclamation of Rome as capital city (Jewish Community of Rome)

contribution as private partner and sponsor of the 2020/2021 and 2021/2022 theatre seasons of the **Rome Opera Theatre** (Rome Opera Theatre Foundation)

partner sponsor of the 16th edition of the **Rome Film Festival**, that took place from 14-24 October 2021 (Cinema Foundation for Rome)

sponsorship of the publication ***From the breach of Porta Pia to Rome of the people - 150 years of Roma Capitale*** (C.O.R. Srl)

sponsor of **100 Cities in Music 2021**, dedicated to the promotion of live music through the organisation of performances at low prices or free admission in 14 municipalities in Lazio (European Music Cultural Association)

sponsor of the **2021 Two Worlds Festival**, the international music event held in Spoleto between 26 June and 11 July 2021 (Two Worlds Festival Foundation)

sponsor of several cultural initiatives and summer events outside Rome, such as the **Tolfa Jazz Festival 2021** (ETRA Cultural Association), the **Etruria Eco Festival 2021** (Kick Srl), the **Civitavecchia Summer Festival 2021** (Music Station Cultural Association), the 2021/2022 theatre and film season of the **Narzio Theatre/Cinema** in Subiaco, the **Reate Festival 2021** (Vespasiano Foundation)

sponsor of the **ANGI Prize 2021**, rewarding the best initiatives of young Italians, and participated in the Innovation Technical Table at the Chamber of Deputies (National Association of Young Innovators)

Sponsor of the realisation of an exhibition, and relevant catalogue, in the context of the **national Italian Smart Design competition** for students and recent graduates in architecture and design on the development of sustainable smart urban system projects, aimed at presenting the projects (Sicrea Srl)

sponsor of **Forum PA Smart City - Digital Agenda 2021**, which scheduled a series of webinars on the topic between 21 and 25 June (FPA Srl)

sponsor of the **Technology and Scientific Research Week**, at the Ettore Majorana Technical Scientific Institute in Cassino, which promotes meetings with the manufacturing, social, economic and academic world and, in 2021, focused on the implementation of innovative projects (ITIS Ettore Majorana)

technical sponsorship of the initiative "**I will use less light (Mi illumino di meno) 2021**", with the switching off of the Senate Palace to raise awareness of energy saving

technical sponsorship for the **2021 Sustainable Development Festival**, involving the projection of the **UN SDG logo on the Pyramid of Cestius**

2021: ACEA FOR SOLIDARITY

solidarity contributions linked to the Covid-19 emergency, **aimed at upgrading or equipping healthcare infrastructure** for hospital centres in Rome, such as **Policlinico Agostino Gemelli,** Policlinico Universitario **Campus Biomedico**, **Bambino Gesù** Children's Hospital, and the purchase of other equipment to improve patients' well-being during hospitalisation (**Policlinico Umberto I**).

contribution for awareness-raising activities in the framework of the **Campaign against childhood cancer**, which took place in Rome between 20 and 26 September 2021 (Peter Pan Association)

contribution to the **Charity Dinner**, an event attended by well-known people from the world of entertainment, aimed at **raising funds for the activities of the Bambino Gesù Children's Hospital**

contribution to the **2021 Fiaba Day** event, organised in Rome on 3 October 2021, to promote discussion and awareness of issues relating to the removal of architectural, psychological and sensory barriers, to ensure equal opportunities, accessibility and usability for everyone (Fiaba Non-profit)

contribution to the **Health Village** initiative, organised in Rome at the Circo Massimo between 7 and 10 October 2021, which every year offers screening for breast cancer, gynaecological and other diseases prevalent in women and numerous other initiatives to raise awareness of cancer prevention and health promotion (Susan G. Komen Italy)

contribution to support the activities of the **Mobile Unit** in the field of **health and inclusion**, to promote health monitoring, the dissemination of the vaccination plan and food support among the most vulnerable and needy (Sanità Frontiera Non-profit)

contribution to the **Energy in the Suburbs** project, which in 2021 focused on the Alessandrino and Torpignattara neighbourhoods; this is an initiative sponsored by Lazio Region and carried out with Energy Bank and other institutional partners to tackle situations of energy poverty, in support of families in difficulty (Energy Bank Non-profit)

contribution to the '**Safety at School**' project for the supply of technical and computer equipment to support teaching activities in the schools in the municipality of San Vittore del Lazio

participation in the **International Day for the Elimination of Violence against Women**, **World Autism Day**, **World Blood Donor Day**, the effort to raise awareness of the campaign to end the death penalty, **World Patient Safety Day**, with **technical sponsorships**, such as the special lighting of Senate Palace, the International House of Women, the Colosseum and the Lazio Region Palace

technical sponsorship with the pink lighting of the Senate Palace as part of the **Pink Ribbon 2021** (LILT - Italian League for the Fight Against Cancer) initiatives and again with the lighting of the Lazio Region Palace, on the occasion of the **Pink October 2021 campaign** and **International HPV Awareness Day**

2021: ACEA FOR SPORT AND YOUNG PEOPLE

sponsor of **Acea Run Rome The Marathon 2021**, the 42 km competitive road race, held in the capital on 19 September 2021, is the one with the most spectators (Infront Italy) and the most Italian and foreign athletes participating.

sponsor of the **Rome-Ostia Half Marathon 2021**, the most important running event over a distance of 21 km, to be held in Rome on 17 October 2021 (RCS Sport)

sponsor for the 2021 Serie B championship of **S.S.D. Santa Lucia Basket**, a **wheelchair basketball** club that has been active in the Roman sports scene since the 1960s (S.S.D. Santa Lucia Srl)

support to **sports and sports events** in the areas of operation outside Rome: **basketball** (ASD Virtus Basket Siena; ADS Orvieto Basket), **soccer** (Frosinone Soccer; Benevento Soccer; USD Monterotondo Marittimo), **running** (ASD Filippide - D. LF Chiusi Avis Castiglione del Lago, Amatori Podistica Terni, Athletic Terni), **cross-country running** (ASD Nissolino Atletica Velletri), **rugby** (Rugby Perugia), **hockey** (ADS Follonica Hockey 1952)

title sponsor of the 2021 edition of the **School Volleyball Tournament - Acea Trophy**, dedicated to **secondary schools in the city and province of Rome** and organised by FIPAV Lazio; the 2021 event consisted of 28 seminars by distance learning on social and environmental issues (FIPAV Lazio)

main sponsor of **Acea Camp 2021**, the event aimed at students, between 14 June and 9 July and between 12 July and 13 August 2021, with the aim of introducing and disseminating the practice of sports and raising awareness of social and environmental issues (Beside Management Srl)

sponsor of **Run For Autism 2021**, the 10 km competitive race and 5 km open to all, held in Rome on 24 October and promoted by Progetto Filippide, to raise awareness of autism and give hundreds of young people from all over Italy a special day (ASD Sport and Society Association - Filippide Project Rome)

sponsor of the **2021 "I'm Separating Wastes Too" project for schools**, which combines sports activities with educational activities on circular economy issues (ASD Virtus Basket Aprilia)

SUPPLIERS

Over **€ 2 billion** = total value of the 2021 Orders for goods, services and works (+66% compared to 2020): processed more than 6,480 orders/contracts of about **2,870 suppliers** involved

80% of qualified suppliers completed a self-assessment questionnaire on **sustainability-relevant aspects during the year**

The Construction Site Safety Unit carried out **15,444 safety inspections** at construction sites (+6% compared to 2020): downward trend in detected non-compliances

The first **"pilot"** of the **Safety Check** project was completed

CONSOLIDATED EXTERNAL COSTS

In 2021, the Group's **consolidated external costs** totalled about **€ 2.46 billion** (+23.9% compared to 2020). The largest increase is due to the electricity and gas item of € 1.72 billion (about € 1.33 billion in 2020), which had the greatest impact on distribution of expenses. There is an increase in the services item equal to around € 437 million (€ 378 million in 2020), influenced by the change in the scope of consolidation.

Procurement of goods, **services and works** related to the Group Companies subject to reporting are managed centrally by the **Purchases and Logistics** Function of the Parent Company[81], with the exception of GORI, AdF and Gesesa, which independently manage their business. The **total value of the order** recorded in 2021, including the amounts of non-centrally managed water companies[82], rises to **more than € 2 billion**, with an increase of about 66% compared to the previous year (about € 1.2 billion in 2020). With regard to the centrally managed companies, the value of procurement in 2021 is more than € 1.7 billion, compared to € 1.1 billion in 2020.

PROCUREMENT POLICIES

The Purchasing and Logistics Department of the Parent Company defines **policies and guidelines** and manages, as a service, the procurement of goods, services and works required by the Departments of the Holding Company and the main Group Companies. To perform its duties, it **values the technical skills of the buyers**, handles the **requests of "internal customers"** (Functions/Companies in the Group) and develops a **transparent relationship with suppliers**. The department also oversees the flow of **materials**, **logistics** and **warehouses** of the Group, managing **the operations of the central depot** and **most of the territorial depots of Areti and Acea Ato 2**, at the service of the operational personnel dispatched to the territory. It also supplies materials for scheduled and urgent works, interacting with most of the companies contracted by Areti and Acea Ato 2. After the testing and operation of the measurement laboratory for the verification of water meters built by Acea Elabori at the new shed of the logistics centre of Santa Palomba, set up in 2020, at the same site, **in 2021**, the setting up of the **low voltage laboratory of Areti** (Engineering and Testing Unit) **was also completed**.

81 For the NFS scope, see *Disclosing sustainability: methodological note*. With respect to this scope, neither the water companies GORI, AdF or Gesesa, which manage their procurement independently, nor the Berg or Demap companies or the photovoltaic companies (with the exception of Acea Solar and Acea Sun Capital, which are managed centrally) are managed at a centralised level.

82 The data of the three companies operating in the water sector that manage procurement activities independently are aggregated here with those managed centrally in order to represent overall relations with suppliers in the year under review. The figures for Berg and Demap and the photovoltaic companies (except Acea Solar and Acea Sun Capital) have not been included, as these companies recorded costs for materials and services of less than 2% of those incurred by the companies in the NFS scope.

DEALINGS WITH SUPPLIERS AND PROCUREMENT MANAGEMENT

The **Acea Code of Ethics** recalls the reference principles[83] that should guide **relations between Acea**, as a contracting authority, **and its suppliers** (contractors and subcontractors):

- compliance with **rules and procedures**, including processes of due diligence aimed at assessing any **risks of corruption**;
- the principles of **transparency** and **protection of competition**;
- principles of **good faith**, **loyalty**, **professional propriety**;
- **promotion of ethical and sustainability aspects**, such as respect for the protection and safety conditions of workers, the quality of goods and services, respect for the environment and the pursuit of energy savings.

Suppliers issue a **declaration of acceptance and commitment to comply with the prescriptions contained in the Code of Ethics**, attached to the documents produced **for participation in tender procedures for the awarding of works**, **goods and services**. Any violation of the principles contained therein revealed by audits will result in **the exclusion from the tender or cancellation of the award**. **Acea mainly uses tenders**[84] **to select suppliers**, adopting criteria of transparency: in 2021, **61% of procurement**, **managed at a centralised level**[85], **was awarded through a tender procedure**.

For centrally-managed Group companies, the Purchases and Logistics Function has **published on the website** [86] – "Supplier" Area – **the documentation relating to purchases** regulated by the Public Procurement Code[87]. **Operators who are interested in participating in tenders** can **freely** access the **portal of the Qualification Systems** and the portal for **participation in online calls for tenders**. The **web portal** is based on the same operational procedure as traditional tenders: it checks the adequacy of the supporting document, acknowledges possession of the eligibility requirements, discloses the bids and displays the ranking. Companies that manage their own procurement process also carry out tenders electronically and interact remotely with suppliers; this method helps to limit face-to-face meetings, in compliance with the provisions aimed at limiting the spread of the pandemic.

The Administration, Finance and Control Function **monitors supplier payment times**: in 2021, for the companies in the scope[88], the **average payment delay** was **27.3 days**[89] (a marked decrease compared to the 42 days recorded in 2020); the same figure, weighted in light of the amounts, falls to 22.6 days[90]. This was the case for 26% of the value of payments made in the year (compared to 35% in 2020), while **the percentage of amounts paid on time was 74%**, **an improvement** on the 65% recorded in 2020.

WATER CONTRACTS: A DEDICATED CHANNEL ON PROCUREMENT WAS ACTIVATED AND SAFETY MEASURES AGAINST COVID-19 HAVE CONTINUED

Acea Group promotes, towards stakeholders, transparency and accuracy of information and maximum attention to the issues of safety at work, with specific regard to the personnel of contractors. In this sense, in line with the provisions of the applied NCBA, the Company confirms its interest in the **fair application of the social clause** on the subject of contract changes, aimed at the maximum **protection of workers' employment**, combating irregular forms of work or work that does not comply with the applied NCBA.
On the basis of the commitments shared in the Water Contracts Protocol, during 2021 **several meetings were held with the trade unions** involved in water contracts and the **contractors** on key issues such as health and safety at work, compliance with the contractual regulations applied, and protection of employment; Acea has expressed its willingness to make available to the trade unions **a dedicated channel** (a certified e-mail address), which has been activated, through which to convey any specific reports on the subject of water contracts.
It should be noted that in 2020 an "**Advisory Committee to analyse and propose actions to improve safety at construction sites**" was set up in accordance with the "Shared protocol for the regulation of measures to combat and contain the spread of the Covid-19 virus at the workplace", with provision for periodic meetings as necessary.

83 Acea's *Code of Ethics*, approved by the Board of Directors, is shared on the company's intranet and is available online at www.gruppo.acea.it, in the Governance section. The Code devotes article 15 to suppliers, as well as numerous other references in the text. Particular attention is paid to social safeguards in higher-risk contexts: "*In supply contracts with at-risk countries, defined as such by recognised organizations, contractual clauses have been introduced that involve: compliance of the supplier with specific social obligations (e.g. measures that guarantee employees respect for their fundamental rights, the principles of equal treatment and non-discrimination, protection against child labour)*" (*Code of Ethics*, Art 15.2).

84 Acea issues tender procedures for the procurement of works, goods and services in compliance with current legislation (Legislative Decree no. 50/2016), with reference to the ordinary and special water and energy sectors. In particular, for tenders in special areas involving amounts below the EU threshold, Acea applies Internal Regulations consistent with the principles of the EU Treaty for the protection of competition. Finally, for tenders that do not fall within the scope of application of the *Code on public contracts* (so-called "extraneous or private law"), selection procedures are used which comply with the principles of free competition, equal treatment, non-discrimination, transparency and proportionality.

85 Equal to 86.4% of the total volumes of the companies in the NFS scope, including those not managed centrally.

86 In compliance with the requirements of the National Anti-Corruption Authority (ANAC) and the so-called "Anti-Corruption Law" (Law 190/2012).

87 Legislative Decree no. 50 of 18 April 2016 and subsequent amendments and additions. *Public Contracts Code*.

88 The 2021 analysis produced by Administration, Finance and Control also included the companies GORI, AdF and Gesesa, which have provided data even through they are not managed at the centralised level. However, the companies Berg and Demap and some photovoltaic companies are not included, due to the low incidence of costs incurred.

89 The calculation of the figure is a simple average of the difference between the due date of the invoice in the system and the date of actual payment.

90 The calculation of the figure is the result of the average of the difference between the expiry date of the bill in the system and the date of actual payment weighted according to the amount of the bills.

DISPUTES WITH SUPPLIERS 2021

The disputes[91] between the company and its suppliers mainly concern non-payment of invoices and judgements on procurement matters.
With regard to **non-payment of invoices** for supplies of goods, services and works, there has been a decrease in the number of disputes that have arisen: **8** in 2021 (12 in 2020). These are injunctions concerning invoices that were not paid for reasons of a formal nature and are quickly resolved by settlement proceedings.
For the remaining civil litigation in the field of **procurement contracts**, mainly concerning the registration of reservations by contractors, contract terminations and damages, **14** cases were filed in **2021**, a slight increase compared to the previous year (8 cases).

As at 31 December 2021, there was a **total number of pending disputes with suppliers** (including disputes started in previous years) **of 100**, down from the 2020 figure (137 disputes), although there is still a slowdown in activity in relation to the health emergency. Lastly, **20 administrative disputes** began in 2021 (15 the previous year) concerning **tenders**. It should also be noted that, as of 31 December 2021, there were also **27 pending disputes started by employees of contractors**, who are appealing against the latter and against the contracting authority - as jointly and severally liable - for work credits accrued as an employee of the contractor during the duration of the contract.

SUSTAINABILITY CRITERIA IN TENDERS

In 2021, for the Group Companies under analysis, **over 6,480 orders/contracts** were processed, for a total of **more than 2,870 suppliers** involved (please see the *Order Analysis* below).
Within the **centralised management of tenders**, which covers 86.4% of the total value of procurement within the 2021 scope of consolidation, amounting to over 3,400 orders/contracts managed and more than 1,780 suppliers involved, as a requirement for participation, for **100% of tenders for the award of works contracts** and for numerous contracts for the purchase of goods and services, Acea requires **UNI EN ISO 9001 quality management system and the UNI ISO 45001:2018 occupational health and safety certifications**. Furthermore, for **the 149 product categories subject to tender** and relating to the purchase of goods, services or works, **evaluation criteria of the technical offer based on the following systems are included during the tender process**, **when applicable**: **UNI EN ISO 14001 - UNI CEI EN ISO50001 - UNI ISO 37001 - FSC Chain of Custody**.
Beginning in 2020, **these requirements** were **added to potentially eligible calls for tenders**, awarded on the basis of the most economically advantageous offer. **In 2021 approximately 23% of the 400 potentially eligible contracts concluded**[92], were **awarded on the basis of sustainability criteria**. Specifically, for some tenders for water, electrical and civil engineering works awarded with the method indicated, rewarding criteria were also included regarding the use of **ecological vehicles**, **additional training of workers in the area of safety**, and the possession of **certifications** (where not already participation requirements) in the following areas: **environment**, **health/safety**, **energy efficiency**, **the use of environmentally sustainable materials and corruption**. Finally, the technical specifications for procurement by Group Companies include sustainability criteria concerning **materials**, such as recycling, re-usage and the repairability index.
For an electromechanical tender that took place in 2021, Gesesa (among the companies that are not centrally managed) added UNI EN ISO 9001 and UNI CEI EN ISO 50001 certifications as a special requirement.

Acea will include, where relevant, the normative references to the **Minimum Environmental Criteria** (CAM) adopted by Decree of the Ministry for the Environment, Land and Sea Binding parameters or bonuses in tender documents[93]. In particular, the reference to CAMS was applied in tenders related to the rental services for generators, ordinary and extraordinary maintenance contracts for lifting systems, the purchase of computers and printer cartridges, in addition to categories such as paper, office furnishings, public lighting – supply and design of LED lighting fixtures – work clothes, cleaning of buildings, maintenance of green areas and vehicles.

ANALYSIS OF PROCUREMENTS AND THE SUPPLY CHAIN

SCOPE

The information and data presented in the paragraph in an aggregated manner concern all companies included in the scope – please see Disclosing Sustainability: *Methodological note*- including the three companies operating in the water sector, Gesesa, GORI and AdF, which are not managed centrally, and excluding Berg, Demap and some FTV companies, which together account for less than 2% of the costs of materials and services of the companies in the consolidation area.

The **2021 tenders** for the procurement of **goods**, the provision of **services** and the execution of **works**, had a **total economic total economic value**, as initially mentioned, of more than **€ 2 billion**[94], with a marked increase compared to 2020 (around € 1.2 billion). In absolute terms, the largest increase in amounts compared to the previous year was recorded for the item work (129%), followed by services (60%), while the item goods decreased somewhat (-12%) (see Table no. 36).

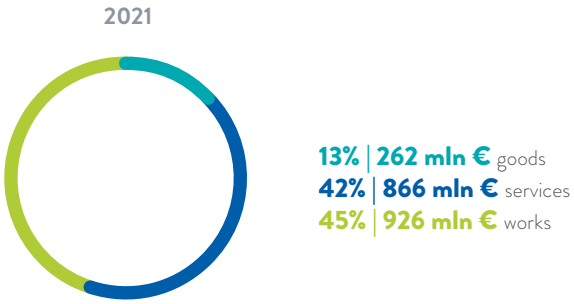
91 The figures for the 2021 dispute refer to all the Companies within the NFS scope (see Disclosing Sustainability: Methodological Note).

92 Consultancy activities are excluded from this calculation.

93 From the www.minambiente.it website: "Minimum Environmental Criteria (CAM) are the environmental requirements defined for the various phases of the purchasing process, aimed at identifying the best design solution, product or service from an environmental point of view throughout the life cycle, taking into account market availability. [...] Their systematic and uniform application makes it possible to spread environmental technologies and environmentally preferable products".

94 The amount of purchases managed at the centralised level refers to tenders awarded during the year, without any distinction between investments and operating cost, annual and multi-annual contracts. Purchases of commodities, regularisation orders and intercompany orders are excluded. The figures for the three water companies that are not centrally managed, for a total of € 278 million, do include all purchase types.

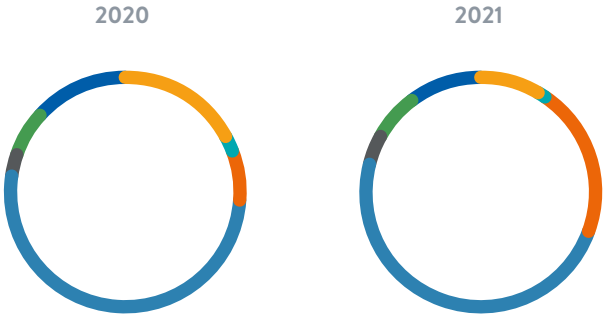
Chart no. 34 – Value of ordered goods, services and works and percentage on total (2021)



NOTE: Figures are rounded off to the nearest unit.

Observing the **value of procurement** for the **business macro-areas** - Networks Operations (electricity grids), Generation, Commercial, Water Operations, Engineering Operations, Environment Operations (waste-to-energy and environmental services) and Corporate (waste to energy and environmental services) and Corporate (Acea SpA) - the increase in the value of orders for both works and goods and services was concentrated in the Commercial area, which also provides energy efficiency services for buildings, and in the Water area (see chart 35 and table 36).

Chart no. 35 – Orders (goods, services, works) by business area (2020-2021)



2020	2021	
212 mln €	174 mln €	Energy infrastructures
28 mln €	25 mln €	Generation
86 mln €	429 mln €	Energy (commercial and trading)
633 mln €	996 mln €	Water
37 mln €	87 mln €	Engineering and services
82 mln €	136 mln €	Environment
162 mln €	207 mln €	Corporate

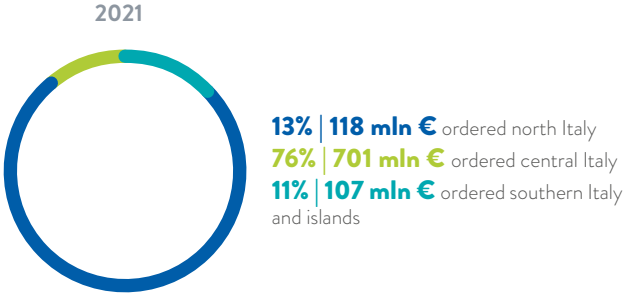
NOTE: Figures are rounded off to the nearest unit. The **Energy Infrastructure segment** includes the company Areti, the **Generation segment** includes the companies Acea Produzione, Ecogena and FTV (Acea Solar and Acea Sun Capital). **Energy (Commercial and Trading)** includes Acea Energia, Acea8cento (until July 2020) and Acea Innovation. **Water** includes the companies: Acea Ato 2, Acea Ato 5, GORI, Gesesa, AdF. **Engineering and Services** includes Acea Elabori. **Environment** includes: Acea Ambiente, Aquaser and Acque industriali. Present in the **Corporate** segment is only Acea SpA.

As already mentioned, the procurement needs of the Group's companies included in the scope of consolidation in the year totalled **6,482 orders/contracts** and involved **2,869 suppliers** (13% more than the 2,529 in 2020). **In terms of the geographic distribution of the suppliers**, in 2021, most suppliers (48%) were in central Italy, of which 31% in Lazio, followed by northern Italy (31%), southern Italy and the islands (19%) and only 2% were foreign. The **geographical distribution of the value of the procurements among the macro-regions**, in terms of percentage weight on the total amounts (€ 1,128 million for goods and services and € 926 million for works), is more concentrated in central Italy, with 51% of the item "goods and services" and 76% of the item "works", followed by northern Italy, which absorbs 38% of the item "goods and services" and 13% of the item "works". During the year, 38% of the value of "goods and services" and **59% of the value of "works"** were concentrated **in Lazio** (Graphs nos. 36 and 37 and Table no. 37).

Chart no. 36 – Geographical distribution of the amounts for goods and services in Italy and abroad (2021)

NOTE: Figures are rounded off to the nearest unit.

Chart no. 37 – Geographical distribution of the amounts of works awarded in Italy (2021)



NOTE: Figures are rounded off to the nearest unit. In 2021, for the companies in the scope, the value of foreign procurement was zero.

Table no. 36 – Procurement data (2020-2021)

	u. m.	2020	2021	Δ% 2021/2020
VALUE OF PROCUREMENT THROUGH TENDERS				
goods	million €	297	262	-12%
services	million €	540	866	60%
works	million €	404	926	129%
total	**million €**	**1,241**	**2,054**	**66%**
GOODS, SERVICES AND WORKS AS A PERCENTAGE OF TOTAL ORDERS				
goods	%	24%	13%	-46%
services	%	44%	42%	-4%
works	%	33%	45%	39%
VALUE OF ORDERS BY BUSINESS AREA				
Energy Infrastructure	million €	212	174	-18%
Generation	million €	28	25	-13%
Energy (commercial and trading)	million €	86	429	401%
Water	million €	633	996	57%
Engineering and services	million €	37	87	136%
Environment	million €	82	136	66%
Corporate	million €	162	207	28%
NUMBER OF PURCHASE ORDERS MANAGED				
POs for goods, services and works	no.	6,552	6,482	-1%

NOTE: all the figures in the table are rounded off to the nearest unit.

Table no. 37 – Procurement nationwide (2020-2021)

	u. m.	2020	as % of total	2021	as % of total
NUMBER OF SUPPLIERS OF GOODS, SERVICES AND WORKS NATIONWIDE					
suppliers north Italy	no.	819	33%	893	31%
suppliers central Italy	no.	1147	45%	1,366	48%
suppliers Lazio	*no.*	*757*	*30%*	*897*	*31%*
suppliers south Italy and islands	no.	516	20%	556	19%
foreign suppliers	no.	47	2%	54	2%
total suppliers	**no.**	**2,529**	**100%**	**2,869**	**100%**
GEOGRAPHICAL BREAKDOWN OF AMOUNTS FOR GOODS AND SERVICES					
value of orders from Northern Italy	million €	365	43%	426	38%
value of orders from Central Italy	million €	375	45%	575	51%
value of orders from Lazio	*million €*	*252*	*30%*	*426*	*38%*
value of orders from southern Italy and islands	million €	75	9%	117	10%
value of orders abroad	million €	22	3%	10	1%
total value of orders for goods and services	**million €**	**837**	**100%**	**1,128**	**100%**
GEOGRAPHICAL BREAKDOWN OF AMOUNTS FOR WORKS					
value of orders from Northern Italy	million €	133	33%	118	13%
value of orders from Central Italy	million €	195	48%	701	76%
value of orders from Lazio	*million €*	*177*	*44%*	*546*	*59%*
value of orders from southern Italy and islands	million €	68	17%	107	11%
value of orders abroad	million €	8	2%	0	0%
total ordered for works	**million €**	**404**	**100%**	**926**	**100%**

NOTE: all the figures in the table are rounded off to the nearest unit. The "northern Italy" geographical area includes Valle d'Aosta, Piedmont, Lombardy, Veneto, Trentino-Alto Adige, Friuli-Venezia Giulia, Emilia-Romagna and Liguria; "central Italy" includes Tuscany, Umbria, Marche, Latium, Abruzzo and Molise; "southern Italy and islands" includes Campania, Basilicata, Apulia, Calabria, Sicily and Sardinia. The geographical area "abroad" includes suppliers that are mainly European.

SUSTAINABILITY IN THE SELECTION AND ASSESSMENT OF SUPPLIERS: FROM QUALIFICATION TO ONGOING CONTRACTS

Various **systems for qualifying suppliers of works**, **goods and services** are active in Acea, in observance of principles of competition and equal treatment.
The **Supplier Qualification** Unit:

- coordinates working groups to identify the **qualification requirements**;
- draws up the **Qualification Regulations**;
- establishes **Qualification systems** of European significance[95] and **Supplier Lists** for so-called "below threshold" or private contracts.

During 2021, the product tree shared between the Group companies whose procurement is managed centrally included **544 product groups** and the Unit in charge managed, as of 31/12/2021, **159 Supplier lists**.
To register with the Lists/qualification systems, companies must visit the Acea institutional website (www.gruppo.acea.it suppliers section) which is a dedicated portal; the requests are processed, including verification of the possession of the requirements and related communications to the supplier. During 2021, a **total of 934 applications for** registration in the **Qualification Systems/Lists** were processed (+17% compared to the 798 applications in 2020), amounting to **733 successful applications** in total. Specifically:

- **274** qualification applications processed for "works" Qualification systems";
- **459** qualification applications processed for Qualification Systems/Suppliers' Lists for "goods and services".

The **qualification requirements** requested of suppliers to register on the Qualification System are "**standard**" – these include **requirements of a moral nature envisaged by the laws in force** in the sector – **and** "**specific**", i.e. they refer to the product group or groups included in each Supplier List.
Among the specific requirements, in some cases **Acea requires its potential suppliers** to have **certain Authorisations and/or certifications**:

- **UNI EN ISO 9001 certification** (binding requirement for all the "works" product groups and for almost all the "goods and services" suppliers);
- **UNI EN ISO 14001 certification** (for inclusion in the lists of suppliers for special non-hazardous waste, cleaning services, armed surveillance service and concierge/reception);
- **Registration with the National Environmental Operators' Register** or authorisation to manage a plant for the recovery/disposal of waste (for inclusion in suppliers' lists for Waste Management Systems);
- **OHSAS 18001/UNI ISO 45001 certification** (for inclusion in the suppliers' list for the electro-mechanical maintenance of industrial plants and cleaning services);
- **UNI EN 15838:2010 certification** (for inclusion in the suppliers' list for "Call Centre and Back Office");
- **SA8000 certification** (for inclusion in the suppliers' list for "Cleaning services");
- **UNI 10891 certification** (for inclusion in the suppliers' list in the "Armed surveillance service and concierge/reception").

For admission to the Qualification Systems of Community-wide significance, **companies wishing to qualify must declare their availability to undergo an** audit **at the administrative head office**, aimed at assessing the truthfulness and adequacy of the documentation provided, **and at the operating plants** or product warehouses, in order to assess the implementation and application of the active management systems.

The assessment of suppliers involves different types of controls that are implemented **depending on the List and the different statuses that the supplier acquires** with respect to Acea:

- **during the qualification phase**;
- **qualified**;
- **qualified with contract in progress**.

In order to be able to register on the **suppliers' list** relating **to the Single Regulations for Goods and Services and Works** which, for 2021, concerned **114 out of 159 total Suppliers' Lists** ("qualification phase"), suppliers must complete a **self-assessment questionnaire on the Quality**, **Environment**, **Safety**, **Energy and Social Responsibility management systems** that are considered **important for sustainability** on the Vendor Management platform. In 2021, this questionnaire was completed by **386 suppliers** (243 for goods and services and 143 for works), an increase of 6% compared to 363 in 2020, representing 100% of the qualified suppliers on the supplier lists for the aforementioned Single Regulations and over **80% of the total qualified suppliers in the year** (equal to 481)[96].

Furthermore, in continuity with a practice that has been consolidated for several years, **Purchasing and Logistics**, in synergy with the Sustainability Planning & Reporting Unit, sent a panel of **100 Group suppliers** (79 in 2020) **an in-depth questionnaire** to assess their commitment on **environmental issues**, with a particular focus on energy consumption. **40 companies responded to the questionnaire in full** and the results of the survey are **shown in the *Relations with the environment*** section, in the chapter on ***The Use of Materials, Energy and Water*** (Energy Consumption paragraph), to which reference is made.

AdF also applies, where relevant, **preferential sustainability criteria** upon **registration on the Suppliers' List** and **for qualification** in the product categories, for example by requiring operators who intend to qualify in the product category "cadastral cleaning services - waste disposal" to certify that they have ISO 14001:2015 certification.
In addition, after initiating the **Circular Economy Protocol** in 2020, in 2021 AdF continued and consolidated this activity, which aims to **protect local suppliers and enhance the quality and socio-environmental sustainability of the supply chain**. The Protocol, drawn up with the direct involvement of stakeholders, including institutions, sector authorities, banks, universities, trade unions, etc., allocates part of the procurement of goods, services and works, that not subject to the rules of the Procurement Code, to local economic operators, who can register in a dedicated and specially created register to qualify in the product categories related to the circular economy. Social and environmental responsibility is also taken into account when assessing qualification requests, and incentive criteria that are linked to further commitments are envisaged, such as, for example, hiring staff belonging to protected categories, good practices in terms of health and safety in the workplace, use of vehicles with

95 Pursuant to Article 134 of Legislative Decree no. 50/2016 as amended.

96 The number of qualified suppliers does not coincide with the 733 successfully processed applications for registration in qualification systems, as suppliers can register in more than one qualification system.

low environmental impact, etc. (see the Circular Economy Regulation available in the "Suppliers Area" of the institutional website www.fiora.it). In 2021, in particular, **AdF wished to promote awareness of the project** through periodic **information campaigns** and also through the **signing of agreements with the main trade associations** in the area to involve their members. As of 31/12/2021, there were **more than 100** qualified suppliers within the scope of the Protocol. Finally, in order to assess the effectiveness of the project, **AdF set up a monitoring table** to periodically check the results achieved and the quality of the actions undertaken and to share them with local stakeholders.

Once **qualified**, the supplier's headquarters may be subjected to a **second-party Audit on Quality**, **Environment**, **Safety**, **Energy and Social Responsibility (QASER) Management Systems** to verify the **actual application** of active certified Management Systems and the management methods of **other areas relevant to sustainability**. Again in 2021, the Covid-19 pandemic situation prevented audits being carried out at the supplier's premises, and they were partly replaced by **audits conducted on the Teams platform** and **remote** sharing of documentation, which made it possible to maintain an active relationship with the supply chain on issues of quality, environment, safety, energy and social responsibility. The **suppliers to be audited** were selected **from among the main suppliers**- based on the economic weight on the volumes of the 2020 "works" order, processed in 2021, and of a share of the 2020 "services" order including the waste management orders – **that have operated in the most critical sectors for "environment" and "safety"** (waste management and works). In particular, **22 suppliers** or 20% (approximately 91 million) **were audited** with regards to the 2020 "works" item and the share of 'services' (a total of € 458 million).
Each supplier **was sent feedback** indicating the degree of compliance per scheme and overall, as well as a report with recommendations for improvement. Overall, it was found that 100% of the audited suppliers are certified for Quality (ISO 9001), 95% for Environment (ISO 14001); 91% for Safety (ISO 45001) and 68% for Social Responsibility (SA 8000), while only 41% have Energy certification (ISO 50001). An overall average overall **average compliance**, **compared to the requirements of the audited schemes (QASER)**, **of about 83%** (86% for Quality, 85% for Environment and Safety, 64% for Energy and 83% for Social Responsibility).
In addition, in the case of a supply of Granular Activated Carbon used for water purification, **Acea Ato 2** included in its purchase specifications the possibility of carrying out **audits at production plants located abroad**, including in "countries at risk". Two audits were carried out during 2021, the findings of which were shared with the supplier for the development of a recovery plan.

The **Group Vendor Rating** started in 2020, continued in 2021 and is currently in the **final fine-tuning phase**. In particular, the evaluation system will monitor **several performance indicators**, **including a composite sustainability indicator,** developed with the involvement of Ecovadis in the project; see box for further details on the project's progress during the year.

PROGRESS IN 2021 OF THE GROUP VENDOR RATING PROJECT AND ADOPTION OF THE ECOVADIS MODEL.

During 2021, the Group's Vendor Rating system was implemented on the dedicated module of the single purchasing portal, to analyse, assess and monitor supplier performance in order to **increase the level of competitiveness and quality of services rendered and products supplied.** The model was defined for goods, services, works and for the combined product supplier/group, using criteria that was objective (non-discretionary) and as automatic as possible.
The **Vendor Rating index** is calculated on the basis of the weighted combination of detail indicators that monitor the main aspects relative to the **execution phases of the contract**: **punctuality**, **quality and safety**.
As of 31 December 2021, the index has been **calculated for 781 suppliers** for a total of **1,859 scorecards** i.e. scorecards in which, for each supplier/goods group concerned, the summary indicator and detailed indicators are shown; they are higher than the number of suppliers as some are registered in more than one goods group. Currently the **model is undergoing fine tuning**, to verify the robustness of the data and create a significant historic database. The next step is making the model official and begin applying it.
Acea recently decided to strengthen its commitment to promoting sustainability throughout the supply chain and in 2021 **adopted** the **model developed by Ecovadis,** a global Corporate Social Responsibility (CSR) company offering ratings based on international standards, to **assess the sustainability performance of its partners.**
The model covers the evaluation of the company services in order to calculate the **sustainability rating** according to 21 CSR criteria related to the environment, work and human rights, ethics and sustainability in purchases.
The Ecovadis model also provides for interaction with suppliers, who are carefully and individually analysed by means of a customised evaluation questionnaire, data collection and analysis by CSR experts, the **definition of corrective plans and monitoring the definition of corrective plans and monitoring** thereof and sharing of the evaluation on the Ecovadis network. In 2021, **148 suppliers were evaluated** and 102 are currently being assessed, with an **average score of 59.2/100**.
Once fully deployed, the CSR evaluation **will be used as a bonus criteria in tenders**, assigning different scores based on the rating obtained from the Ecovadis assessment, in order to reward the most virtuous companies in terms of environmental protection and corporate social responsibility.

HEALTH AND SAFETY ALONG THE SUPPLY CHAIN: AWARENESS RAISING AND AUDITS

The Group is **extremely attentive to occupational safety**, which it also applies **across the supply chain**. In particular, Acea has tasked organisational structures, in the parent company and the operating companies, with activities aimed at **monitoring** and more effectively **controlling** how suppliers manage safety.
The **Site Safety Unit in Acea Elabori**, is the Group structure of reference, for the management of the **safety of works and services contracted out** by Group companies (mainly Acea Ato 2, Acea Ato 5, Areti and Acea Ambiente[97]), **ensuring compliance with the highest standards** and with regulations[98]. To this end:

- **Support and assistance to the Works Manager** and general Safety Coordination;
- **Coordination of safety in the design phase and during execution** at specific sites;
- **Safety inspections** for works and services that do not require coordination during execution;
- **Services ancillary** to safety inspection activities.

Site safety inspections are mainly related to the **main works** that are the subject of **maintenance contracts for networks and services in the water and electricity sectors**, but also concern minor contracts[99].
Activities are distinguished into works requiring **Safety Coordination during the Execution phase** (Coordinators appointed as needed by the Works Director) and works with **random safety inspections**.
To facilitate the operation of the organisational structure, **inspection activities are managed with computerised systems** that **issue work orders to the security inspectors to check ratings that exceed a certain threshold.** The system also provides support for technical and professional suitability checks and the engagement of a Safety Coordinator at the execution or design stage, where required.
For the interventions carried out during the year the following people were involved:

- **21 Safety coordinators** in the execution and design phase, assigned to specific worksites as needed;
- **19 Safety inspectors**, who assessed and verified the safety standard through random inspections;
- **5 Planners**, who followed the planning and dispatching of the safety inspections to the sites of the contractors;
- **10 Technical Support resources**, who managed the technical and professional audits of the companies engaged in the contracts.

In particular, **in 2021**, the Site Safety Unit:

- carried out the activities in **support of the technical and professional audits of 812 companies** (45% of contractors and 55% of subcontractors and operated equipment rentals[100]), about **32% more** than in 2020 (617 companies);
- activated **Safety Coordination in the Execution phase for 492 tasks** and carried out **Safety Coordination in the Design phase** for **54 tasks;**
- conducted **15,444 on-site safety**[101] **inspections** (**+3.6%** compared to 14,904 inspections in 2020).

During the audit of the staff of contractor and subcontractor companies, the Site Safety Unit **also ascertains that the Employer has provided basic health and safety training** and, where applicable, specific training.
After the **occupational health and safety audits** conducted during inspections **by the Site Safety Unit** inspections, a total of **a total of 1,023 non-conformities**[102] (of which 677 were of minor importance, 251 of medium importance and 95 were of major importance), **confirming**, despite the constant increase in inspection visits, **the considerably decreasing trend recorded over the last three years**[103] both in the absolute number of non-conformities detected and, above all, in the number of non-conformities in the "major" category.

THE FIRST "PILOT" OF THE SAFETY CHECK PROJECT

In 2021, Acea Elabori, in collaboration with the parent company's Technology & Solutions department, continued testing on the Safety Check project, which was launched in 2020. The objective is to remotely verify the safety conditions of personnel at construction sites, through the use of IoT sensors in the field, In particular, **the pilot carried out in 2021** was of a **4 month duration** and was conducted at one of the construction sites managed by the Works Management and Safety department.
Sensors, tags, smart-watches and an IoT infrastructure linked to a dashboard enabled **real time monitoring of worker safety on site**, **to prevent potential risk situations.** Five operational technicians were involved in the monitoring and the system received about 1,200 inputs from the field, most of which were the result of deliberate **specifically staged simulations** to test the effective operation of the system, such as cases where the protective helmet was removed in areas where it should have been worn.
The pilot was successful and preparatory activities for a gradual implementation of the project have begun.

97 For Acea Ambiente, Acea Elabori's Construction Site Safety Unit has mainly carried out Safety Coordination during execution (CSE) activities on a smaller number of sites.

98 Legislative Decree no. 81/08 "Consolidated Act on Safety", as amended.

99 Such as electrical or electromechanical maintenance work carried out on plants, meter changes, road repairs, video-inspections and sewerage pumping, etc.

100 Operated equipment rental is a contract that involves the rental of work equipment and the performance of a specialized operator, essential for the operation/use of the equipment itself.

101 The number includes visits for all types of contracts, both main ones and "minor ones".

102 For the main contracts, as envisaged in the contract documentation, the results of audits are recorded according to four categories: compliant or non-applicable, minor (generally corrected on the spot), medium and major infractions. The non-conformities are associated with corrective actions and penalties applied by the contracting company on the basis of the provisions of the tender documentation, and, serious infractions may lead to the suspension of works.

103 In 2019, after approximately 12,400 inspections, 1,741 non-conformities were recorded (1,141 minor, 367 medium and 233 major) and in 2020, after 14,904 inspections, 1,457 non-conformities were recorded (962 minor, 337 medium and 158 major).

The Acea Elabori Site Safety Unit and all Group Companies that independently manage site audits, either in whole or in part, also contribute to **protecting the safety of contractors working on the construction sites**, by meeting the employers of the companies before the start of work to **inform them of the standards adopted**. In fact, **all contractors** are informed by the relevant Units in charge of managing the contract, the Works Management and the relevant Safety Coordinators for the Execution of the Works (the latter where provided for by current legislation), **through the DUVRI** (Single Risk Assessment Document, to be attached to the contract), **the SCP** (Safety and Coordination Plan) or **specific coordination meetings**.
As an example, **AdF** which conducts its own inspections, during 2021 took steps to carry out **coordination meetings with the contracting companies** given the prolonged health emergency situation caused by Covid-19, reiterating the correct procedures to be implemented, also in view of the **repeated updates to the relevant legislation** and the need to keep site procedures and documents constantly in line with national and regional regulations.

In Acea, moreover, the **Training Camp** is a space dedicated to the training and education of staff on **occupational health and safety**. It is used for both internal training (see also Staff section) and for **training of contractors** in relation to specific activities (such as, for example, climbing/descending medium and low voltage power line poles, access to underground confined spaces, etc.), depending on the contracts awarded during the year.

In 2021, due to the continuation and development of the health emergency, the activities of the **Coronavirus Prevention Committee** set up in 2020 by the **Parent Company**, from the very early stages of the Covid-19 emergency, constantly **coordinates with Group companies** and **with contractors** (see also Staff - Health and safety at work). In particular, contractors **have been trained** to comply with the "Shared protocol for the regulation of measures for the prevention and containment of the spread of the Covid-19 virus in workplaces"[104] which requires the adoption of **technical**, **organisational and procedural measures** (safety measures to prevent contagion), defined on the basis of a precautionary approach, for the management of health emergencies **both in the workplace and with regard to the procurement of goods and supplies**, extending also to the site owners and all subcontractors and sub-suppliers present; an **operational instruction** containing the Covid-19 Prevention Guidelines was provided to contractors.

The Companies that carried out site inspections during the year, **above and beyond the work of the Site Safety Unit**, took the **Parent Company's guidelines into consideration**. In particular, **Acea Ato 2**increased the activities assigned to the Supervision and Inspection Unit, and**1,118 inspections** were conducted during the year. In addition, in June and July 2021, the Company dedicated two days to conducting **unannounced field surveillance activities** on **safety and environmental issues**, **respectively**, and has decided to repeat both initiatives periodically. **Acea Ato 5** also stepped up its audit activities and carried out **270 inspections** through its Internal Security Team (Risk & Compliance and Security Unit), to audit suppliers on occupational health and safety, environmental issues and the quality of the work carried out, as well as compliance with prevention procedures for the dissemination of Covid-19, including possession of Green Certification (also known as the "Green Pass") by the workers. The findings of the inspection visits were shared with the companies concerned, to raise their awareness on the issues detected by the inspection.
This also applies to non-centrally managed companies: Through its Technical Management Systems Unit, **AdF conducted 223 audits to verify safety conditions and compliance with the Covid-19 regulations**, detecting 7 deviations concerning lack of documentation and no cases of procedural problems and/or lack of PPE; **GORI conducted 2,600 on site health and safety audits** and **Gesesa** carried out **24 inspections** at contractors' sites to check compliance with safety regulations and to identify and resolve anomalies.
The **Parent Company's Occupational Safety Unit** in turn organised **9 meetings** with technical directors and supervisors of **contractors** under contract with Acea SpA, during which it stressed the importance of **accident prevention**.

In 2020, the Investor Relations & Sustainability Department and the Occupational Safety Unit of the Parent Company, **in synergy with the parent company Units and the operating companies handling relations with suppliers** in various capacities launched a project titled "***Sustainability and safety, a virtuous pair***", which was further developed in 2021. The project aims to actively involve contractors working with Acea, urging them to conduct training sessions and in particular, **improve the process of collecting and reporting accident data.** Numerous meetings were held to this end during the year with the RSPPs of the Group companies, who are key players in the process of collecting data from contractors, in order to optimise the process, reach as many companies as possible and analyse increasingly complete data.
After the pilot survey carried out in 2020, to which 81 companies responded, **in 2021** all the Companies asked the companies that provided the main services during the year to complete questionnaires on the subject of safety in order to ascertain the level of internal control each company has and what accidents have occurred. **225 contractors responded** to the survey.
Analysis of the data showed that total of 31 accidents occurred in 2021, broken down into **occupational and non-occupational accidents**. Of these, 25 **professional accidents** occurred in the year to **contractor personnel working on Acea job**s, of which **7 for work-related travel** and **almost all (21) involving only minor personal injuries.**
There were **6 non-occupational accidents**, 5 of which involved minor injuries.
The **main causes of accidents** are due **to stumbling**, **bumping**, **slipping and road accidents**. The **frequency index** of total accidents is **12.44** and the **severity index is 0.38**. There were no fatal accidents.
Lastly, **no cases of occupational diseases** were recorded for contractors' staff during the year.
With a view to continuous improvement, analyses are under way to **identify the actions to be taken in order to standardise the process and involve as many of the Group's suppliers as possible**.

104 The Shared Protocol regulating measures to combat and contain the spread of the Covid-19 virus in workplaces was signed on 14 March 2020 by the trade unions and employers' organisations in agreement with the Government. It was further supplemented on 24 April 2020 and updated with the Protocol of 6 April 2021, for the duration of the emergency.

INVOLVEMENT OF SUPPLIERS IN OTHER SENSITIVE ISSUES

Some Group companies carry out activities from **involvement and awareness of suppliers** with respect to other aspects mainly concerning technological developments implemented in operating processes and Group guidelines, to ensure **constant alignment and adequate training of partners** working on behalf of the Company.
In 2021, **Areti** involved suppliers on the topics of 'mass replacement of 2G measuring units' and 'commercial quality and 2G metering' **providing 40 operators from the contracting companies** with a total of **560 hours of training** divided into 5 training sessions. In addition, **8 contractor operators** in the field of "Hammer meter readers - time meters received **8 hours of training**. The initiatives were carried out with the help of the supplier and 8 internal teachers, in full compliance with the anti-Covid-19 provisions for in-person training. The training venues were the Magliana training room and the "Cabin of the Future", a real electrical cabin specially set up for technical-operational training featuring some equipment and interactive panels.

Finally, every year **Acea Energia** monitors the **quality of the sales service provided by the door-to-door and/or telemarketing agencies** in the "domestic" and "micro-business" segments of the deregulated market, and in accordance with the Agency Mandate, **it trains those** who work in the name and on the behalf of Acea **so that they can convey adequate information** to customers (please also see the chapter on Customers). In 2021, Acea Energia notably carried out a **training programme**, providing **927 hours of training** in total, of which 427 hours were delivered to **551 door-to-door sellers**, for a total of 63 days, and 500 hours delivered to **teleselling agency workers**.

STAFF

ACEA'S EMPLOYEES

people with a **permanent contract: 98%**

women on the Acea **Board of Directors : 44.4%**

335 hires: 84% with permanent contracts and **39%** young people **under 30**

In 2021, the **company's total staff**[105] **numbered 6,466 people**.

Table no. 38 – Evolution of employees by macro-area (2019-2021)

business area	2019 (no. of employees)	2020 (no. of employees)	2021 (no. of employees)
Water	2,695	3,303	3,353
Energy Infrastructure	1,272	1,280	1,264
Generation	81	87	89
Energy (Commercial and Trading)	437	392	397
Environment	304	338	362
Engineering and Services	262	274	298
Corporate (Acea SpA)	665	700	703
total	**5,716**	**6,374**	**6,466**

(*) 2021 figures do not include the staff of Berg and Demap, totalling 33 people.

105 This chapter shows the data of the companies in the NFS scope (see *Communicating sustainability: methodological note*), with the exception of the companies in the FV area that have no staff, and the companies Berg and Demap, which are not managed centrally and have a low impact, as indicated in the text. The total workforce, for all the Companies within the consolidation, was 9,348 during the year (7,650 in 2020).

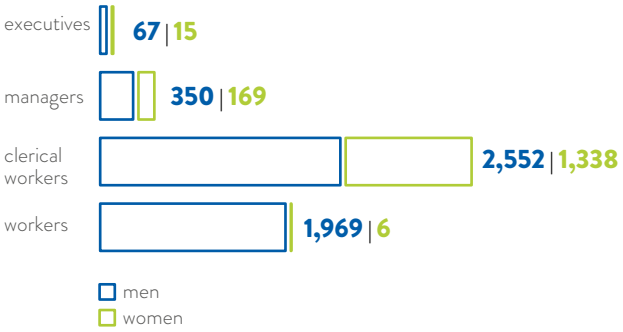
The Water Operations segment recorded the **highest numbers and accounts with 52% of the total**, in line with the number of Companies included and the percentage of business on the Group's operations. The **Energy Infrastructures** segment followed, which **represents 20% of the total figures**.
Except for the paragraph Protection of health and safety at work, the information and data set out below in the chapter do not include Berg and Demap, for which it was not possible to collect and process information at the closing date. However, as these companies are small, the number of employees is not very significant and does not change the data illustrating the overall characteristics of the Group's workforce.

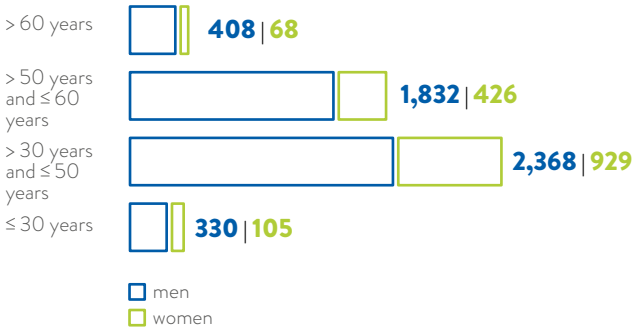
COMPOSITION AND TURNOVER

The Acea SpA Human Resources Management Department handles the **administration of the personnel** employed by the subsidiaries according to defined procedures. To this end, the Department uses computer systems (SAP HCM, SIPERT PY, Success Factor) operating at the Group level for the **management of employee records**, **salaries**, **merit plans**.

In terms of composition, **76% of the total staff consists of men**. This is caused by the fact that there are more men than women with technical skills in Italy today.
The **professional structure is stable** and is composed as follows: **60%** are **employees**, **31%** are **workers**, **8%** are **executives** and **1%** are **managers**.
7% of the workforce less than **30 years old**, **51%** is **between 30 and 50 years old** and **42%** of people are **over 50 years old**.
With regard to the **level of education**, we confirm **the steady increase of university graduates**, **who have increased to 27% of the total** (25% in 2020) and the **stability of diploma holders**, whose percentage remains around **50%** (for the above data, please see Chart no. 38 and Table no. 39).

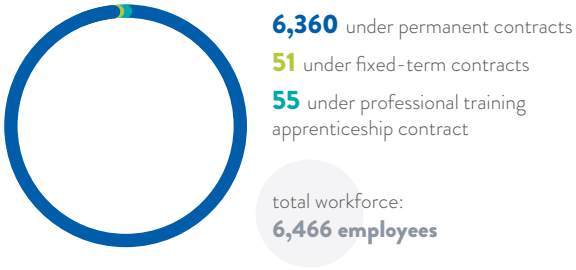
Chart no. 38 – Composition of the staff: gender, age and category (2021)

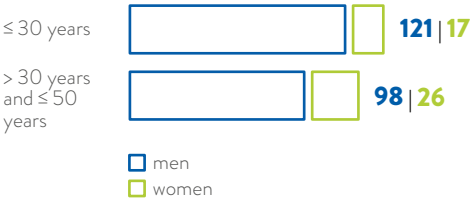




98% of the workforce are employed with **a permanent contract**, which is in line with 2020. The **length of the employment relationship** indicates the **stability of employment**: **47%** of the people who left during the year worked for the Group **for 30 to 50 years** and **53% up to 30 years** (please see Chart no. 39 and Table nos. 39 and 41).

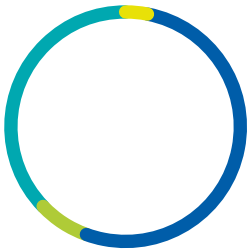
Chart no. 39 – Contract types and length of the employment relationship (2021)





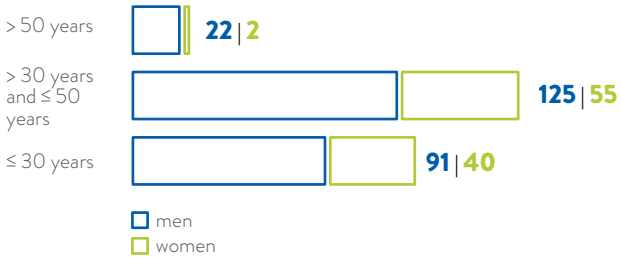
335 people joined the company in 2021 (238 men and 97 women), **84%** of whom on the basis of **open-ended contracts** divided into: 176 recruitments from the external labour market, 124 became permanent employees (including 21 young people who did internships or apprenticeships in the company), 24 were hired internally and 11 were granted apprenticeships (see chart no. 40 and table no. 41).
39% of newly hired staff during the year were **aged 30** or under.

CHART NO. 40 – Types of entries and age of the staff (2021)



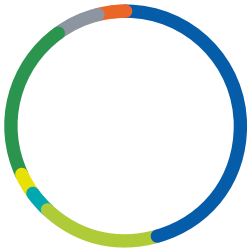
11 apprenticeships
176 hires
24 in-house hires
124 stabilisation

335 incoming employees



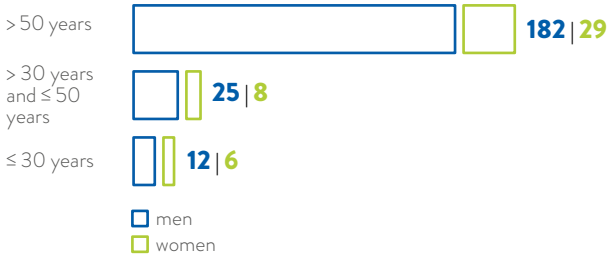
262 people left the company in 2021 (218 men and 44 women): 120 with a form of voluntary and incentivised early retirement, 43 as part of voluntary redundancy plans, with the agreed and incentivised termination of the employment contract, 10 retired, 57 resigned, 16 passed away, 8 had their contract expired and 8 were dismissed (see Chart no. 41 and Tables no. 41 and 42). **81% of the outgoing staff** was **over 50 years of age**.

Chart no. 41 – Types of exits and age of the staff (2021)



120 layoffs
43 early retirement
8 dismissal
8 contract expiry
57 resignation
16 death
10 retirement

262 exits

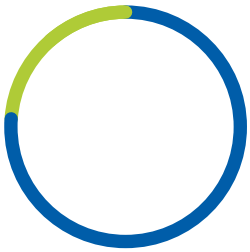


THE PRESENCE OF WOMEN IN ACEA

The **rate of turnover** was **9.2%** (9.21% for men and 9.16% for women), the **incoming rate** was **5.17%** (4.8% for men and 6.35% for women) and the **outgoing rate** was **4.04%** (4.41% for men and 2.81% for women) (see Table no. 40).

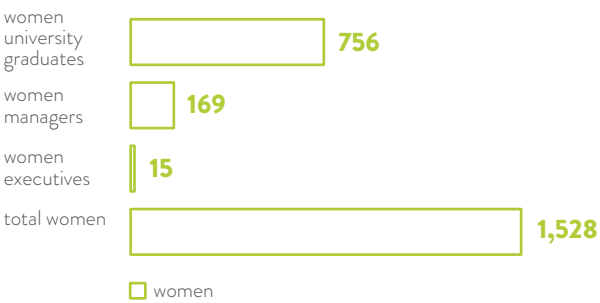
In 2021, Acea had **1,528** female workers (up 28% from 1,486 in 2020), representing **24% of the total workforce**.
The proportion of female executives as a percentage of total executives (15 out of 82) is equal to **18%**. **The percentage of women in managerial positions** is **33%** of the category (169 out of 519) (Chart no. 42, while **women accounted for 44%** (765 out of 1,741) of the **graduates** employed by the Group.

Chart no. 42 – Distribution of staff by gender (2021)



4,938 men
1,528 women

total workforce:
6,466 employees



A total of 61 women participate in the **corporate governance of the reporting companies** (Boards of Directors, Boards of Statutory Auditors and Supervisory Bodies), representing **34% of the total members** (in 2020, women in the governance bodies totalled 60, equal to 35%). In the Parent Company, **women** make up for **44.4%** of the members sitting on the **Board of Directors** (4 women out of 9 members) and **60%** of the members of the **Board of Auditors** (3 women out of 5 members, including 2 alternates), thus the company has exceeded the quotas imposed by legislation (Law 120/2011). We also report that every internal board committee includes one or more women, and that the Chair of the Control and Risks, Appointments and Remuneration, Ethics and Sustainability Committees is assigned to a female Director (see also *Corporate Identity*, section Corporate governance in Acea).

Chart no. 43 – Presence of women in the corporate governance bodies (2019-2021)

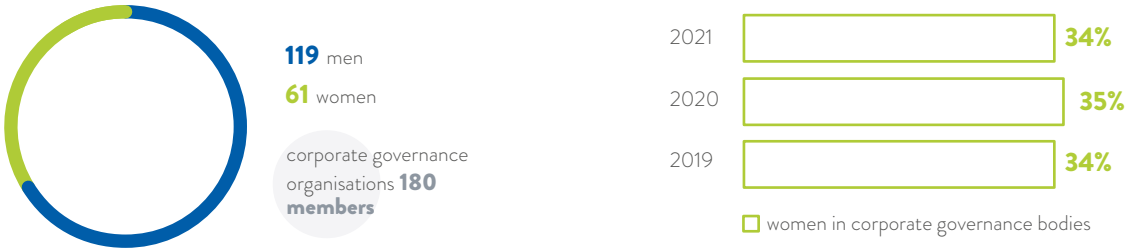


Table no. 39 – General personnel information (2019-2021)

u.m.	2019			2020			2021		
	men	women	total	men	women	total	men	women	total
COMPOSITION of the staff									
number									
executives	70	11	**81**	73	17	**90**	67	15	**82**
managers	311	137	**448**	341	150	**491**	350	169	**519**
clerical workers	2,293	1,133	**3,426**	2,517	1,295	**3,812**	2,552	1,338	**3,890**
workers	1,756	5	**1,761**	1,975	6	**1,981**	1,969	6	**1,975**
total	**4,430**	**1,286**	**5,716**	**4,906**	**1,468**	**6,374**	**4,938**	**1,528**	**6,466**
WOMEN IN ACEA									
%									
women out of the total workforce			**22**			**23**			**24**
female executives out of total executives			**14**			**19**			**18**
female managers out of total managers			**31**			**31**			**33**
female graduates out of total graduates			**43**			**43**			**44**
EDUCATION LEVEL OF THE PERSONNEL									
number									
university graduates	755	567	**1,322**	904	696	**1,600**	976	765	**1,741**
high school graduates	2,275	583	**2,858**	2,541	643	**3,184**	2,546	637	**3,183**
other qualifications	955	45	**1,000**	1018	55	**1,073**	999	57	**1,056**
not defined	445	91	**536**	443	74	**517**	417	69	**486**
total	**4,430**	**1,286**	**5,716**	**4,906**	**1,468**	**6,374**	**4,938**	**1,528**	**6,466**
AVERAGE STAFF AGE									
years									
average company age	48	45	**48**	48	45	**47**	48	45	**47**
average age of executives	53	51	**53**	53	51	**53**	53	52	**53**
average age of managers	51	49	**50**	51	49	**50**	51	49	**50**
average age of clerical workers	48	44	**47**	47	44	**46**	47	44	**46**
average age of workers	48	48	**48**	47	49	**47**	47	50	**47**

AVERAGE SENIORITY OF THE STAFF									
years									
average corporate seniority	17	15	**17**	16	14	**16**	16	14	**16**
average seniority of executives	17	16	**17**	17	16	**17**	17	17	**17**
average seniority of managers	20	18	**19**	19	18	**19**	19	17	**19**
average seniority of clerical workers	18	14	**17**	17	14	**16**	17	14	**16**
average seniority of workers	15	18	**15**	14	18	**14**	14	19	**14**
TYPE OF EMPLOYMENT CONTRACT									
number									
staff with permanent contract	4,327	1,256	**5,583**	4,783	1,435	**6,218**	4,859	1,501	**6,360**
(of which) part-time staff	*26*	95	***121***	*23*	*102*	***125***	*20*	*81*	***101***
permanent staff	27	8	**35**	69	19	**88**	40	11	**51**
staff under apprenticeship contracts	76	22	**98**	54	14	**68**	39	16	**55**
total	**4,430**	**1,286**	**5,716**	**4,906**	**1,468**	**6,374**	**4,938**	**1,528**	**6,466**

Table no. 40 – Movements of personnel (2019-2021)

u.m.	2019			2020			2021		
	men	women	**total**	men	women	**total**	men	women	**total**
INCOMING STAFF: CONTRACT TYPE									
number									
permanent	337	70	**407**	283	82	**365**	**201**	**82**	**283**
fixed-term	22	9	**31**	67	19	**86**	**32**	**9**	**41**
professional apprenticeship contracts	9	5	**14**	17	4	**21**	**5**	**6**	**11**
total	**368**	**84**	**452**	**367**	**105**	**472**	**238**	**97**	**335**
OUTGOING STAFF: REASONS									
layoffs	153	16	**169**	103	18	**121**	95	25	**120**
early retirement	46	7	**53**	35	5	**40**	41	2	**43**
retirement	2	1	**3**	10	0	**10**	10	0	**10**
terminations	7	3	**10**	8	0	**8**	8	0	**8**
other reasons (*)	29	9	**38**	47	9	**56**	65	16	**81**
total	**237**	**36**	**273**	**203**	**32**	**235**	219	43	**262**
TURNOVER RATES, INCOMING AND OUTGOING RATES BY AGE GROUP (**)									
%									
turnover rate	13.7	9.3	**12.7**	11.6	9.3	**11.1**	9.2	9.2	**9.2**
incoming rate	8.3	6.5	**7.9**	7.5	7.2	**7.4**	4.8	6.3	**5.2**
≤ 30 years	1.7	2.4	**1.9**	2.7	2.7	**2.7**	1.8	2.6	**2.0**
> 30 years and ≤ 50 years	4.7	3.7	**4.5**	3.8	4.1	**3.9**	2.5	3.6	**2.8**
> 50 years	1.9	0.4	**1.5**	1.0	0.4	**0.8**	0.4	0.1	**0.4**
outgoing rate	5.3	2.8	**4.8**	4.1	2.2	**3.7**	4.4	2.8	**4.0**
≤ 30 years	0.2	-	**0.1**	0.1	0.2	**0.1**	0.2	0.4	**0.3**
> 30 years and ≤ 50 years	0.4	0.5	**0.5**	0.4	0.4	**0.4**	0.5	0.5	**0.5**
> 50 years	4.8	2.3	**4.2**	3.6	1.6	**3.2**	3.7	1.9	**3.3**

(*) For 2021, the item includes: 16 deaths (not due to accidents at work), 57 resignations, and 8 contract expirations.
(**) The turnover rate is provided by the sum of hires and terminations of the year relative to the workforce at year end. The Companies to which the data refers are predominantly located in Lazio.

Table no. 41 – Age groups, employment contract length (2019-2021)

u.m.	2019			2020			2021		
	men	women	**total**	men	women	**total**	men	women	**total**
STAFF AGE GROUPS									
number									
≥ 25 years and ≤ 30 years	203	80	**283**	302	91	**393**	330	105	**435**
> 30 years and ≤ 50 years	2,166	789	**2,955**	2,384	900	**3,284**	2,368	929	**3,297**
> 50 years and ≤ 60 years	1,703	374	**2,077**	1,822	419	**2,241**	1,832	426	**2,258**
> 60 years	358	43	**401**	398	58	**456**	408	68	**476**
total	**4,430**	**1,286**	**5,716**	**4,906**	**1,468**	**6,374**	**4,938**	**1,528**	**6,466**
INCOMING STAFF: AGE GROUPS									
≤ 30 years	77	31	**108**	132	39	**171**	91	40	**131**
> 30 years and ≤ 50 years	208	48	**256**	188	60	**248**	125	55	**180**
> 50 years	83	5	**88**	47	6	**53**	22	2	**24**
total	**368**	**84**	**452**	**367**	**105**	**472**	**238**	**97**	**335**
OUTGOING STAFF: AGE GROUPS									
≤ 30 years	7	0	**7**	6	3	**9**	12	6	**18**
> 30 years and ≤ 50 years	19	7	**26**	18	6	**24**	25	8	**33**
> 50 years	211	29	**240**	179	23	**202**	182	29	**211**
total	**237**	**36**	**273**	**203**	**32**	**235**	**219**	**43**	**262**
DURATION OF THE EMPLOYMENT CONTRACT OF THE OUTGOING STAFF									
≤ 30 years	85	13	**98**	94	14	**108**	121	17	**138**
> 30 years and ≤ 50 years	152	23	**175**	109	18	**127**	98	26	**124**
total	**237**	**36**	**273**	**203**	**32**	**235**	**219**	**43**	**262**

HOURS WORKED, SALARY AND PENSION FUNDS

HOURS WORKED IN ACEA

Acea works in compliance with labour legislation and in accordance with the National Collective Bargaining Agreements of reference, with a particular focus on cases relating to working hours and the duration of work, minimum guaranteed wages, age categories and restrictions on the use of legal child labour, proper management of disadvantaged categories.

Following the continuation of the Covid-19 health emergency, in line with the security measures imposed at government level, Acea has maintained **remote working** as the main working method, mainly for staff with administrative profiles.

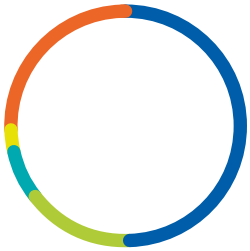
Hours worked in the year, **ordinary and overtime**, excluding managers, amounted to **10,807,931 hours** of which **78% by male staff** (8,436,103 hours), due to the higher proportion of men in the company's workforce (76% of the total).

Analysing the overtime **hours**, **the influence of gender** is even more evident: **96% of overtime is in fact attributable to men** and **only 4% to women** (please also see the sub-paragraph Remuneration).

Days of absence totalled 82,254, **mainly due to** illness, **leave** (for reasons of study, health, etc.), **maternity/paternity leave**, **trade union and other reasons** (study, health, generic) (see Chart no. 44 and Table no. 42).

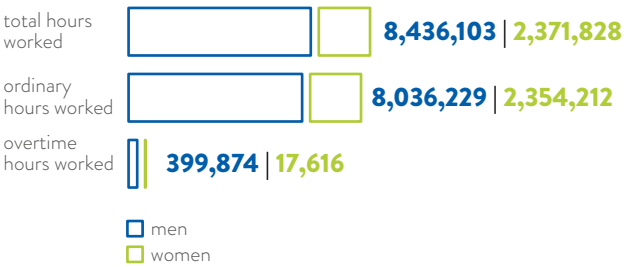
The **absenteeism rate for the year was 2.7%** (3% for men and 2% for women), down from 3% in 2020.

Chart no. 44 – Hours worked by the staff and absences (2021)



40,736 sick leaves
12,370 maternity/paternity leaves
5,811 trade union meeting leaves and strikes
2,430 leaves of absence
20,907 various other leaves (study, health, mourning, etc.)

total absences in days: **82,254**



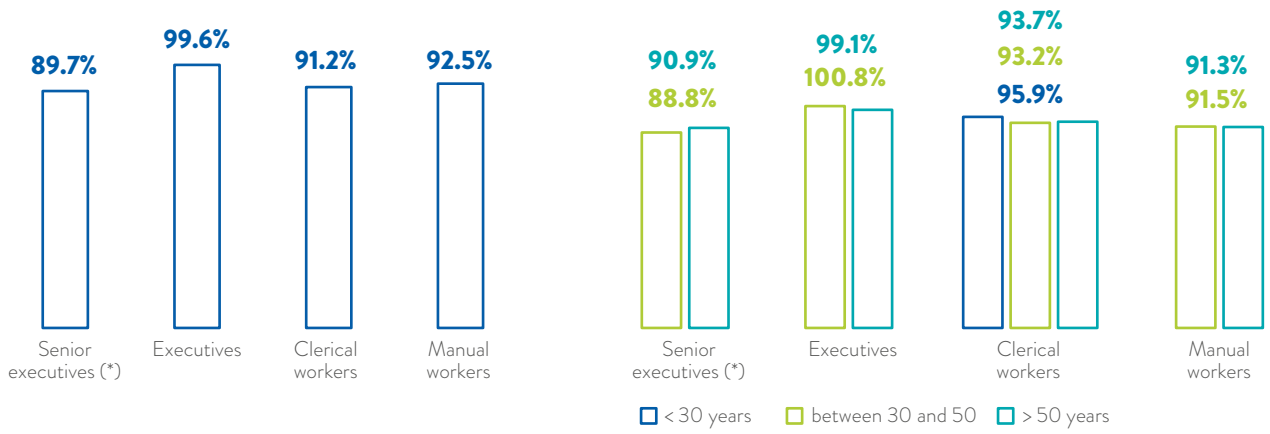
In addition to leave, staff can access reduced working hours, in accordance with the terms defined by the company: in 2021, **part-time** staff amounted to around **1.6% of total staff**.
For managers **and stage-three workers**, independent scheduling is permitted, which allows the "personalized" management of work **schedules**, in compliance with contractual provisions.
For **employees with a "fixed schedule"**, arrival and departure **flexibility** is permitted, according to established slots, and **a total number of monthly hours of leave** can be used during the times established.
Remote working is an agile and flexible working method that Acea has adopted on an experimental basis since 2018 to promote work-life balance; because of this choice, **the company was able to reorganise its working methods as from the start of the pandemic emergency**, **which continued into 2021**, by placing most of its staff into remote working mode (see also the section on Staff development and communication).

SALARIES

The **wages** that Acea pays its employees, excluding executives and top management, are determined by applying the **National Collective Bargaining Agreements** (CCNL) of reference, which ensure the minimum salary levels according to professional categories.

The company also adopts a **remuneration policy** that applies **merit-based principles** to the fixed and variable components of the remuneration, determining remuneration that is above the minimum salaries set by the National Collective Bargaining Agreements.
The **percentage weight of gross average effective remuneration of women**, including fixed and variable components, **as compared to that of men** shows that for executives, the pay gap is the highest and amounts to 10.3%, in favour of men; for middle managers, women's and men's salaries are essentially aligned and men receive only 0.4% more remuneration than women; for clerks and manual workers, the pay gap is 8.8% and 7.5% respectively, again in favour of men, due to the fact that activities with higher additional remuneration (on-call, shifts, allowances, overtime, etc.) are mainly carried out by men.
Breaking down the data further **by age group**: the pay gap narrows slightly for female managers over 50, who accrue more variable elements of their pay over time; female executives aged between 30 and 50 receive pay that is 0.8% higher than that of men in the same age bracket; finally, the pay gap narrows, in particular, for female employees under the age of 30, demonstrating that the remuneration for the new and more qualified jobs required by the company are more uniform from a gender perspective (see chart no. 45 and table no. 42).

Chart no. 45 – Women's pay as a percentage of men's pay by qualification and age group (2021)



(*) The item does not include senior managers benefiting from the *Long Term Incentive Plan (LTIP)*.

PENSION FUNDS AND DEFINED CONTRIBUTION PLANS

Supplementary pensions are a form of **voluntary contribution** aimed at generating income that is supplementary to the pension, the amounts paid by workers being invested in the financial market by specialized operators.
The pension funds of reference for Acea staff are: **Previndai**, reserved for executives, and **Pegaso** (managed jointly by Utilitalia and Trade Union Organisations) for non-management staff, to whom the National Collective Bargaining Agreements of the electrical and gas-water segments apply.
The **Pegaso Fund** adopted a 2019-2021 Strategic Plan that illustrates the **organisation's management guidelines**, **including instruments for measuring ESG factors** (environmental, social and governance).
There were **2,973 Pegaso members among the Acea employees** in the year, a slight increase on 2020 (2,909 members). By analysing the distribution by gender of the members, **76% are men** and **24% are women** (please see Table no. 42). The company paid about € 6 million in severance pay to the fund and about € 2.1 million in supplementary contributions; for some years it has been possible to pay part or all of the performance bonus into the fund, benefiting from an additional share paid by the company.

Table no. 42 – Hours worked, absences, remuneration and members of the supplemental pension fund (2019-2021)

u.m.	2019			2020			2021		
	men	women	total	men	women	total	men	women	total
HOURS WORKED BY THE STAFF									
hours									
regular	6,250,724	1,941,510	**8,192,234**	7,771,112	2,256,024	**10,027,137**	8,036,229	2,354,212	**10.390441**
overtime	369,398	29,464	**398,862**	399,694	14,871	**414,565**	399,874	17,616	**417,489**
total hours worked	**6,620,122**	**1,970,974**	**8,591,096**	**8,170,806**	**2,270,896**	**10,441,702**	**8,436,103**	**2,371,828**	**10,807,931**
TYPE OF ABSENCES									
days									
sick leave	29,279	10,969	**40,248**	35,163	7,815	**42,978**	33,518	7,218	**40,736**
maternity/paternity	1,118	9,278	**10,396**	1,499	7,929	**9,428**	1,730	10,640	**12,370**
strike	82	28	**110**	0	0	**0**	1,159	257	**1,416**
trade union leave	5,159	584	**5,743**	3,756	377	**4,133**	3,996	399	**4,395**
leave of absence	1,313	379	**1,692**	2,015	734	**2,749**	1,617	813	**2,430**
miscellaneous leave (study, health, bereavement and general reasons)	15,631	8,022	**23,653**	18,402	5,378	**23,780**	16,157	4,750	**20,907**
Total absences (not incl. holidays and accidents)	**52,582**	**29,260**	**81,842**	**60,835**	**22,233**	**83,068**	**58,177**	**24,077**	**82,254**
AVERAGE GROSS FEMALE PAY AS A PERCENTAGE OF MALE PAY BY QUALIFICATION (*)									
%									
executives		96.2			98.2			**89.7**	
managers		97.1			98.2			**99.6**	
clerical workers		87.6			87.8			**91.2**	
workers		99.6			94.6			**92.5**	
AGE GROUPS AND GENDER OF THE EMPLOYEES ENROLLED IN THE PEGASO FUND									
number									
≤ 25 years	20	0	**20**	32	0	**32**	56	3	**59**
> 25 years and ≤ 30 years	65	26	**91**	92	25	**117**	103	29	**132**
> 30 years and ≤ 35 years	126	66	**192**	143	70	**213**	155	76	**231**
> 35 years and ≤ 40 years	186	88	**274**	202	103	**305**	224	90	**314**
> 40 years and ≤ 45 years	249	78	**327**	261	89	**350**	258	99	**357**
> 45 years and ≤ 50 years	320	105	**425**	293	101	**394**	293	96	**389**
> 50 years and ≤ 55 years	469	136	**605**	466	144	**610**	454	154	**608**
> 55 years and ≤ 60 years	423	119	**542**	440	112	**552**	434	102	**536**
> 60 years	293	49	**342**	276	60	**336**	276	71	**347**
total	**2,151**	**667**	**2,818**	**2,205**	**704**	**2,909**	**2,253**	**720**	**2,973**

(*) 2019 and 2020 data do not include AdF and GORI.

INDUSTRIAL RELATIONS

68% of employees are **union members**

Agreement signed with **trade unions** regarding the **Isopension plan**

Agreement signed on **funded training** to enhance **company know-how**

Acea applies the **Single Contract for the electricity sector** and the **Single Contract for the gas-water** sector. **All the workers** are therefore **covered by national collective bargaining agreements**.
In 2021, **unionisation** was around **68%**. There are 273 employees who hold **management or trade union representation positions**; of these, **19 hold positions of Workers' Safety Representatives** (RLS), designated following an agreement.
The **Labour-Management Relations Unit** of the Parent Company (Human Resources Function) **oversees the company's policies regarding trade union relations**, ensuring consistency with the Group's objectives. The discussions on the specific corporate requirements are conducted within the framework of national collective bargaining (CCNL) at the sector level, and between companies and internal employee representatives.
The **Labour-Management Relations Model** applied in Acea defines a **system of high-profile trade union relations** based on **bilateral agreements and participation**, combining **business objectives and social demands**.
The **Labour-Management Relations Protocol** structures the system of union participation and dialogue on **three levels** – Group, industrial segment and corporate – and provides for **several areas of comparison**: economic and financial performance, employment policies, selection, promotion, development and training of staff, occupational safety, corporate welfare, promotion of diversity & inclusion; industrial policy and investment plans; performance bonus, organisation of working hours, technical and specialized training and professional development.
Acea also has a **consultation procedure for workers**, that can be applied directly or through their representatives. It covers issues such as **occupational safety**, **respect for the environment and sustainable development of production activities** and, in order to favour the involvement of employees in trade union relations activities, it has set up a **dedicated e-mail address**.
There are also **Bilateral Commissions**, composed of company representatives and employees, **who express their opinions on key issues**, **such as training**, **smart working**, **corporate welfare and occupational health and safety.**
The company promotes the models for participation in Trade Unions, such as **Unitary Trade Union Representations** (RSU) and Workers for Safety and the Environment (RLSA).

In 2021 Acea signed several **agreements** with the trade unions (OO. SS.), **concerning the organisation of work and the management of health emergencies**, **funded training and the performance bonus**.
In particular, with the Agreement of 26 March 2021, **front-end workers at Acea Energia** were able to carry out their work activities remotely, through the **activation of a digital work tool**, thus guaranteeing the provision of services to customers, even in an emergency.
Agreements on measures to contain and combat Covid-19 were confirmed and renewed in line with the provisions of the National Protocols, **the regulation concerning remote working in emergencies**, **flexible working time and remote learning** which are designed to allow work to continue safely and with organisational flexibility.
In line with the provisions of the **Agreement regulating what is known as the "Isopension"** [early retirement] signed last year, in 2021 the agreement regulating the **Plan implementation criteria** for employees who become eligible for early retirement as of 1 August 2022 was signed, in part to manage generational turnover.
In July, Acea signed a **protocol on diversity & inclusion** with the trade union, which emphasises the centrality of the **principles of gender equality**, **social inclusion**, **combating all forms of discrimination and valuing diversity** (see also paragraph Diversity, inclusion and welfare).
Moreover, in implementation of the provisions of the Agreement of 23 December 2020 concerning the **New Skills Fund** during the year, **a training project was implemented to broaden and reconfigure staff skills**, due to the introduction of organisational and technological innovations and the related need for retraining the introduction of organisational and technological innovations and the related need for professional retraining. Also, **a funded training agreement was concluded** aimed at strengthening the Company's know how while increasing the level of satisfaction and motivation of workers, enriching their professional skills (see also the section on Development and human resources communication).
Finally, the **Group Agreement on the Performance Bonus** for the three-year period **2021 to 2023** is particularly noteworthy. It allows employees to convert the amount of the bonus into "welfare credit".

As regards the **information notice to the employees regarding possible organisational changes or corporate reorganisations that effect employment relations**, Acea takes different positions depending on the situations explained below:

1. **Organisational changes**: in the event of establishment of new Units or changes in assignments or responsibilities, the Human Resources Department issues an Organisational Provision and

sends a communication to the competent functions, which post it on the bulletin board and the company intranet. In the event of organisational changes that affect the staff, the trade union representatives are informed. If they concern a single employee (change in workplace, schedules, etc.), they are notified by the Human Resources Unit of the person's Company;

2. **Corporate reorganisations**: in the event of reorganisation, as a result of significant organisational and production changes, with effects on working conditions and employment, the methods of informing the employees and the Trade Union Representatives, are regulated by the CCNL applied in the Group and by the Labour-Management Relations Protocols;
3. **corporate transformations** (such as alienations, mergers, acquisitions, transfers of company branches): in cases of corporate transformation, the notices to the employees are regulated by the legislation in force[106], which anticipates information obligations towards employees that allows them to verify the business reasons for the transactions, the correct methods of the process and the consequences on the employment relationship.

DISPUTES WITH EMPLOYEES AND TRADE UNIONS

The labour disputes in Acea mainly concern **dismissals**, **classification changes**, **differences in remuneration**, **indemnities not received**, **demotions**, **harassment and employment relationships.**

In 2021, there were **23 new labour disputes** (46 in 2020), most of which were **initiated by employees of the Companies**. A total of **76** labour disputes were pending as at 31 December 2021 - including those initiated in previous years.

OCCUPATIONAL HEALTH AND SAFETY

Acea sets up a Covid-19 **vaccination hub** **at its corporate site**, open to all citizens

Acea Energia and **Acea Elabori** achieve **Biosafety Trust Certification** for infection prevention and control

over **58,600** **hours of training** on occupational health and safety **provided to staff**

The **accident indices** were essentially stable: **FI 5.09 and SI 0.20**

Acea is committed to a **widespread safety culture** both in Group Companies, through the direct involvement of employees, and along the supply chain (please see the Suppliers chapter).
Safety management is structured at the organisational level and all Companies for which the parent company considers certification important, due to the size of the workforce and the type of activities carried out, have implemented **Certified Management Systems**[107] (please also see the *Corporate Identity*, Corporate Governance and Management Systems chapter).
The Occupational Safety Unit of the parent company is in charge of the coordination and direction in this area, monitoring the companies on the application of legislation, guidelines and company policies.

Each Group Company **has direct responsibility for the operational management of safety** and takes care of **training the personnel**, **monitoring accidents** and assessing the **risks to the workers**, preparing the **Risk Assessment Document** (RAD). Following these activities, the **Occupational Safety Unit prepares** a **centralised** annual **accident report** for Group Companies.
The analysis method of the accidents follows the **Guidelines for the classification of accidents**, prepared by Utilitalia and in compliance with the **standard UNI 7249/95**, with reference to the INAIL measurement criteria and the instructions of ESAW (European Statistics of Accidents at Work).
In accordance with the law, Acea **identifies the dangers present in the company's activities** which may cause injury or illness through

106 Article 2112 of the Italian Civil Code and Article 47 of Law 428/90 as subsequently amended and supplemented.
107 Companies with seconded or no staff are therefore excluded.

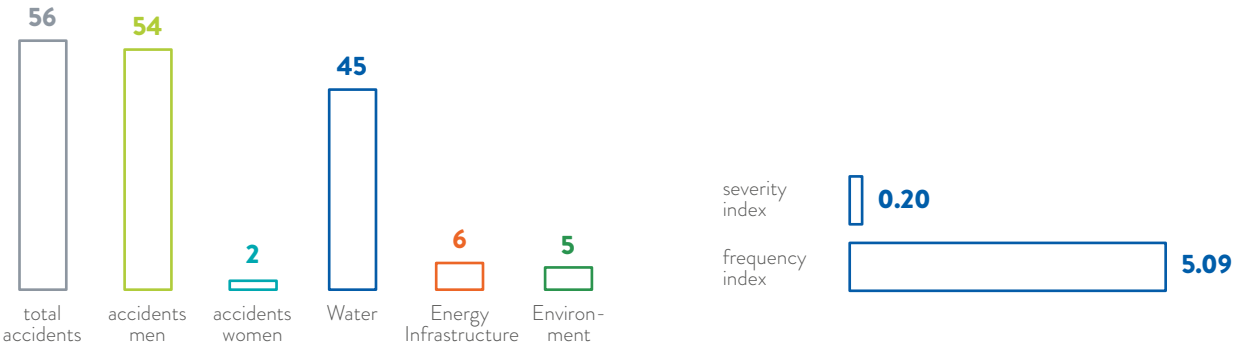
inspections carried out jointly in the workplace by the **Head of the Prevention and Protection Service (RSPP),** the Company Physician, the **Workers' Safety Representatives** (RLS) and the Unit Heads, who are involved from time to time. Then the company assesses the risks to workers' health and safety in relation to the hazards detected in the workplace, verifies the possibility of eliminating them, adopts **preventative and/or protection measures** to implement to keep the risks under control and draws up the Risk Evaluation Document (RAD). In the case of accidents, an investigation is launched to determine the causes of the event and identify appropriate corrective actions to prevent it recurring.
With a view to **constantly improving the operational management of occupational safety**, Acea has developed **Group Safety Guidelines** and a **HSE (Health, Safety, Environmental) Dashboard** to measure and monitor performance data, also in relation to sector benchmarks, and to implement improvement measures.

To **manage the emergency situation that continued in 2021**, in accordance with regulatory provisions, Acea continued to share the prevention and protection initiatives against coronavirus with the **Group Workers' Safety Representatives** (RLS) and the **Group RSPP (Prevention and Protection Service Manager) Coordination Committee**.

Acea is certified according to the **Biosafety Trust Certification** management system (see also Corporate Identity in chapter Corporate Governance and Management Systems) and, as required by the certification, has set up the **Committee for the prevention and management of Coronavirus and other infections.** This Committee is composed of the Competent Doctor and the main Acea Functions and its purpose is to coordinate infection prevention and management activities, monitor the epidemiological context, and take the necessary actions to counter the emergency.
In addition, Acea SpA and the other Group companies have constantly **updated their relevant risk assessment documents (RAD) in accordance with the provisions of the measures to combat the spread of the coronavirus.**

In 2021 the **number of accidents increased slightly** compared to compared to last year: **56 accidents** (51 in 2020) **occurred in the course of work activity** and **19** while commuting from home-work[108]; the accident rates have **essentially remained stable**: the **frequency index** is equal to **5.09** and that **severity index** stands at **0.20** (see chart no. 46 and table no. 43). All the accidents involved **minor injuries**, 34 were **"occupational" accidents and 22 were "non-occupational"**. The **main causes of injury** are: tripping, hitting, slipping, cutting, crushing, falling from heights, animal bites and insect bites.

Chart no. 46 – Accidents and indices by gender and business area (2021)



NOTE: Male frequency index **4.91** and female frequency index **0.18**; male severity index **0.19** and female severity index **0.01**. The graph shows only those business areas that reported accidents during the year.

Analysing the **breakdown of accidents by gender** (net of accidents occurring during commutes) shows that **54 accidents involved male personnel** of which 44 were blue collar workers, 9 white collar workers and 1 manager, and **2 accidents occurred to female staff** with an administrative profile.
The companies with the highest number of accidents, not including those occurring during commutes, are: Acea Ato 2 (16 accidents), GORI (15 accidents) and AdF (7 accidents), which naturally have **greater exposure to the risk** of accidents in relation to the type of activity performed.

Acea has implemented and maintained multiple prevention and protection measures to contain contagions in view of the continuing Covid-19 pandemic emergency in 2021. In particular, the company has:

- **kept up-to-date the Circulars**, **internal Guidelines and Health Protocols** drawn up by the Competent Doctors and the **Protocol for the Management of Covid-19 cases** in the company;
- **revised the Risk Assessment Document**, with the new assessment of the biological risk related to the Sars-Cov-2 virus, and the **emergency plans**;
- implemented new prevention and protection measures;
- organised **screening campaigns for employees and the staff of contractors**;
- planned **information and training courses for all employees and set up dedicated communication channels.**

In order to make the working environment safe, Acea has **reorganised the way people access company premises** and consolidated the **procedures for the management of common spaces** planning attendance through the Acea4You app platform, **intensifying the**

108 Accidents *during commutes* relate to travel from home to work and from work to home, using private or company vehicles, which take place outside of working hours, as established by the relevant Federutility note. They are not included in the calculation of accident indices used herein.

cleaning, **sanitation and sterilisation shifts in the workplace**, **installing thermoscanners for measuring body temperature at entrances and sanitizing films that reduce the bacterial load** were placed on lift buttons and food and drink dispensers, bathroom handles and on staircase handrails, and **multi-layered antibacterial mats** for shoe soles were placed at the entrances.
Operational staff, who continued to provide services in the field and in contact with the public, were given specific **personal protective equipment (PPE)** and provided **with information sessions** on their correct use.
Lastly, with a view to providing staff with health prevention tools, the company implemented a **flu vaccination campaign** aimed at employees and the **family members who live with them**.
Acea has also offered **serological tests for detection of Spike protein antibodies** to all employees; testing is on a voluntary basis and about 3,000 people have participated; at the company's Medical Centre, Acea has provided **chromatography tests for the qualitative detection of the virus in saliva samples** and has activated an agreement with the **Policlinico Gemelli** and the **Paideia Clinic**, **reserved for staff and relatives**, **to perform molecular swabs and rapid antigen swabs.**
Finally, the company has maintained its **Covid-19 insurance policy** in 2021 to provide personnel infected with Covid-19 with adequate insurance cover, including for their families.

In 2021 Acea implemented an important initiative to help fight the Covid-19 pandemic: **the activation of the Vaccine Hub** (see box).

ACEA VACCINE HUB

In May 2021 in collaboration with the Covid Crisis Unit of the Lazio Region and ASL Roma 1, Acea was the **first Italian multi-utility company to set up a vaccination centre**, **open to the local area and citizens**, at one of its corporate headquarters and made a concrete contribution to the national and regional vaccination campaign.
Acea's Occupational Safety Unit was directly involved in the **design and commissioning of the facility**, which is situated on company premises, planned and implemented the actions necessary to set up the vaccination centre.
The Vaccination Centre is equipped with **26 stations that handle incoming patients**, **15 vaccination lines**, **over 60 observation stations and medical and nursing staff**, employed under an agreement with the Paideia Clinic.
More than **140,000 doses of Covid-19 vaccine were administered at the Acea Vaccine Hub**, **from May to December 2021**.

The Parent Company's **Occupational Safety Unit** is also tasked with promoting healthy working environments and **mitigating work-related stress**. In 2021, special care was devoted to staff in psycho-physically fragile conditions, accentuated by the pandemic, with the activation of the **I Care project**. Specifically, the project involved **48 women** who are unit managers of Acea SpA, in the programme **I Care** programme for individual and professional well-being, **52 men** Acea SpA Unit managers in the programme **Actions and Reactions** and, in the final phase of the programmes, their staff and other professionals were involved too.
In the last two months of the year, the 100 people hired participated in the final phase of the project and were included in **Acea's We-Care programme for men and women**, working both on recognising signs of stress and on the metaphor of the emergency, the pandemic in particular, to share how communication management not only improves the working climate but is an indispensable tool for positively directing behaviour.
The three paths, implemented in 2021, represent the first risk mitigation of work-related stress experience designed by Acea SpA, which will lead to other initiatives aimed at listening and responding to the needs related to the provision of support, including psychological support in the workplace.

The Group Companies train workers and supervisory staff **regarding occupational health and safety** in compliance with current legislation (please also see the sub-paragraph below Staff training and development).
Also in 2021, the training provided by Group Companies in partnership with the activities carried out by the Parent Company were mainly focused on the measures adopted to prevent the spread of Covid-19 and this was done via **e-learning** with *ad hoc* training videos and tutorials.

Below are some initiatives carried out:

- **Acea SpA** organised and delivered the in-house training course **Sars-Cov2 - Insights and aspects of biosafety and occupational medicine**, which trained **669 people** on: biological risk, chemical risk, biosafety, occupational medicine and hygiene, vaccines and prevention, and diagnostic tests. In addition, in order to raise employees' awareness on how to behave in case of emergency, the course "**Emergency Management - Knowledge and Awareness**" was delivered, involving **232 people**. The course, divided into 4 sessions, also dealt with the theme of "**Emergency and Disability**", illustrating the most effective assistance techniques to manage the different types of disabilities (motor, sensory, cognitive) in case of evacuation, also making participants aware of the attention paid to temporary disabilities;
- **Acea Ato 2** launched the ***Camper della Sicurezza*** [Safety Camper] project, which enabled the widespread promotion of the culture of safety in the workplace, through mobile initiatives carried out at all of the company's workplaces and construction sites; finally, with reference to the management of the health emergency, Acea Ato 2 set up the **Committee for the management of measures to prevent the Covid-19 virus,** a special body whose objective is to monitor the epidemiological situation and supervise the evolution of the emergency situation;
- Through the activities of the internal Coronavirus Prevention Committee, **Acea Ato 5** organised an **information campaign on the evolution of the pandemic situation and the expected correct behaviour**, which was aimed at staff, It also carried out the **Reset 2.0 project**, with meetings **aimed at all operational staff**, aimed at verifying the skills acquired and sharing issues relating to health and safety at work. Finally, specific training was provided on the use of multi-gas detector calibration stations, an activity that was fully in-sourced in 2021;

- **AdF** provided **safety education and training**, in particular, for operational staff (45 people were provided with 180 hours of training) who were trained in the use of new **recovery devices for interventions in confined environments,** used for cleaning and restoration of drinking water accumulations;
- **Acea Ambiente** disseminated informative **videos about anti-Covid measures at some of its facilities and provided e-learning training for Covid-19**;
- **Areti** continued staff training at its **Training Camp**, albeit reorganising in accordance with the new rules imposed by the pandemic, a **space dedicated** to training **on workplace health and safety**, (safe ascent/descent on medium and low voltage power line poles; safe access to confined underground areas; the use of work/safety tools, training for emergencies in a dangerous environment, etc.). The Company has organised a **training course on electrical risk**, carried out internally through the Training camp with the collaboration of external certified and qualified training organisations, and a **training course on occupational safety** for all operational employees. In 2021, the Company provided a total of **16,610 hours of education and training in the field of safety at work**, involving **1,092 people**;
- **Acea Energia** has carried out drills, with the participation of emergency workers, for the management of the suspected Covid case in the company. In 2021, as a further measure to combat the health emergency, the **Company obtained Biosafety Trust Certification**, implementing an infection prevention and control management system and setting up a **Committee dedicated to the prevention of Coronavirus and other Infections**; a **Coronavirus Emergency Handbook** was also drawn up and distributed to the entire company population by e-mail;
- **Acea Innovation** trained **17 people on safety** (high and medium risk work, first aid and electrical risk), providing a total of **260 hours of training**;
- **Acea Elabori** provided a total of **3,637 hours of education and training in the field of safety at work**, involving **318 people**; In particular, courses were organised to **update safety coordinators at temporary and mobile sites (CSE and CSP)**, **fire prevention officers (ASA) – also for high risk – and first aid officers (APS)**, and **training was provided on confined spaces and chemical and biological risks** for the staff of the Laboratory and Research Unit. In addition, in order to obtain **Biosafety Trust certification (achieved at the end of the year)**, **specific training** was carried out to monitor the procedures adopted for infection prevention and control;
- In addition to continuing the training of transport (particularly road) staff, **Aquaser organised safety training courses for operational transport staff and technical-administrative staff;**
- In 2021, GORI implemented the ***Well at Work*** **project**, **aimed at the entire company population**, in particular personnel working remotely who are more exposed to stress and the adoption of sedentary and unhealthy habits and lifestyles, which included the organisation of two training modules focusing on stress/posture and addictions/nutrition. Thanks to this training initiative, the company was one of the eight finalists in the Well@Work 2021 - Charge the Energy contest, organised by the Human Resources Community (HRC), in which more than 60 companies of national significance participated;
- **Gesesa conducted 9 training courses on occupational safety**, **with a total of 628 hours of training provided and 48 people involved.** In regard to the health emergency, all staff received periodic updates on the evolution of the pandemic situation and were informed about safety measures and conduct required to avoid an increase in contagions in the company. Gesesa has also set up a **dedicated screening plan**, offering staff the opportunity to undergo periodic molecular or antigen based swabs at a centre that has an agreement with the company.

Over 58,600 total hours of training were provided to Group personnel in the field of occupational safety in 2021.

Table no. 43 – Health and Safety (2019-2021)

number	2019	2020	2021
ACCIDENT BREAKDOWN BY BUSINESS AREA			
Water	70	31	45
Energy Infrastructure	16	13	6
Generation	0	0	0
Energy (Commercial and Trading)	0	0	0
Environment	4	4	5
Engineering and Services	3	2	0
Corporate (Acea SpA)	2	1	0
total	**95**	**51**	**56**
ACCIDENT INDICES			
total days of absence	2,884	2,044	2,195
Frequency Index (FI) (number of accidents per 1,000,000/working hours)(*)	**9.74**	**4.84**	**5.09**
Severity Index (SI) (days of absence per 1,000/working hours)(*)	**0.30**	**0.19**	**0.20**

(*) the hours worked used to calculate the accident indices differ from the hours worked illustrated in the sub-section *Hours worked in Acea*; the two processes meet different operational requirements and specific calculation parameters are applied to each.

NOTE: The Water Operations area includes 5 companies, the Energy Infrastructure area 1, the Generation area 3, the Energy area 3, the Environment area 5, the Engineering and Services area 1 and the Corporate area 1. The data in the table does not include accidents *currently being assessed*.

HEALTH MONITORING

Health monitoring, regulated by **a company procedure** that defines its **planning and management**, is carried out **in cooperation with external professionals** in compliance with current legislation (art. 41 of Legislative Decree no. 81/08).

Formally appointed doctors conduct medical examinations prior to employment, **in the event of a position change**, **periodically** according to health protocols, **at the worker's request** and **prior to resumption of work** following absence for health reasons lasting more than 60 continuous days.

Workers **exposed to specific risks** are included in a **targeted check-up programme**.

In collaboration with the employers and the relevant Protection and Prevention Service Managers (RSPPs), the **Competent Doctors define health protocols** according to the workers' exposure to the various risks and **draw up those to be implemented at the Group companies**.

At the headquarters a **First Aid Office** provides staff and visitors with first aid in the event of illness; since December, the first aid service is available from 08.00 to 20.00.

In 2021, there were **4,245 medical appointments** provided to the same number of employees of Group companies for whom the occupational medicine service is managed centrally by Acea SpA, for

a total economic value of approximately € 440,000 (including the amount relating to the company's first aid service and that relating to analyses and specialist visits carried out at the Pigafetta and Marilab CDO centres).
Health monitoring includes the **prevention of occupational diseases** that workers may contract due to **prolonged exposure to the risk factors** existing in the work environment. In the context of the work performed by the companies of the Group, for which Acea provides the health monitoring service, **there are no risk profiles likely to cause occupational diseases**. The competent doctor has the task of cooperating with the employer in order to define preventive measures and health protocols for the risk profiles associated with specific duties, and monitoring any damage to workers' health, issuing suitability assessments, and applying limitations and prescriptions, where necessary, in order to prevent possible occupational diseases. In 2021, in Acea, **there were no reports of suspected occupational diseases**.

HUMAN RESOURCE DEVELOPMENT AND COMMUNICATIONS

Acea participates in the ***DNA Inclusive Job Day***: matching job supply and demand for people from protected categories

The ***Talent Day*** and the ***Talent Graduate Program*** for the selection of young graduates in economics and STEM disciplines

The Acea Business Model: key behaviours for the success of the organisation

Adopted the new ***Long Term Incentive Plan*** *(LTIP)* introducing a composite sustainability indicator

The pandemic continued in 2021 as did its impact on society and more particularly, work. Acea has continued to provide its people with **working methods and tools adapted to their specific working and living conditions** with the objective of **preserving people's involvement in the Group's identity**, developing skills through remote training and ensuring **organisational well-being** through targeted initiatives.
As mentioned, **remote working has prevailed**, thanks to the **digitalisation of business processes and the Teams digital workspace platform**.

STAFF SELECTION

The **selection process** is regulated by a **Group procedure that was updated in 2021**, which governs the search for skills in the labour market. In particular, **the format for drafting job descriptions has been rendered more effective insofar as describing the job opportunities offered by Acea** and a declaration has been added regarding the **promotion of and respect for the principles of diversity & inclusion in selection processes.**
Acea further **strengthened its recruiting network**, with a major focus on **social media channels. In 2021**, **267 searches for personnel took place,** in an effort to cover more than 400 positions. A significant number of these positions were published on the institutional website and **concerned individual or group profiles for one or more positions within Group companies**, **involving about 25,000 candidates.**
The selection process can include **several stages depending on the specifics of the search**: CV screening, online challenges using gamification (technical quizzes and business games to assess numerical reasoning, verbal ability, visual-spatial skills, logic), video interviews, assessment of soft skills, motivation and skills through collective tests and individual interviews. During the year, **new tools were developed and used to digitise and improve the selection process**, both in the CV screening phase through the implementation of a dedicated system which, thanks to artificial intelligence, supports and speeds up the decision-making process of the Group's recruiters, and in the recruiting phase recruiting through the use of personality tests based on the Acea Leadership model, digital mindset tests and video interviews to render the in-depth screening of candidates more effective and faster.
The security measures taken **required selection activities to be carried out digitally**, **while respecting the deadlines for the introduction of new resources and business continuity**. To this end, several **selection days** were organised for multiple roles, including the ***Areti Talent day***, a selection project that led to the placement of ten young talented graduates in STEM disciplines, and the ***Acea Energia and Acea Innovation Talent Graduate Program*** (see box).

ACEA ENERGIA AND ACEA INNOVATION TALENT GRADUATE PROGRAM

The Acea Energia and Acea Innovation Talent Graduate Program, **a selection process dedicated to young graduates in economics and STEM disciplines**, took place in 2021.
The programme, launched in August, involved **around 1,000 young people who took part in several entirely digital selection steps,** in which participants faced a number of **online challenges concerning soft skills and technical knowledge followed by group role playing.** The last phase **involved team project work**, **designed from a diversity perspective**, **in response to a business challenge.**

The final stage of the selection process took place in November at the company's La Fornace conference centre where **the 38 selected prospects presented their business cases to the Group's management and gave individual interviews.** Finally, **7 girls and 2 boys were selected and started their career in the company.**
Talent, skills and energy were the drivers behind the selection process. The use of innovative methodologies and accurate assessment tools made it possible to enhance the potential and promote the individuality of each person involved.

Acea also participates in **professional orientation events** promoted by university bodies, to meet new graduates and soon-to-be graduates to include in their selection processes. Again, the meetings took place via digital platforms. Some **Live Webinars about the Acea Group** were made for these events to explain the search and selection process and answer the questions of the participants. In particular, Acea took part in: The **Placement Exchange**, **Almalaurea High Flyers Day Information Technology**, **Cesop Virtual Job Meeting Stem Girls**, **Start Hub Digital Recruiting Week STEM**, **Almalaurea Digital career day at work**, **LUISS Career day "young people and work" and Dna Inclusive Job Day**, an online event during which **Acea** together with other companies, **met with people included in protected categories** whose integration into the labour market can be more difficult (see also the paragraph Diversity, inclusion and welfare).
During the year, a Group dashboard was developed with indicators for **analysing the progress of each stage of the selection process** and understand how diversity targets change.

GROUP CULTURE AND STAFF ENGAGEMENT

In 2021 Acea embarked on the process of defining a **new Leadership Model which brings together the key behaviours useful to guide the success of the organisation**. The model is the guide to which each employee must refer in his or her working life, acting proactively to achieve the Group's objectives.
This initiative applies to the **recruitment** process, aimed at hiring talent consistently with the Group's values, the performance management process, which measures each person's contribution to the defined values, the **training and development** as well as **compensation policies**, whose objective is developing and enhancing people and capabilities.
The new model was designed with the **active involvement** of the Group's people, in **focus groups** to define the proposed output.
A specific communication campaign aimed at the entire company population is planned for the initial months of 2022, to promote the new Model. This will be followed by specific training and information events.

The **employee engagement activities** implemented in 2021 to increase people's **sense of belonging** to the Group included:

- **Team Building**, an initiative dedicated to the first and second line structures of the Energy area (Commercial and Trading), aimed at stimulating a constructive discussion on strategic orientations and business guidelines that influence future activities (self-confidence, team, relationship and innovation). This was also an opportunity to celebrate achievements, strengthen interpersonal relationships, increase collaboration between colleagues, clearly define management objectives and prepare people for new challenges;
- The **Smart alliance - Relational gyms project**, an initiative developed within the framework of the Semester of the Elis Consortium School of Enterprise, pursuant to which twice a week, 3 people from the Group worked in the co-working spaces provided by the Consortium's member companies and participates in a programme of activities aimed at promoting creativity, innovation, well-being and developing networks among the participants.

In 2021, the **HR Special Projects Unit** designed specific initiatives, both internal and external, aimed at **enhancing the value of human resources**, contributing to the **improve the corporate climate** and promoting **corporate well-being and disseminating values such as sustainability and inclusion**, through active employee involvement.
The main projects were:

- ***The Friday breakfasts***, a project designed to **create a channel for open and direct dialogue** between the CEO and Group staff and to share proposals and feedback on specific areas of interest. The meetings were attended by a sample of employees, selected on the basis of the main dimensions of diversity present in the company – age, gender, seniority in the company, educational qualification, position professionalism–, so as to ensure that different perspectives were adequately represented;
- ***Acea Talks - Sustainable Conversations,*** a format created with the contribution of a transversal work team designed to **raise the awareness of the Group's stakeholders on the issue of sustainability**, **through video interviews with well-known personalities from the academic**, **cultural**, **artistic**, **sporting and social world**;
- ***Acea ti porta a Teatro*** (Acea takes you to the theatre), a project set up in 2021 with the **Rome Opera House** to support art and pay tribute to employees with a video of artistic performances, created with the direct involvement of colleagues and top management, through which Acea has launched an important message combining art and sustainability;
- ***Top Employers Certification***: the process for obtaining Top Employers certification began during the year, with the completion of the survey, prepared by the certifying body, aimed at collecting data and information in the company;
- ***Christmas meeting*** for executives, an event organised and held in collaboration with Acea's Sponsorship and Value Liberality and Communication departments and dedicated to the Group's top management and executives, who together reviewed what they had done during the year and shared their growth prospects for the future.

STAFF TRAINING AND DEVELOPMENT

169,522 hours of training delivered in **traditional**, **experiential** and **e-learning** form

training for the evolution of the Group's digital mindset continues: **1,185 persons trained in 2021**

the **Digital Generation** project: **480** students from 12 high schools in Lazio, Umbria, Tuscany and Campania involved in **training courses** and **social and environmental sustainability projects**

Acea launches the **New Normal** *training course:* ***REMOTE LEADERSHIP*** for development of digital leadership to cope with organisational change

The **development of professional skills** is fundamental for the evolution of the Group and the achievement of its industrial objectives. In fact, it ensures the acquisition of adequate technical-specialist skills and the mandatory updating of compliance regulations (workplace safety, privacy, etc.), and **increases the company's competitiveness**, **by equipping it with innovative and strategic skills**, in response to emerging professional needs. Furthermore, via its training activities, Acea spreads knowledge of value, behavioural and leadership models within the Group, consistent with the company's vision and mission.

A **Group procedure** defines **roles**, **responsibilities and tasks in the management of training processes** for the development of expertise, knowledge and professional skills necessary to act in company positions. The process is divided into the following macro-activities:

- **identification of the training needs**, consistent with business objectives, centrally managed by the Holding Company, and **the definition of the guidelines and the budget** which orientate the training interventions of the year, taking into account **the specific training needs of each Group Company**;
- **definition of the Operating Companies' Training Plan**, based on the specific needs identified (for example, **operating-technical**) and **Group** needs ("transversal" training);
- **administrative management and provision of training**, by the Parent Company's and the Operating Companies' Training Units.

Acea **funds training through its membership in interprofessional bodies for continuous training** - Fonservizi, Fondirigenti and For.Te. which the main Group companies belong to.

As in the previous year, the 2021 training courses were designed to be carried out mainly remotely, by means of "synchronous" training (live webinars) alternating with "asynchronous" training (recorded videos and e-learning courses).

The training course **New Normal**: **Remote Leadership** was held to support staff in managerial and coordinating roles to exercise leadership and remote management skills within the work team (See box)

THE *NEW NORMAL: REMOTE LEADERSHIP COURSE*

The objectives of the ***New Normal: Remote Leadership*** course are to recognise and address the **potential and new challenges of remote working** and improve the **ability to remotely manage work teams** (assignment of objectives, feedback, delegation processes). In 2021, the course involved managers, executives and employees with coordination responsibilities.

The **579 participants** tested the skills needed to develop digital leadership for dealing with organisational change and engaging people who **work remotely or in a hybrid mode.**

The course was taught in **20 sessions totalling 4,039 hours of training** and addressed the **themes of leadership and people management** with the aim of:

- providing a **mindset for developing new ways of working**;
- enabling **collaboration between people**;
- making **teamwork effective**, even in **remote working scenarios**;
- supporting **employee development**, even remotely.

In 2021 management training courses were organised especially for **61 people that were assigned Individual Development Plans** on: Negotiation, Decision Making, Effective Communication, Relationship Care, Emotional Management, Motivational Leadership, Relationship Management and Communication, Economics and Project Management.

Training was also provided on **public speaking techniques** which involved **84 people who received a total of 1,080 hours of training**.

In addition to meetings in virtual classroom meetings, a **virtual mentoring activity** was provided during which participants were able to receive feedback with the goal of strengthening their public speaking technique.

Finally, **digitisation** training continued with courses aimed at the entire company population, for the dissemination of a new mindset and the growth of competencies and skills aimed at innovating industrial processes (see dedicated box).

TRAINING FOR THE EVOLUTION OF THE GROUP'S DIGITAL MINDSET

In 2021, the Group continued its **significant investment in digital skills** launched in 2020 through the training project **Digital Academy** and the definition of a framework of strategic digital skills for the Group, all assembled in Acea's "Digital DNA". In particular, during the year **10 training courses** were given with differing but complementary objectives, in which **1,185 people** participated.
8 training courses focused on strengthening specific **digital skills**, with the aim of introducing **new skills** and evolving the **organisational mindset**. In particular, the courses "Data Analytics" (39 hours of teaching and 59 participants) and "Data Lake" (4 hours of teaching and 53 participants) were organised to consolidate the ***data-driven approach adopted by Acea***: the courses "Industry 4.0" (32 hours of teaching and 86 participants), "Internet of Things" (72 hours of teaching and 86 participants) and "Salesforce" (96 hours of teaching and 99 participants), on the **potential impact of new technologies on Acea's business**; the courses "New Clients" (45 hours of teaching and 61 participants), "Service Design" (48 hours of teaching and 36 participants), "Agile PM" (66 hours of teaching and 41 participants) promoting the **adoption of a customer-centric strategy** through specific methods and digital tools that put the customer's needs at the centre.
Two other courses - "Development of Potential' (158 participants, 40 hours of teaching) and 'Digital Culture' (10 hours of teaching and 506 participants) - focused on the on the **role of digital skills** and how they can **support the development of professional and personal skills.**
Finally, in December, the **new Digital a new Digital DNA survey was launched** in with the aim of understanding the effectiveness of the training actions undertaken and the actual evolution of Acea's digital skills.

Together with Acea SpA's Investor Relations & Sustainability Department and with the support of SCS Consulting, the second edition was held of the course "**Acting sustainably to make a difference"** to increase the **culture of sustainability in the Group**, by training new "Sustainability Ambassadors" in the various Group departments and companies.
In 2021,**the first e-learning course aimed at the entire corporate population** (see box for more details), a **Iso focused on sustainability**, was launched.

THE *AZIENDA 2030* [COMPANY 2030] E-LEARNING COURSE

In 2021, ***Azienda 2030*** was the first e-learning course dedicated to sustainability issues aimed at the entire corporate population, created in collaboration with **ASviS** (Italian Alliance for Sustainable Development).
Approximately 3,300 people attended to learn more about sustainable development issues and the reasons and opportunities underlying the adoption of business models oriented towards the **Azienda 2030** Sustainable Development Goals (SDGs).
The course, lasting a total of 3 hours, is divided into four modules: a) Towards sustainable economic development; b) New business models and opportunities; c) How to deal with change; d) Financial instruments for companies committed to sustainable development.

The training on the Group's **governance model** was provided **in e-learning mode** through the Pianetacea platform. It was aimed at the **entire company population**. In particular, a new training course called "Antitrust Regulation and Acea Compliance Programme" was launched, focusing on the model adopted by Acea.
Courses were also repeated on the legislation pursuant to Legislative Decree no. 231/01, concerning the Administrative Responsibility of Entities and the new Organisation, Management and Control Model implemented by Acea and on the Code of Ethics and the whistleblowing procedure, with the aim of completing the training of all personnel.
The Group Companies also carried out remote training independently, for example:

- **Acea Produzione** organised, with the training body SAFE, a training course on **energy efficiency** in industry, in which staff from Ecogena also participated, and a specialist training course on **company law**, in collaboration with the **Sole24Ore Business School**;
- **Acea Ambiente** trained its staff in **environmental regulations**, in particular to update the managers of its plants on the ARERA waste sector rules;
- **Aquaser** has trained the technical staff supporting the Director of Works in service and supply contracts;
- **Acea Elabori** continued its **EPC Academy** training course, with accredited courses on **BIM (Building Information Modelling)** methodology for infrastructure design (see also the chapter on *Institutions and the Company*) and carried out extensive internal training on the **use of digitalisation and data analytics platforms such as ServiceNow**, **CO.SI.**, **Qlik and Geo Community;**
- **Acea Energia** organised the **SalesForce course**, a cloud-based CRM solution for connecting with customers in an innovative way, **training on integrated SAS software** for managing data and generating reports and summary graphs, and training on **Lean Presentation Design** to acquire increasingly effective communication techniques. Finally, in the field of **energy management**, it has organised specialist training courses on imbalances in the electricity sector;
- Areti completed two strategic training projects, one on **LV Automation and Remote Control** and the other on **Smart Meter 2G** (the new second generation meters). In the area of **Compliance**, Areti delivered training modules on "Offences in public procurement", "Antitrust Regulation" and "GDPR Privacy". Particular efforts were made to train new recruits, both administratively and operationally, through the **Conosci Areti** training plan. Finally, a training project on "HV network - primary substations and protections" was organised and will continue in 2022;

- **Acea Ato 2** created the **Virtual Tour of the plants** project, designed with the aim of illustrating, by means of a virtual tour, company sites of particular interest, through realistic and immersive simulations, in a three-dimensional environment, wearing VR (Virtual Reality) visors; it organised training courses on **environmental issues**, with the aim of better managing the risks and opportunities arising from environmental impacts, **on the European Union's Taxonomy**, **on Environmental sustainability and the circular economy applied to integrated water and waste disposal processes and the reclamation of contaminated site**s;
- **Acea Ato 5** oversaw, in particular, the Integrated Quality, Environment, Safety and Energy **Management System**;
- **AdF** continued to **consolidate the agile culture in the company**, both through technical training and through experiential training, carried out outdoors and aimed, in particular, at new recruits. The Company has trained all its staff in Legislative Decree no. 231/01, Antitrust and Sustainability;
- **Gesesa** has provided training to all company personnel, including senior management on **environmental**, **technical and operational issues** and on Legislative Decree no. 231/01. Managers continued with the "**Leadership & People Management**" course, launched in 2020 and aimed at enhancing their managerial style, in particular by delving deeper into issues concerning relationship with their staff, effective communication, time management and decision making.

The traditional and experiential training activities and those provided on the **e-learning platforms** provided a total of **886 courses** (587 in 2020), amounting to **1,657 editions**, in which **5,029 people** took part in total, of which 26% were women.
A total of 169,522 hours of traditional, experiential and e-learning training was provided - a significant increase (+93%) compared to 87,672 hours in 2020 (see table 44).
The **total training hours per capita**[109] **are 26** (13 in 2020). When analysing data from a gender perspective, the hours of training per capita provided to male staff amounted to 26 and those provided to female staff amounted to 25. The breakdown by qualification is as follows: 10 hours for managers, 37 for executives, 24 for employees and 27 for other workers.
The **overall costs incurred** for the provision of the courses, net of scheduling for training and the preparation of the spaces allocated to it, were equal, in 2021, to **€ 1,995,848**.

Table no. 44 – Training (2020-2021)

TRADITIONAL AND EXPERIENCE-BASED TRAINING COURSES

course type	courses (no.)		training (hours)	
	2020	2021	2020	2021
managerial	13	21	11,108	14,749
safety	65	250	10,059	58,164
governance model	29	34	3,031	4,260
operating-technical	468	571	41,442	53,575
total	**575**	**876**	**65,640**	**130,748**

TRAINING COURSES PROVIDED THROUGH THE PIANETACEA E-LEARNING PLATFORM

whistleblowing	1	1	804	2,762
general training	1	0	480	0
Code of Ethics	1	1	6,740	590
antitrust law	1	1	977	8,643
unlawful business practices	1	0	1,170	0
project management	1	0	454	0
administrative liability of entities (Legislative Decree no. 31/01)	1	1	2,426	590
safety	3	2	5,585	464
QASE management systems	1	1	1,982	358
Legislative Decree no. 202/05	1	1	1,414	475
Sustainability and Agenda 2030	0	1	0	16,836
Digital Culture	0	1	0	8,056
total	**12**	**10**	**22,033**	**38,774**

BREAKDOWN OF TRAINING HOURS BY QUALIFICATION AND GENDER

title	2020			2021		
	men	women	total	men	women	total
executives	631	157	**788**	724	149	**873**
managers	8,090	3,746	**11,836**	13,062	6,277	**19,339**
clerical workers	34,473	20,548	**55,021**	63,614	32,609	**96,223**
workers	19,976	51	**20,027**	52,952	135	**53,087**
total	**63,170**	**24,502**	**87,672**	**130,352**	**39,170**	**169,522**

NOTE: Training hours do not include training provided to staff who left the company during the year.

109 The indicator was calculated by comparing the number of hours attended with the total number of employees.

In 2021, a structured process was established to define a **methodology** which led to **identifying the areas of intervention and tools for constructing development paths** for Group employees (see the relevant box); the **first editions of development paths**, including **training and focus team coaching courses** defined in the individual plans, sharing the results through reports for the various stakeholders involved.
Following the analysis of the needs that emerged, within the context of the individual development plans that were designed, three advanced training courses were identified and realised through participation of executives in the EMBA Masters degree programme at the University of Tor Vergata.

INDIVIDUAL DEVELOPMENT PLANS

The methodology for the construction of targeted development paths was developed in 2021. It provides for individual plans and the definition of a detailed catalogue, through the design of specific paths based on the competences to be developed, with a view to innovation and continuous improvement. These include tools and areas of intervention.
18 types of interventions and development tools were designed, divided into: **9 types of training courses**, **6 types of focus team coaching** (on employee management, strategic thinking decision making effective communication, peer relations and change management), **individual coaching courses,** mentoring for both mentors and mentees, supported by specific training on methodology and process and, finally, **high-level training**.
14 editions of focus team coaching involving 64 people were launched in 2021.

Additionally, **projects were begun to train and develop the potential of new hires.** These initiatives, carried out by the Parent Company with various Group companies, **involved around 300 people who were given a self-descriptive personality test**, the results of which could be shared and submitted. Following the administration of the test, **individual and summary reports** were produced with aggregated data on the population involved in terms of strengths and areas for improvement. These documents, which provide useful insights for the development of potential, were shared with process stakeholders and participants.
Professional development of staff through **promotions** in the year concerned **804 people** of which 215 were women, i.e. 27%.

COLLABORATION WITH UNIVERSITIES AND HIGH SCHOOLS

Acea develops **partnerships and cooperation with universities**, participates in studies and research, meetings between companies and students and stipulates agreements to promote internships and apprenticeships. Acea consolidated relations with the Tor Vergata, La Sapienza, LUISS Guido Carli, Studi Europei di Roma, Federico II di Napoli, Lumsa, Scuola Superiore Sant'Anna di Pisa, Università degli studi della Tuscia, Cassino universities and Politecnico University of Milan via the **conclusion of agreement**s aimed at encouraging the transition of graduates into the working world. Despite the ongoing difficulties caused by the health emergency, in 2021 Acea **renewed the agreements for curricular and extra-curricular internships** with the Universities of "Roma Tre", "Tor Vergata", "La Sapienza" and LUISS Guido Carli. Acea also concluded specific agreements for the master's degree programme in "Procurement Management – Procurement and Tenders" and the Maris master's degree programme in "Reporting, Innovation and Sustainability", both created by the Faculty of Economics of the "Tor Vergata" University in Rome. Acea has also initiated **new contacts and relations with the placement departments** of the Alma Mater Studiorum University of Bologna, the Politecnico University of Turin, the Aldo Moro University of Bari, the University of Camerino, the Parthenope University of Naples, the University of Pisa and those of Palermo, Catania and Messina. Finally, during the year, a scientific cooperation agreement was signed with the Department of Earth, Environmental and Resource Sciences of the University of Naples Federico II and with the Vesuvius Observatory for the design and implementation of a hydrogeological and microbiological monitoring network for groundwater.
Thanks to these interactions, in 2021 Acea established **76 training internships** and **27 curricular internships**. It hired **15 young graduates** and stabilized the positions of **21 young people** previously holding internship positions.

The Company also utilizes the **professional skills** of its staff in university master's degrees and courses and for **technical projects**. In 2021, qualified **company staff** worked as teachers or provided corporate testimonies for **university master's degrees**, covering, in particular, issues related to energy, the **environment**, **sustainability** and **innovation**. In particular, **Acea** has collaborated with **SAFE**, a centre of excellence for studies and training on issues related to energy and the environment, with the LUISS School of Technological Innovation, dedicated to Digital Talents, signed an agreement with the 42 Roma LUISS School of Technological Innovation dedicated to Digital Talents and took part in the 'Digital Open Innovation and Entrepreneurship' graduate programme together with the Campus Bio-Medico of Rome.

Acea also concludes agreements with **high schools** for school-to-work projects such as the **H2SchOOl** project launched by Gesesa in 2021 with local high schools and commercial schools in the country.
GenerAzione Digitale [Digital Generation] (see dedicated box) was an important project implemented by Acea in 2021, involving both support to and collaboration with schools, through the contribution of Group companies.

THE *GENERAZIONE DIGITALE* PROJECT

The ***GenerAzione Digitale*** project involved about 480 students from **12 high schools** in Lazio, Umbria, Tuscany and Campania, with the aim of promoting the Group's commitment to projects that raise awareness of sustainability among the younger generations, encouraging a virtuous exchange between schools and companies, based on the creativity of students and their experiences in the workplace.
The 2021 format, focusing on "**The protection of natural ecosystems in a sustainable and innovative way**" has been conceived as a creative marathon, the "**Digital Creathon**" during which students, supported by the ELIS team facilitators and the "Sustainability Ambassadors", developed innovative ideas and creative solutions digitally.
The 3 winning project ideas of the 'Digital Creathon' were developed by:

- the **Nefti** team with its project '**For a more useful Tiber**', for the production of electricity using water from the river;
- the **ECOciqua** students, who created an **app and an eco-bin system** for smart urban waste management;
- the **Rest@rt** Team, which has designed a **mapping of electric charging stations** to make charging more efficient, and a **virtual currency**, the carbon point, to encourage both plastic recycling and the use of electric cars.

In addition, as part of the initiative, Acea worked on realising the **I-School** team's **Intelligent School project**, which envisages the adoption of a school in which interventions will be carried out to transform the school premises into an **eco-sustainable**, **self-sufficient** place.

INCENTIVE SYSTEMS AND STAFF EVALUATION

The **Performance Management System** is governed by corporate procedures and is the operational application of the **Leadership Model**. Its purpose is to **enhance personal contribution to the Group's performance**, including through the achievement of expected individual objectives and adherence to the Leadership Model.

The **remuneration policy** adopted envisages short-term and long-term fixed and variable remuneration measures (MBO, LTIP).
Following the expiry of the 2018-2020 long-term incentive plan, paid in 2021, a **new Long Term Incentive Plan (LTIP) was introduced**, **covering the three-year period 2021-2023**. This plan covers only the **Chief Executive Officer**, **the Executives with Strategic Responsibilities and other Executives holding key positions** in the Group.
The new Plan is divided into three cycles, at the end of which a monetary bonus will be paid, if the objectives are achieved; the accrual of any **three-year cycle** bonus is aimed at guaranteeing the continuity of the company's performance, steering the management towards results with a **medium and long-term outlook** that are consistent with the Group's Strategic Plan. The **calculation system is subject to the degree of achievement of objectives** as determined by the Board of Directors after consulting the Appointments and Remuneration Committee, **of an economic-financial nature** (NFP/EBITDA and NFP/NP), linked to the profitability of the share (EPS) and, as a novelty introduced with the new Remuneration Plan, these results are linked to the **Group's sustainable success** in the medium to long term as measured by a **composite sustainability indicator** which has been given a percentage weighting in line with market best practices. To this end, it should be noted that the **ESG objectives envisaged are in line with the Group's strategic**, **industrial and sustainability planning**.
The **short-term (annual) incentive system**, **Management by Objectives (MbO),** has also been revised, starting in 2021, for consistency with best market practices, to make it fairer and easier to communicate and assess. The MbO is applied to **top and middle management** and entitles them to receive a monetary bonus based on the achievement of set targets. The system is divided into **Group objectives** which are the same for all involved parties, Area objectives (applicable across the relevant Area) and **individual objectives**.
The **Group objectives** that are applied to 100% of the recipients of the MbO incentive scheme, are based on **four indicators (KPIs)** three of an **economic-financial nature** (EBITDA, net profit, net financial position) and one **composite sustainability indicator**. Managers can choose their **Area objectives** from among those included in the **Dedicated catalogue**, with a direct link to the company's strategy and operational management.
With the introduction of sustainability objectives in the incentive systems for the MbO population and for top management (LTIP), Acea has confirmed the **integration of sustainability** into business activities, strengthening the **link between remuneration mechanisms and the achievement of social and environmental objectives.**

Employees who are **executives**, **clerical and manual** workers including those with part-time, fixed-term (including temporary) and apprenticeship contracts, are **eligible for the performance bonus every year**. This is a variable payment, linked to qualitative and quantitative results achieved in the realisation of company objectives, which aims to have workers **participate in company processes and projects** to increase the company's profitability and improve competitiveness, productivity, quality and efficiency.
There are also **benefits** for employees, including those with part-time, fixed-term contracts and apprenticeship contracts, such as **meal vouchers**, a discounts on electricity tariffs (for staff hired before 9 July 1996), the subsidies provided through the Company Recreational Club (CRC) and a **supplementary health insurance** policy. Other forms of benefits are provided to staff to support their **well-being**. These include: contributions for dental expenses, health check-ups, contributions for the use of emotional and physical well-being services. Executives are also entitled to specific benefits, such as the use of a company car and the reimbursement of fuel costs, etc. Finally, a policy is in place for all staff members which, in the event of death, provides a monetary payout to beneficiaries.

INTERNAL COMMUNICATION

At Acea SpA, the **Internal Media Relations and Communications Unit** handles communication to employees and contributes to **promoting the Group's principles**, **values and strategic objectives** and developing a **shared company culture**.
Digital platforms continued to play a central role in the communication between companies and people in 2021 as well.
Of particular note is the **My Intranet** portal, a digital environment

dedicated to staff, which aims to strengthen the Group's cultural identity by facilitating access and information sharing. In order to make the portal more and more inclusive, a number of **features have been optimised** during the year such as the release of a new, better performing version of the **search engine**, **integration with third party tools** (Teams and Forms) and the activation of the Single sign on all SAP platforms.
In addition, **a digital ecosystem was created with the launch of three new operational portals** for the Water, Energy Infrastructure and Engineering & Services industrial areas.
My Intranet has been enriched with **3 new sections - Welfare**, **Organisation**, **Stakeholder Engagement** - and has featured important **initiatives and events**, including the Acea Green Cup, the Sustainability Day, the Connect with Acea and Prevent with Acea programmes, confirming its position as the place where the Group's people can engage. The section dedicated to **anti-contagion measures** implemented by the Company for its employees has also been constantly updated.
The massive use of digital working methods has led to a parallel increase in cyber threats and attacks. A newsletter has therefore been produced and is available in **My Intranet,** in the section dedicated to **IT security**, **to raise staff awareness of the issue and the correct use of IT tools.**
In May, the **Acea Ti Premia** [Acea rewards you] portal, the Group's innovative digital meeting venue, was integrated with My Intranet an**d became accessible from any device** (PC, smartphone and tablet). It is a venue that encourages engagement, where employees are able to share projects, events and company gadgets. The portal also makes it possible to improve the way in which company benefits are allocated by making them more transparent and democratic, through random allocations and the gamification.
The **Acea4You App** was designed to plan office attendance, avoid crowds, and book Covid-19 vaccination or serological tests, meals or canteen space and Christmas parcel collection and was widely used.

In 2021, internal communication initiatives remained in line with the pillars of strategic planning: **sustainability**, **welfare**, **safety**, **engagement**, **solidarity and innovation**. The ***Connessi con Acea*** [Connect with Acea] was created to help keep communication between company employees alive, despite their physical absence from the workplace. The project, devised by the Communication Function, involved the organisation of two digital events - "Work challenges during the pandemic: Acea's responses" and "Sustainable by vocation: the Acea Group experience" - during which current issues related to the Group's activities were addressed with the contribution of qualified experts and employees. The events were simultaneously translated into sign language by professional interpreters associated with ANIOS (Association of Italian Sign Language Interpreters).
Again with a view to strengthening the group spirit and sense of belonging, the ***Acea Green Cup 2021*** initiative was launched in June with an intra-group contest on the most sustainable projects carried out by the companies that participated, in September, in a regatta held for staff only (see the chapter on "Customers" - paragraph Communication, events and solidarity).
The second phase of ***Proteggo l'Azienda che mi protegge*** [I protect the company that protects me], the internal communication campaign promoted by the Ethics Officer with the aim of promoting the dissemination and knowledge of the values enshrined in the Code of Ethics and the tools to protect them, was unrolled in 2021. In addition to the dedicated training course and the "Comunica Whistleblowing" platform, a number of awareness-raising videos on the articles of the Code of Ethics were produced, involving managers and employees.

The Communication Function supported the implementation of numerous initiatives devised by the Human Resources and Sponsorship Functions & Value Liberality, also in collaboration with the corporate CRA, on **corporate welfare**, **wellbeing and inclusion** in continuity with 2020, including: ***Wellness Fridays***, the **Acea and Fondazione Policlinico Gemelli** webinar, the **Acea Camp** and **My Camp** summer centres for the children of employees, the ***Orientiamoci***, a webinar created to guide employees and their children into the professional world and the **Acea** and **Fitprime** programme: **Insieme per il benessere** [Together for well-being] (see also the paragraph on *Diversity, inclusion and welfare*).
Also of note:

- the project ***Insieme per la parità di genere e contro la violenza sulle donne*** [Together for gender equality and in opposition to violence against women], was launched in 2020 with a dedicated webinar and continued in 2021 with the dissemination of video clips designed to raise people's awareness of these issues and of how gender stereotypes and prejudices are rooted in cultural models and can influence everyday life. At the end of the initiative, on the occasion of the International Day for the Elimination of Violence against Women, a video message from Acea's top management in support of the project was released;
- this path is dedicated to the themes of **Diversity & Inclusion** and its purpose is to promote a cultural change towards valuing diversity at all levels of the organisation. The first stage of the process involved an internal survey to determine employees' awareness and perception of the issue;
- the ***Previeni con Acea*** [Prevent with Acea] project to promote a culture of wellbeing and prevention, with a communication campaign aimed at raising awareness of the importance of health, prevention and healthy lifestyles. In particular, two webinars were organised to explore prevention issues and an online and offline communication campaign was implemented (intranet, digital totems and lift monitors at headquarters). Acea has also carried out preventive screenings in collaboration with **Susan G. Komen Italia** (see the section *Diversity, inclusion and welfare*).

Solidarity has always been a fundamental value for Acea, which, in 2021,expressed it together with the protection of health and safety by creating the **Acea Vaccine Hub** (see also the paragraph on Occupational health and safety). In this context, the Communication Function, in coordination with the Human Resources Function, collaborated on the implementation of the **campaign to raise awareness of the Covid-19 vaccination**, which involved sending out emails and setting up visual communication on digital totems.
Still on the subject of solidarity, a completely digital version of **Acea's Solidarity Mondays** continued in 2021. This effort involves employees in supporting charitable activities (Taxi Solidale, AISM, Banco Alimentare, Medici senza fissa dimora, Un...due...tre...Alessio).
Finally, as a sign of its support for scientific research, Acea renewed its partnership with the **Telethon Foundation**, with **6,700 Christmas gifts**, delivered to Acea Group employees and partly donated to the Community of Sant'Egidio to support its activities in favour of those most in need.

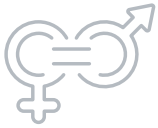
To survey staff opinions and requests, the Communication Function ran a **survey** on:

- **smart working** - in collaboration with the Human Resources Function a **questionnaire** was circulated concerning the working methods implemented by the Group in the face of the new emergency scenario;
- ***Diversity is a fact, inclusion is an active choice***, a widespread survey to promote a cultural change in the Group aimed at valuing diversity;
- the ***Acea work lab***, in collaboration with the Human Resources Function, to determine how employees view the new ways of working and sharing space;
- the ***Digital selfie***, in collaboration with the Training Unit, designed to map and enhance the technical skills of all Group employees;

At the end of the year, at Christmas, a video made by top management was released to wish the employees happy holidays and thank them for their efforts during the year. Also the **Acea Christmas Contest** involved a culinary challenge in which employees reproduced the eco-sustainable recipes of the "La sostenibile leggerezza del gusto" [The sustainable lightness of taste] cookbook, created especially for Acea on this occasion in collaboration with the Italian Federation of Chefs.
The attempts at making the recipes were voted on and a ranking was drawn up, which was then submitted to a jury of chefs from the Italian Cooks Federation who decided on the winners.

DIVERSITY, INCLUSION AND WELFARE

signed the **Protocol on Diversity & Inclusion** with trade unions and defined the **Diversity & Inclusion Plan for 2021-2022**



Acea's rating in the **Gender Equality Index di Bloomberg** improves: **80.67/100**

the **"Sostegno Donna"** counselling service and the **"Mi prendo cura di te"** caregiver service have been set up

in collaboration with Susan Komen Italia: **342 free preventive screening** provided

Inclusion, **protection of diversity** (gender, age, disability, religion, race, etc.), **combating sexual harassment and mobbing are issues that are monitored at the governance level**. Indeed, Acea has a Code of Ethics and an active **Ethics and Sustainability Committee**, which, among other things, has the responsibility of assisting the Board of Directors in matters of **diversity**, with the task of **promoting the culture of valuing diversity and combating all forms of discrimination.**
Acea is one the signatories of the "***Utilitalia Pact – Diversity makes the Difference***", drafted by the Commission for the Management and Promotion of Utilitalia's Diversity, and has adopted a Group procedure on the "***Protection, inclusion, promotion of the diversity and well-being of workers***" and, in 2020, signed the ***CEO Guide to Human Rights*** by the World Business Council for Sustainable Development (WBCSD).
In 2021, the company was particularly committed to promoting the principles of including people and valuing diversity, as well as preventing and combating all forms of discrimination. To this end, two important initiatives were implemented:

- the signing, with the social partners, of the **Protocol on Diversity & Inclusion**, operational at Group level, to enhance diversity and combat all forms of discrimination in the workplace. The Protocol proposes to implement concrete measures, improving existing legal provisions, to **foster parenthood** (e.g. leave of up to 12 days as compulsory leave for fathers), **support women who are victims of gender-based violence** (e.g. provision of an additional period of paid leave of 90 days), counteract any gender gaps and foster the inclusion of the disabled (see also *Industrial Relations*);
- the definition of the **Diversity & Inclusion Plan for 2021-2022**, **aimed at defining a programme of initiatives addressed internally,** with actions dedicated to **employees**, **and externally for the development of projects on the subject of D&I**, in synergy with other corporate Functions, with an impact on customers, the territory and institutions (see in-depth box).

ACEA INITIATIVES IN RESPONSE TO EMPLOYEES' REQUESTS CONCERNING DIVERSITY & INCLUSION

In 2021 Acea developed the **2021-2022 Diversity & Inclusion plan**. To this end, employees participated in a **survey** to collect data on the level of knowledge of the topic, **assist the company in undertaking initiatives in line with the real needs of employees**, facilitate the **dissemination of a culture oriented towards valuing diversity & the inclusion of people**.
Based on the survey results, initiatives were defined and implemented during the year in the areas of training, communication, monitoring and support, including:

- the development of a section of the **dashboard dedicated to D&I**, with the definition of specific **indicators** for measuring and analysing trends relating to variables of interest (gender, age, disability, etc.) across all processes of the employee journey, from entry into the company to exit;
- the **Corporate Family Responsibility** programme, which included **4 webinars** aimed at all Group employees, to provide support on issues related to parenting, how to take care of loved ones, the use of social networks and how the relationship between adults and adolescents is evolving. In particular, the "*Tienilo Acceso*" [keep it going] webinar, conducted as part of the broader event dedicated to inclusion and diversity promoted by TIM called **4week4inclusion**, featured sharing and testimony on how diversity, if recognised and valued, can become a strategic factor for people and for the company;
- the creation of the **Equality & Care intranet section**, which includes an **area dedicated to Diversity & Inclusion**, was designed to disseminate the D&I culture, make thematic documents accessible to employees in a structured repository, and disseminate information and communications on initiatives and commitments undertaken by the company on the subject;
- the project **Together for gender equality** with the aim of raising awareness on gender equality and combating violence against women, with webinars, short video tutorials and the activation of a support service;
- participation in the **DNA Inclusive Job Day**, a career day dedicated to high-school and university graduates belonging to protected categories, during which Acea interviewed over 20 people. The event aimed to promote the leveraging of differences and the dissemination of inclusive business and organisational models. It consisted of three parts: a training workshop to acquire and share good organisational practices in the area of diversity, presentations by participating companies of their inclusion policies, and a space dedicated to direct interviews between participating companies and candidates. Following the interviews, **one candidate was selected and started her career at Acea**;
- the development of the new **'job advertisements' editing**, with the definition of new layouts of job descriptions published externally with a specific announcement: «*Acea promotes the inclusion and enhancement of the individuality of each person involved in its selection processes by combating any form of discrimination.*»;
- **training** of staff **on the concept of unconscious bias** to provide useful tools for promoting the value of diversity in the company and encouraging inclusive management of working relations. The project, which started in December, **involved 5,190 people**, **who were made aware of cognitive biases and widespread prejudices**, their impact on organisations and the possible resistance that hinders the establishment of an inclusive culture.

Acea adopts reconciliation measures to support parenting, strengthened thanks to the Diversity & Inclusion Protocol mentioned above, such as parental leave for family reasons for working mothers or working fathers, **paternity leave**, with the addition of two extra days of paid leave, to be taken within two months of the birth, adoption or fostering of a child; the **hourly permits for the enrolment of children at nursery school**, **kindergarten and the first day of primary school**.

In 2021, the company once again participated in the ***Sistema Scuola Impresa*** [Business School System"] project, coordinated by the Elis consortium, helping to create the "***Inspirational Talks Role Model***" initiative: a programme for the promotion of **STEM** (Science, Technology, Engineering and Mathematics) training programmes among **female middle and secondary school students**. This year's project involved 15 female Acea Group professionals who, as role models, recounted their experiences of professional success in male-dominated sectors and sent a message of encouragement to the younger generation about the possibility of realising their professional dreams. Acea also participated in the **Nastro Rosa 2021 campaign** on the importance of breast cancer prevention and the **International Day for the Elimination of Violence against Women**. (see the chapter Customers, Communication, events and solidarity).

Acea participated in the Bloomberg Gender Equality Index (GEI) again in 2021. This index measures gender equality in terms of five areas: female leadership and talent pipeline, wage parity and equality between the sexes, inclusive culture, sexual harassment policies and promotion activities aimed at women. The assessment is **positive and equal to 80.67** (on a scale of 0-100), a **clear improvement on the 2020 assessment (70.49) and above the averages for the sector (71.21) and the sample analysed (71.11)** (see also chapter Shareholders and Investors).

Acea actively promotes corporate well-being, starting with the **needs of its staff**, which are determined over time through surveys. The **Group Welfare Plan** was enhanced in 2021, identifying six fundamental pillars relating to health, **work-life balance**, **emotional and physical wellbeing**, **supplementary pensions**, **income support measures and family**.
The income support measures include the option to **convert the performance bonus into welfare services** (flexible benefits) through the **My Welfare platform**, enriched with a wider range of **personal and family services (**family services, travel, transport, health and health insurance, supplementary pensions, sport and leisure, etc.).
To promote the Welfare Plan, in 2021 numerous **information meetings** were held remotely and a variety of **training videos** were shared.
Acea has **reused part of the tax relief,** enjoyed thanks to the Welfare Plan, **for the benefit of all employees** through the payment of an **additional amount** for those who allocate their performance bonus to supplementary pension schemes, **complementary social security** and by offering preventive health services and campaigns **promoting primary and secondary prevention and healthy lifestyle**s as well as making an economic contribution the **provision of services for the psycho-physical well-being and physical well-being of employees and their families.**

Among the numerous **welfare initiatives** undertaken during the year, Acea:

- organised the "**Previeni con Acea**" [prevent with Acea] campaign, to raise awareness of the importance of health, prevention and the adoption of healthy lifestyles among employees. To this end, **in collaboration with the Fondazione Policlinico Universitario Agostino Gemelli IRCCS and the Bambin Gesù Children's Hospital**, **two webinars have been organised** on: "*Covid-19 and the lungs: a lesson for the future*", "*The role of the microbiota in the digestive system*" and "*The Sars-CoV-2 Pandemic in Italy*"; a three day event was organised in collaboration with Susan G. Komen Italia, during which **342** breast, dermatological and endocrinological **screenings** were carried out free of charge, with around 600 requests received, and employees were offered **free cardiological**, **urological and gynaecological check-ups and clinical tests**, as well as the possibility of using the telemedicine service in collaboration with the CRA;
- deployed the "**Sostegno Donna**" (Support for Women) to offer a direct channel of assistance to those who need to talk to selected professionals, also offering the possibility of undertaking specific counselling, psychological, psychotherapeutic, pedagogical and parenting support courses;
- developed "**Mi prendo cura di te**" [I take care of you], a caregiver service, totally free of charge, aimed at providing personalised advice and guidance with a professional (the care manager) in the management of educational and/or social care needs (support services for the elderly and people with disabilities, services to support children, specialised services with the availability of psychologists, nurses, physiotherapists, etc.);
- Rolled out the **wellness programme 'Acea and Fitprime**: **together for wellbeing'**, aimed at promoting physical and nutritional wellbeing and encouraging the adoption of a healthy lifestyle by practising sport, taking part in live streaming and on-demand courses on the Fitprime platform and customising one's diet plan with a nutritionist;
- the "**Wellness Fridays**" programme was launched on World Food Day in association with the HR Community to promote healthy lifestyles, sharing the importance of prevention and healthy eating;
- **actions in support of parents** to encourage a better balance between work and childcare, such as the summer camp for boys and girls aged 6 to 14, created with the aim of promoting the values of sport among the younger generations, and the **webinar on career guidance**, aimed at parents and children aged 17 to 22.

Finally, also in 2021, the solidarity and food support project **Solidarity Taxi** was promoted in the Rome area in collaboration with the **ACLI of Rome** with the aim of providing concrete help to the **neediest families** and those most affected by the pandemic. The project involved the **donations of parcels containing food and medicine by employees**, and **former employees contributed by driving** a Fiat Doblò, loaned free of charge by Acea, to deliver the solidarity parcels in the municipality of Rome. A total of **8,604 parcels** were distributed, **4,552 shopping coupons** and **200 school kits** were donated to **4,969 families**. Overall, **the effort reached a total of 16,785 people of which 4,675 minor**s.

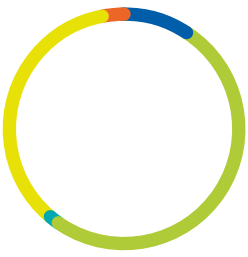
In compliance with the law[110], there are **employees belonging to protected categories** (disabled, orphans, etc.) who are guaranteed support services, assistance and technical support tools to facilitate the performance of the tasks entrusted to them. In 2021, **206 employees** (124 men and 82 women) belonged to protected categories.
In the year under review, there were no cases of discrimination against Group employees in Acea.

COMMUNITY LIFE AT ACEA

Some structures perform work of a social nature, directly involving employees: the Company Recreational Club (CRC), the Gold Medal Association and the Association of Christian Italian Workers (ACIW). **4,450 members** are enrolled in the Company Recreational Club in 2021, including executives.
The CRC was responsible for **managing the company's crèche**, open to children of employees and children of residents of Municipality I, and accommodating 20 children in the first half of 2021 and 25 in the second half.
The Club **offers cultural, sport**, **tourism**, **economic**, **commercial initiatives and personal services**, and its aim is to enhance the free time of its members, without losing sight of aspects of social interest. An important solidarity tool among employees is the **Emergency Fund**: an initiative **in support of the relatives of deceased**, in-service or retired employees. All employees can join by signing a form, which they must send to the Human Resources Function or to the CRC, in which they authorise the deduction from the payroll of a small contribution that is allocated to the Fund.
The Company Recreational Club enters into **agreements** for employees and their families with institutions that offer health services, dental services, legal advice, etc. and active commercial agreements, sports ticket sales, theatre and music events, which can be viewed on a dedicated portal with constantly updated contents and accessible on the Intranet (www.cra-acea.it). It is also responsible for informing employees, by sending newsletters.

The Association of Christian Italian Workers (ACIW) is very active in Acea and **promotes social initiatives**, **solidarity and support**. Examples of that support are the presence of the Chaplain from whom employees can seek guidance, and the organisation of meetings for families, also with the intention of creating a **support network** for employees. The association is also involved in **providing services** such as **mortgage and loan advice**, **school assistance** for children of employees attending lower and upper-secondary schools, and various other initiatives benefiting employees, such as the organisation of language courses and cultural and sports activities. The ACLI (Association of Christian Italian Workers) was very active in 2021 as well, **in its support for initiatives of social value in the local area** (Banco Alimentare [food bank], Caritas, etc.).

Chart no. 47 – Members that have used CRC services (2021)



209 members utilized tourism services
1,145 members interested in insurance instalments
35 members interested in purchase instalments
811 members utilized the so-called "dono della Befana" bonus benefits
64 members utilized scholarships

110 Italian law no. 68/99.

SHAREHOLDERS AND INVESTORS

Through the **Investor Relations & Sustainability Function** and in cooperation with the competent corporate structures, as a listed issuer, Acea **provides the financial community** with a flow of continuous, timely and useful information for a **correct assessment of the Group's current and prospective situation**, with a greater emphasis on **ESG elements** (Environmental, Social, Governance) that are increasingly integrated with financial aspects. The information is conveyed through current and potential **direct relationships** with analysts and investors, and through **specific communications** (price-sensitive press releases, company presentations, credit ratings, stock performance, highlights, etc.) that are made available on the institutional website (www.gruppoacea.it), respecting the fundamental principles of **propriety**, **clarity and equal access**.
Additionally, working with the competent structures, the Corporate Affairs Function is responsible for the management of information flows with the **Supervisory Authorities** (Consob and Borsa Italiana) and the corporate obligations required by law for listed companies.

ECONOMIC FLOW TO SHAREHOLDERS AND INVESTORS

For shareholders, at the Shareholders' Meeting, the Board of Directors proposed the distribution of a dividend of € 0.85 per share (+6.3% on the € 0.80 in 2020), equivalent to € 180.6 million received (having been € 170 million in 2020), which correspond to a payout of 58% on net income, after allocations to third parties.

In 2021 **Acea performed well** on the Exchange with the share price increasing by **9.4%.** The share price rose from € 17.15 at the beginning of 2021 to € 18.76 on 30 December 2021 (the last stock exchange session of the year) with a capitalisation of € 3,995 million.

The maximum value of € 21.30 was reached on 18 June, while the minimum value of € 16.12 was reached on 3 March. During the year, the **daily average volumes** traded were above 120,000 shares (compared to 165,000 in 2020).

Table no. 45 – Performance of stock exchange indexes and Acea shares (2021)

	% change 31/12/2021 (vs 31/12/2020)
Acea	**+9.4%**
FTSE Italia All Share	+23.7%
FTSE MIB	+23.0%
FTSE Italia Mid Cap	+30.8%

€ 97.4 million are allocated to **financing** stakeholders (compared to € 98 million in 2020). The average overall all-in cost of the Acea Group's debt on 31/12/2020 was 1.42%.

Regarding **the composition of medium/long-term** debt consolidated as at 31/12/2021, approximately 85% of the total amount derived from transactions on the capital market (corporate bonds). Regarding the banking sector, the Group mainly deals with entities whose mission is **to finance strategic infrastructure**, such as the European Investment Bank (EIB, 6.1% of the consolidated debt) and the Cassa Depositi e Prestiti (CDP, 3.6% of the consolidated debt). These Institutions ensure loans, to entities with creditworthiness such as Acea, with a maturity of more than 10 years, in line with the duration of the concessions (water and electricity) owned by Companies of the Group called to make the relevant investments.

THE FIRST ACEA GREEN BOND

In January 2021 Acea issued its first **Green Bond** against a total value of € 900 million as a development initiative towards greater integration of sustainable finance tools, in line with its **industrial and sustainability plan 2020-2024**, which is focused on achieving the objectives of the 2030 Agenda.
The Green Financing Framework constitutes the basis of the Green Bond. The Framework was drawn up by Acea's Finance, Planning and Control and Sustainability Functions as a document for informing investors about the use of the proceeds raised for industrial projects that are significant in terms of sustainability. Green projects eligible for Green Bond financing are selected across four areas of activity that are consistent with the goals of the 2030 Agenda: **water resource management**; **energy efficiency**; **the circular economy**, **green energy.** The progress of investments and underlying projects will be **monitored and reported** on as a guarantee of the commitment made to lenders with the Acea Green Bond, which has now received **ISS certification**.
Acea's first green bond initiative has been very well received by the market, as is evident from the fact that the number of applications was **7 times higher than the offer**; Acea obtained a price premium (greenium) compared to a traditional issue and, in the first case ever recorded for corporate issues among Italian listed companies, the bond has a **negative yield** for the 5-year tranche with a consequent reduction in the interest paid by Acea.

AGENCY RATINGS

Table no. 46 – 2021 rating

agency	long-term rating	short-term rating	outlook
Moody's	Baa2		stable
Fitch	BBB+	F2	stable

The **Moody's** and **Fitch** agencies confirm, with their latest ratings, their respective ratings on Acea. They highlight the appreciation of the Group's strategic focus on regulated businesses, the positive performance trend and the good level of available liquidity, all of which offset the increase in debt linked to investments in innovation and sustainability of the 2020-2024 Business Plan.

FINANCIAL DISCLOSURE

During the year Acea participated in **numerous "virtual" events** (meetings, extended presentations, investor conferences, roadshows and reverse roadshows), **meeting with about 240 buy-side investors and analysts (both equity and credit)**.
Conference calls and webcasts were held for the approval of annual and interim results, and there was frequent contact with the financial community, with a total of over **170 analysts and investors**.
Approximately 140 studies/reports on Acea shares were published during the year under review. Six **investment banks** analyse Acea shares with a high level of continuity, of which five gave the Acea share a positive rating while one gave a neutral rating on 31 December 2021.

ACEA'S ENGAGEMENT POLICY

In November 2021, **Acea adopted the "Policy for managing dialogue with institutional investors, shareholders and bondholders"** (the Engagement Policy), in line with the provisions of the new Corporate Governance Code.
Through this tool, Acea aims to promote a **constant and effective dialogue with these stakeholders** in order to contribute to the achievement of business objectives and strengthen the generation and sharing of value, while ensuring the principles of transparency, timeliness, equal treatment, fairness and reliability.
Specifically Acea's **Engagement Policy defines**:

- the **topics** to be discussed with Institutional investors/shareholders/bondholders;
- the **corporate functions and departments** responsible for engagement, and the methods and deadlines for reporting to the Board of Directors;
- the **channels of communication** through which the financial community can engage with the Company (shareholders' meeting, meetings with analysts, industry conferences, Investor days, webcasts, company website, press releases, etc.).

ESG ANALYSTS RATE ACEA

The Covid-19 pandemic **strengthened institutional investor interest in ESG issues**, which are increasingly integrated into investment decisions. In particular, the financial community's sensitivity to social and environmental issues has increased, with a growth in investor awareness of the attractive risk/return profile that can be offered by sustainable investments.
The increasing attention **ESG investors** place on Acea is confirmed by their growing participation in the company's equity. Based on an analysis carried out in November 2021, these shareholders **represent 5.5% of Acea's share capital and about 40% of the total number of institutional investors**. They consist mostly of European funds, followed by investors from North America.

During the year, Acea further improved or confirmed its position in analysts' assessments, ratings and benchmarks, as illustrated below.

Acea has been confirmed in the "Leadership" category with the **level A**- by **CDP** (**formerly the Carbon Disclosure Project**), the international reference organisation, supported by about 600 international investors, which promotes global attention to the management of climate change risks and impacts, inviting companies to provide detailed and timely information on the subject. On the basis of the analysis of the data and information acquired, CDP publishes each year, in a ranking, the assessment made on each undertaking. In 2021, more than 13,000 companies and over 1,100 public bodies disclosed their information through CDP. For details see Box in the chapter Strategy and Sustainability).

In the year under review, Acea **further improved** its **sustainability solicited rating** by the independent agency **Standard Ethics (SE)**, receiving a rating of **EE** (investment grade F/EEE scale) and confirming the long-term long term expected rating (EE+). In June 2021 Standard Ethics announced the launch of the **SE Mid Italian Index** which will consist of a basket of 20 mid-cap stocks listed on the Italian Stock Exchange selected from a list of 30 companies, including Acea, whose composition will be based on capitalisation and free float values, in consideration of the industrial sector and the rating assigned.
Acea has been included among the 15 largest EU-listed multi-utility companies that have made up the **SE European Multi-Utilities Index** since 2020. This index aims to provide an overview of the level of sustainability progressively achieved by European companies operating in the field of essential public services.

Acea improved for the fourth consecutive year in the assessment of the French ESG agency **GAIA rating (EthiFinance** Group), achieving a score of **82/100** (78/100 the previous year). The Agency assesses companies on the basis of **75 indicators** in 4 areas: environment, social, governance and stakeholder relations. The assessment process is based both on public evidence provided by the companies and on direct comparison with them; at both stages the agency carries out checks on the reliability and robustness of the data.

During the year Acea also received ESG ratings from other major players: **Sustainalytics** assessed Acea as a company with a low level of risk, with optimal management control; **Refinitiv** placed the Company in the third quartile, indicating a good ESG performance and an above-average degree of transparency in disclosing relevant ESG data; **MSCI ESG Rating** confirmed the "A" rating (AAA (leader)-CCC scale) upon its assessment of Acea's proactive management of ESG risks. During the year there were also interactions with **VigeoEiris** for the agency's ESG assessment initiatives, and with **ISS ESG** which confirmed the rating already issued
Finally, Acea's presence in the **Bloomberg Gender Equality Index** has been confirmed for the third consecutive year, with a further improvement in the score received, which is 80.67 for 2021. This index includes 418 companies from 45 countries, which best value **gender equality** in terms of disclosure and corporate practices (for more details see the section on Diversity, inclusion and welfare in the chapter Staff).

THE INSTITUTIONS AND THE COMPANY

Acea receives the **SMAU 2021** Innovation Award

the **Acea Innovation Garage 2021**: more than **40** initiatives on **innovation and sustainability**

second edition of the **Acea Innovation Day** ***Building a sustainable future***

Acea collaborates with the **House of Emerging Technologies** in Rome: **smart city of the future**

Acea partners with **Circular 4 Recovery**: The innovation for **eco-friendly development models**

Acea interacts with institutional actors and stakeholders of reference according to a participatory logic in order to generate shared value for the benefit of all stakeholders, primarily the community and the regions it operates in.

THE RELATIONSHIP WITH THE INSTITUTIONS

Relations with the institutions are focused on the economic dimension (taxes and fees) and the social dimension (relations with local institutions, sector authorities, consumer associations and other civil representatives etc.), in line with current legislation and the Group's Code of Ethics.
In 2021 **€ 150.7 million** (approx. € 134.6 million in 2020) was paid in taxes. The tax rate for the year is equal to 30% (it was 29.2% last year).
The Tax Management Unit in the Parent Company's Administration, Finance and Control Function, has the main function of developing **tax policy** at the Group level, monitoring legislative changes and ensuring periodic compliance, managing – as key owners – the relative risks, which are assessed, managed and monitored within the wider ERM programme. The Unit also prepares, where appropriate, specific information on the subject for the Control and Risk Committee. Acea interacts with the relevant tax system authorities in a collaborative and transparent manner and the updating of the main legal tax disputes is reported annually in the Consolidated Financial Statements, to which reference should be made. In compliance with the relevant legislation, Acea produces a Country by Country Report[111], which lists the information on taxes paid in each jurisdiction in which the Company operates. **According to the latest Country**

111 The obligation arises for the Parent Company due to its control of Acea International, the vehicle company through which shares in the overseas companies are held. The data produced in the Country by Country Report are merged into the audited *Consolidated Financial Statements*.

by County Report filed by Acea in 2021 with the Italian Revenue Agency **covering 2020 data**, **97% of the total amount** is paid **in Italy**[112] while the remaining 3% is paid in the Dominican Republic, Honduras and Peru, where the Company operates in the water sector to improve the service, with reference to certain technical and management aspects (see the chapter Water Company data sheets and overseas activities). Overseas activities refer to locally managed businesses **and are not connected to delocalisations carried out to draw fiscal benefits from favourable jurisdictions**. In fact, Acea has not defined a tax strategy and does not intend to establish any aggressive tax planning to gain a competitively advantageous position. Acea regularly pays contributions and registration fees owed to public and private bodies, such as chambers of commerce, independent administrative authorities, industry associations and representative bodies. In 2021, the total amount of this item was approximately € 2.91 million (€ 2.63 million in 2020).
Partnerships with **public institutions** are aimed at carrying out **initiatives with positive effects in the local region and the public's quality of life** (see the chapters Customers and the community, Personnel and Relations with the environment).
Article 17 of the Group's **Code of Ethics**, devoted to relations with institutions, the public administration and political and trade union organisations, establishes that: "*Acea cooperates actively and fully with the independent Authorities, establishes relations with the Public Administration by strictly observing the provisions of the law, applicable regulations, provisions contained in the Organisation and Management Model pursuant to Legislative Decree 231/01 and in internal procedures [...]. Acea does not contribute in any way to the financing of political parties, trade unions movements, committees or organisations [...] or their representatives and candidates [...] Acea does not make contributions to organisations with which a conflict of interest may arise [...] In any case, Acea's personnel shall refrain from any behaviour aimed at exerting pressure (direct or indirect) on political and trade union representatives or representatives of associations in potential conflict of interest in order to obtain personal or corporate advantages*".

The supervision of relations with institutional entities is defined by **an organisational model** that attributes competences **and responsibilities** to the corporate structures of reference. In particular, the **Institutional Relations Function** protects corporate interests and represents the Group's positions in dialogue with Industry associations, Research centres, Standard-setting bodies and local, national and international public and private institutions and bodies. The **Legal Affairs Function** supports the Group Companies for **legal aspects** related to the activities, the **Corporate Affairs Function** handles communications with the Supervisory Authorities (Borsa [Italian stock exchange] and Consob [National Commission for Companies and the Stock Exchange]) and the **Regulatory Function**, in coordination with the relevant divisions established within the Group Companies, handles relations with the **regulatory bodies** in the relevant sectors, also to minimize exposure to regulatory risk. The **Group's operating companies**, jointly with the Parent Company, manage the **"technical and specialist" aspects** of the managed services – water and electricity supply, public lighting and the environmental sector – **including through interaction** with administrative, regulatory and control bodies.

INTERVENTIONS BY SECTOR AUTHORITIES WITH RESPECT TO ACEA: REVIEWS, BONUSES AND PENALTIES

In the regulated sectors, **the Regulatory Authority for Energy, Networks and Environment** (ARERA) has established bonus and penalty mechanisms to encourage the improvement of the performance of service operators.
In view of ARERA's approval of the regulatory experiment on service continuity for LV users, **ARETI** paid no penalty in 2021 since the project provides for a final balance at the end of the four-year trial period (this is in 2024 for the four-year period 2020-2023).
Areti paid about € 20,000 to the Cassa per i Servizi Energetici e Ambientali (CSEA) for exceeding the standards set for MV users and about € 830,000 to MV and LV end customers for prolonged and extended outages; in 2021, it also earned about € 5.3 million as a premium for interventions aimed at **increasing the resilience of the distribution service** in relation to 2020.
In 2021 the **Lombardy Regional Administrative Court** rejected Areti's application for a declaration that ARERA Resolution No. 270/2020, revising the tariff contribution to be paid to distributors fulfilling their energy saving obligations under the Energy Efficiency Certificates mechanism, was null and void, in execution of Lombardy Regional Administrative Court ruling No. 2538/2019, and ordered the continuation of the proceedings to verify whether it could be annulled due to flaws in its legitimacy. An appeal was lodged against this judgement, which the Council of State held to be unfounded. Areti also filed an appeal with the Lombardy Regional Administrative Court to challenge ARERA Resolution 550/2020 on white certificates and the determination of the tariff contribution to be paid to distributors under the Energy Efficiency Certificates mechanism for 2019 and, in October 2021, it filed an appeal on additional grounds in relation to ARERA Resolution 358/2021 on the tariff contribution to be paid to distributors for 2020.
The automatic compensations payable to customers by the water companies **Acea Ato 2**, **Acea Ato 5**, **AdF**, **AdF**, **GORI and Gesesa** during the year totalled approximately € 300,000, € 15,600, € 21,000, € 378,000 and € 25,000, respectively, in relation to contractual quality performance.
In 2021, the **AGCM** [Antitrust Authority] contacted **Acea Ato 2 and GORI** concerning the issue of **two-year statute of limitations on invoiced consumption**, pursuant to the 2020 Budget Law, formulating requests for information which were followed by moral suasion tactics. The Authority has taken note of the feedback received and the actions implemented by the Companies and has deemed these measures suitable to remove any suspicion of unfairness towards consumers, requesting them to provide proof of the actual implementation of the measures by 31/01/2022. The AGCM

112 The low amount of revenue, and consequently the taxes paid, in relation to the Group's activities in foreign countries has led to the overseas companies being reported as non-material from an economic/financial point of view; in addition, the potential evolution of the sector and other strategic and representative criteria regarding the Group's development and main impacts, have resulted in them not being included within the scope of the Consolidated Non-Financial Statement. The main data and information referring to these companies are however included in the Sustainability Report (see the chapter *Water Company data sheets and overseas activities*). Although the issue introduced by GRI 207, on Taxes, was not included among the material issues with the involvement of stakeholders and managers, and therefore does not appear in the *GRI Content Index*, it is in any case mentioned here as testament to transparency and good accounting practice.

has also initiated proceedings against **GORI** concerning its **criteria for charging for the sewerage and purification service**, and has requested it to cease any incorrect commercial conduct, pursuant to Article 4, paragraph 5 of the Regulation on investigative procedures for consumer protection, and at the outcome of the clarifications provided and the actions taken, the AGCM ordered the closure of the proceedings in November 2021.
With reference to the **environmental sector,** AGCM issued two requests for information to **Acea Ambiente and Demap** regarding the treatment of plastics and one request to **Acea Ambiente** regarding organic waste; it also requested additional information from the former following its acquisition of Deco and Ecologica Sangro.
In 2021, a preventive seizure order by the **judicial authorities** involved some limited structures of the sludge line of a purification plant managed by GORI, which was subsequently released from seizure during the same year.
In November 2021, the Benevento judicial authority ordered the preventive seizure from **Gesesa** of movable and immovable assets worth € 78 million for charges relating to environmental offences under Legislative Decree no. 231/2001; this measure was challenged by Gesesa and the appeal was upheld by the review court which therefore cancelled the seizure in December.
Following a fire that occurred in December 2021, an order was issued to seize the burnt waste and the related warehouse owned by **Demap**.
Finally, as for the litigation procedures of an environmental nature with public enforcement authorities (Arpa, Forestry, etc.), see *Relations with the environment* and the *Environmental Accounts*.

EMERGENCY MANAGEMENT PLANS

In synergy with public institutions, private entities and research bodies, Acea carries out **environmental and social initiatives and projects of an environmental and social nature aimed at protecting common assets**; these projects are referred to and illustrated herein (see, for example, Relations with the environment or the chapter Customers, paragraph *Quality delivered*).
Acea is active in the **prevention** and **management of critical events**, and in the **event of an emergency** it provides support to the **authorities responsible for public health**, **civil protection and public safety**.
In particular, the Group companies ensure the **highest levels of safety and continuity in the provision of managed services**, in collaboration with public institutions.
To this end, they have established **procedures and tools** that, in critical events (unavailability of central systems, breakdowns, adverse weather conditions, peak demand and network stress, etc.), are **able to restore operating conditions of networks**, **plants and systems in a timely manner** (see also the chapter on Protection of assets and management of internal risks in the section on The company as a stakeholder).
Each operating company has **plans for managing emergencies and intervention procedures** and, through the **control centres**, **constantly monitors the status of networks and equipment** – water and sewage, electricity and public lighting – in partnership with the **Municipal and National Civil Protection and Roma Capitale.**
Whenever an event affects the managed services (damage to plants and/or networks, water/energy crisis, etc.), the companies of the Group notify the competent bodies to facilitate the coordination of interventions.
Acea SpA has a **procedure for managing** health and environmental **emergencies** with an impact on the population, **for which it defines the level of risk** (low, medium and high) and provides for the organisation of intervention teams. The company also holds **biosafety Trust certification for actions to prevent and control coronavirus and other viral infections.**
Areti's emergency management plan, the company that handles the distribution of electricity, deals with widespread breakdowns and unavailability of the grid. It defines the different **states of activation** (ordinary, alert, alarm and emergency), according to the operational and environmental conditions, the procedures for the activation (and subsequent reset) of the same states, the **units involved** and the respective roles, and the **resource materials** necessary for maintaining or restoring equipment. It also provides for the appointment of a **Head of Emergency Management** and an employee dedicated to the **management of safety**, in specific cases. The **detailed Operating Plans** indicate methods for quickly managing the types of disruption (such as flooding, fires, disruptions to the remote-control network, etc.) and procedures to be followed, for example, **for restarting the electrical system in the event of a blackout** of the National Transmission Grid (NTG) or **re-establishing power for strategic users** (such as parliament, the government, the State of Vatican City, etc.), **the materials**, **equipment and resources to be involved** depending on the case. The master plan and detailed operating plans are **updated on a yearly basis** and periodically improved on the basis of analyses of real cases. The effectiveness of procedures and the functionality of equipment are tested by means of drills. In addition, with a view to improving processes, the Company created a platform for the real-time **acquisition and monitoring** of **weather events**, in order to prevent potential risks from changes to the operating conditions of the electric grid.
Plans for the management of emergencies of the **water companies** define conditions that compromise the **continuity and quality of the integrated water service**, **classify the emergency levels**, describe the **preventive and remedial measures** for the types of unforeseen events (damage to the networks, pollution, water crisis and emergencies related to the sewerage and treatment service) and provide for the division of tasks among the areas involved (technical area and communications). These are shared with local institutions (such as Governmental Territorial Offices, Local Health Authorities, Area Management Agencies). In particular, the **Acea Ato 2 Plan was reviewed**, consistent with the Water Safety Plan guidelines, and takes **25 critical scenarios** into consideration, specifying the consequences, manoeuvres and mitigation actions required for each of them. In 2021, the Company updated its Emergency Management Plan, also based on the procedures applicable under the pandemic conditions and in the light of organisational changes, and set up the **Standing Emergency Committee** which meets on a periodic basis to propose interventions and training activities, and to decide on actions in serious emergency conditions.
Acea Ato 5 continued its collaboration with ARPA Lazio for the "Environmental surveillance project of Sars-CoV-2 through urban wastewater in Italy".
AdF collaborated with **the Tuscan Water Authority** on the updating of the **Emergency Operating Plan for the drinking water crisis (EOP)**, aimed at monitoring and preventing water emergencies through the periodic reporting of critical issues found within the region, and providing support for operational decisions when an emergency arises. In the context of the critical issues outlines in the

Plan, AdF has in place a **Water Crisis Emergency Management Operating Procedure** which, establishes the sequence of activities to be carried out, detailing all of the entities involved, measures to be taken, documents/databases to be consulted/updated/produced, and correspondence to be sent, for every expected level of severity. Together with other authorities such as the Province of Benevento, the Municipality of Benevento, EIC, the Region of Campania, ARPAC [Campania Regional Environmental Protection Agency] and local health authorities, etc., Gesesa is an active member of the **technical panel to ensure that the local aquifer** is safe from tetrachloroethylene pollution.
The **companies of the Group that manage waste treatment plants** ensure the execution of a detailed **routine maintenance plan** to **reduce plant downtime caused by faults or unexpected events** and minimize unplanned non-routine maintenance work. All the structures of each site are equipped with **Emergency Plans** that take into account the **scenarios identified for endogenous and exogenous emergencies**. These Plans examine aspects related to the **safety of workers**, ensuring their safety with specific behavioural and evacuation procedures, checked on a yearly basis, and aspects related to the **protection of the environment**, identifying the emergency interventions in order to limit contamination of environmental media (air, water and soil). Permits by virtue of which the plants are managed also include communication requirements and methods for **non-routine or emergency events to the competent bodies**, in order to guarantee the maximum dissemination of information and, where appropriate, the coordination of the intervention.
Acea Elabori has **updated the Emergency Plans of the Grottarossa and EUR2 Centres with the inclusion of measures to counter the spread of Covid-19.**
Finally, as already mentioned, in 2021 both Acea Elabori and Acea Energia received **Biosafety Trust Certification** by implementing an infection prevention and control management system and adapting their Emergency Plans.

PROJECTS FOR THE INNOVATIVE AND SUSTAINABLE DEVELOPMENT OF THE AREA

In the **water segment**, **Acea has adopted the Smart Water Company model** which is characterised by responsible and sustainable management of water resources, thanks to the increasing **digitalisation of the network**.
In 2021, some water companies, in agreement with local administrators, started or continued a review a programme of **installation** of **Water Kiosks** in the areas managed (see the chapter Customers, paragraph The quality delivered in the water segment).
In the smart city field, in line with its strategy for electric mobility and its plan to install electric columns, in 2021, Acea **launched** the **e-mobility App** which allows customers to recharge their electric vehicle at more than 10,000 enabled points in Italy, thanks to interoperability agreements signed with industry players (see the chapter Customers chapter, paragraph Customer care).
Acea also works with **ENEA on projects aimed at sustainable management of the waste and water cycle**, with the objective of applying innovative technologies and solutions to industrial projects (see Relations with the environment, Water segment).
Finally, as part of the implementation of the Lazio Region European Social Fund Operational Programme, **Acea Elabori** in collaboration with ENEA and the University of Cassino and Southern Lazio has launched an **Industrial Research Doctorate** to implement a **sustainable management strategy for sludge from wastewater treatment**, to limit its environmental impact, to limit its environmental impact.

In order to promote the innovative and sustainable development of the sectors of reference, Acea establishes **collaborations and partnerships with complementary companies** or organisations operating **in sectors similar to the businesses it manages** and **with innovative players**.
In 2021, Acea was a partner of the "**Circular 4 Recovery**" call for projects, promoted by Marzotto Venture Accelerator to **select innovative projects aimed at creating eco-friendly development models and fostering the transition to a more sustainable economy**.
In particular, the call selects, awards and supports entrepreneurial projects aimed at the development of innovative technologies, solutions and services with a low environmental and social impact in the following 5 Key Focus Areas of the Circular Economy: *Circular Bioeconomy, Circular Water Economy, Circular Energy Economy, New Circular Life Cycles, Circular City & Land.*
7 proposals were examined further and feedback was provided.
In 2021 Acea **signed specific agreements (MOUs) with foreign companies for the development of innovative technologies for the production of green hydrogen** (SGH2, Innovathec and Omni).
Collaborations also continued with **private companies active in the green and circular economy**, **advanced plant engineering**, **innovative treatment for recycling and recovery of waste and reduction of emissions**. These include Nextesense, for the use of visible light lamps with sanitising action (BIOVITAE) in the purification of water and waste, Opus, for the creation of an analytical robot for the analysis of TSS in waste water, Raft, for the production of new technologies for the abatement of emissions, in particular odorous emissions, by means of photocatalysis and catalytic oxidation, and the Sersys Group, for the joint development of projects and collaborations in the field of waste treatment and specialist analytical activities. Moreover, **collaboration agreements were signed** with new companies, including Absolute Energy, for the exploitation of an advanced waste shredding mill, Wasserchemie, for the development of a predictive model for optimising the use of filter masses, Uviblox, for the development of UV technology for abatement of odour emissions, Lod, for the development of an advanced online odour emission monitoring system using odour chemical fingerprinting, and Nature 4.0, for the development of a new category of low-cost sensors for environmental monitoring and the creation of an electrochemical sensor calibration laboratory.
Acea is one of the companies that won the tender, together with TIM and Windtre, to collaborate for the next three years on the **Casa delle Tecnologie Emergenti** [House of Emerging Technologies] **(CTE) in Rome**: this will be the first permanent living lab, deployed in 2021, to develop the smart city of the future. The project is sponsored by the Department of Economic Development, Tourism and Employment, in cooperation with universities, research centres, companies and partners specialised in technological progress.
In November 2021, in partnership with US software provider **Citrix**, **Website and Codemotion**, an Italian platform that supports the professional growth of developers, Acea launched "**Innovate the way we work**", a **hackathon** to search for solutions to be implemented on Digithall, the digital workplace.
Finally, with the aim of bringing together the protagonists of innovation to study new models of urban development, Acea organised the **second edition of Innovation Day**, **entitled *Builders of the Future*** (see box).

ACEA INNOVATION DAY 2021: NEW TECHNOLOGIES FOR BUILDING A SUSTAINABLE FUTURE

On 5 July, the second Acea Innovation Day was held at the Salone delle Fontane in EUR, Rome.
The title ***Builders of the Future*** represented the Group's readiness to discuss the challenges ahead with experts with sector experts and institutional representatives. In this second edition (the first was held in 2019), the focus was on the themes of innovation and how they can represent the drive for the country's solid and lasting recovery. Digitalisation, cybersecurity, green energy, electric mobility, circular economy, network resilience to manage the growth in electricity demand and tackle climate change: these were the topics at the heart of the event, which took place in"phygital" (part presence, part digital) mode to outline the scenarios and new industrial models. Important companies participated in the day's work, including Cisco Italia, IBM Italia, Leonardo, Google Cloud Italia, Accenture Italia, the ELIS Consortium, CDP Venture Capital SGR and Mind The Bridge.
The challenge is to create a **community of innovators** acting together to accelerate the process of technological evolution of infrastructures, to develop the competitiveness of companies and offering more efficient services. The live broadcast was followed by about 5,000 online users, with an average of about 200,000 views online and offline.

The virtuous relationship with the local region is also expressed through the **collaboration between Group companies and the educational world of the new generation** (see Customers, section on Communication, events and solidarity, and Personnel, section on Development of human resources and communication).
In 2021 **Acea Ambiente** signed an agreement with the University of Cassino to carry out the research project **CO_2 capture and environmental impact mitigation in waste-to-energy plants** and has carried out projects to educate people about sustainability and the circular economy, such as the **Differenzio Anch'io** [waste sorting] project.
In 2021, **AdF** involved a number of schools in the province of Grosseto in environmental education projects **#bevisenzaplastica** [drinkwithoutplastics] on the conscious use of water resources, distributing 3,000 water bottles to school students and installing 14 water dispensers.
Gesesa has launched the **"Plastic Free" project aimed at local institutes and universities** and donated water bottles and dispensers to the institutes to reduce the use of plastic in the area served and also donated the first water kiosk to the University of Sannio.

Collaborations with universities and research institutes are carried out within the framework of **conventions and agreements**.
To assess changes in the availability of water resources in the short and long term, in 2021 **Acea Ato 2** initiated collaboration agreements with the **CNR Institute for Water Research** for the development of tools and instruments for forecasting the flow rates available for drinking water purposes in relation to short-term scenarios (less than 1 year), and with the **University of Catania** for the prediction of the probability of satisfying the available water flows in the event of climate change in medium and long term scenarios (30, 50 years).
AdF has begun working with the Environmental Engineering Department of the University of Florence to study the concentration of microplastics in urban wastewater and sewage sludge.
Within the framework of the study, research and technical/scientific support agreement with the **Department of Earth**, **Environmental and Resource Sciences of the Federico II University of Naples**, **GORI** carried out a study on the sludge produced by the Area Nolana purification plant, with the aim of assessing the potential for biogas production, and was involved in a study on emerging contaminants, recently conducted in collaboration with the University of Salerno and a group of researchers from the Water Research Institute of Bari.
Acea Elabori has signed several collaboration agreements with different Universities: **the Department of Pharmacy of the Federico II University of Naples** for the development and use of sensors and biosensors in the environmental field for the online determination of chemical species, particularly metals, drug residues, endocrine disruptors, PFAS and other chemicals of emerging concern (CECs) in wastewater and post-treatment water; the **Department of Civil and Environmental Engineering**, **University of Florence** for the development and validation of innovative technological solutions for the advanced monitoring of solid, liquid and gaseous effluents from wastewater and waste treatment plants, including odorigenic emissions and greenhouse gases; the **National Interuniversity Consortium for Materials Science and Technology** for the design of innovative materials and the development of new technologies for the production and recycling of materials with a view to a circular and sustainable economy; the **CERI Research Centre "Prediction**, **Prevention and Control of Geological Risks" of the University of Rome La Sapienza** for the development of models for hazard analysis on a large scale in relation to geological instability processes, to assess the risk exposure of structures and infrastructures the **Department of Astronautical**, **Electrical and Energy Engineering of the University of Rome La Sapienza**, **Faculty of Civil and Industrial Engineering** for the development of 4.0 sensors to optimise the operation and safety of integrated water sites; and finally with the **Marche Politecnico University** for the development and field validation of methods for calculating and critically analysing the carbon footprint of integrated water services and waste treatment.
In the **energy field**, **Areti** actively participated in the meetings of the **Milan Politecnico's Drone Observatory** during which it presented the **G.I.M.M.I. project**. project, whose high level compared to similar projects on the national scene was appreciated.

COMPARISON WITH THE REFERENCE CONTEXT

Acea participates in **Research Centres**, **Standard-setting Bodies and Industry Associations**, acting as sponsor or contributing to studies in the businesses in which it operates.

THE 2021 MEMBERSHIPS OF RESEARCH CENTRES, STANDARD-SETTING BODIES AND INDUSTRY ASSOCIATIONS

During the course of the year the Group renewed and activated numerous memberships of organisations of interest, including:

- AGICI – Finanza d'Impresa
- AICAS Associazione Italiana Consiglieri, Amministratori e Sindaci
- AIDI Associazione Italiana Illuminazione
- Analysis
- Andaf
- ANFOV
- ASCAI
- Aspen Institute Italia
- Assochange
- Associazione Amici della LUISS Guido Carli
- Associazione Civita
- Associazione Geotecnica Italiana
- Associazione Italiana Internal Auditors
- Associazione Italiana Esperti Infrastrutture Critiche (Italian Critical Infrastructure Experts Association – AIIC)
- Associazione Elettrotecnica ed Elettronica Italiana (Italian Electro-technical and Electronic Association – AEI)
- Associazione Idrotecnica Italiana (Italian Hydro-technical Association – AII)
- Associazione nazionale fornitori di elettronica (National Electronics Suppliers Association – Assodel)
- Assonime
- ASTRID
- CEDEC Bruxelles (European Federation of Local Energy Companies)
- CEEP Bruxelles (European Centre of Employers and Enterprises providing Public services)
- Centro Studi Americani (Centre for American Studies)
- CDP Worldwide
- CISPEL Confservizi Toscana
- Club Ambrosetti
- Comitato Elettrotecnico Italiano (Italian Electro-Technical Committee – CEI)
- Confindustria Umbria
- Conseil de cooperation economique
- CONSEL Consorzio Elis per le Formazione
- Sustainability Makers - the professional network (formerly CSR Manager Network)
- Distretto Tecnologico Nazionale sull'Energia (Di.T.N.E.)
- EDSO Bruxelles (European Distribution System Operators' Association for Smart Grids)
- Elettricità Futura ("Future Electricity" formerly Assoelettrica-AssoRinnovabili)
- Energy and Strategy Group – Politecnico di Milano (ES-MIP)
- EU Bridge Harmonized Electricity Market Role Model
- EU-DSO (European Distribution System Operators' Association)
- EURELECTRIC Bruxelles (Union of the Electricity Industry)
- FAI Fondo per l'Ambiente Italiano (Fund for the Italian Environment)
- FERPI
- FIRE (Federazione Italiana per l'uso Razionale dell'Energia) (Italian Federation for the Rational Use of Energy)
- FISE Assoambiente
- Fondazione Global Compact Network Italia (Global Compact Network Italy Foundation)
- Fondazione Roma Europa
- Fondazione Utilitatis (Study and Research Centre for Water, Energy and the Environment)
- Gruppo Galgano
- IATT (Italian Association for Trenchless Technology)
- ICESP Piattaforma Italiana Economia Circolare coordinata da ENEA
- I-Com (Istituto per la Competitivita – Institute for Competitiveness)
- IGI (Istituto Grandi Infrstutture)
- InnovUp
- ISES Italia (International Solar Energy Society – Italian Section)
- Laboratorio dei Servizi Pubblici Locali di REF-Ricerche (Local Public Services Laboratory of REF-Ricerche
- Norman Network
- Italian Phosphorus Platform coordinated by AENEA and MATTM
- Servizi Professionali Integrati
- Task Force Demand Side Flexibility
- Task Force TSO-DSO on Distributed Flexibility
- Task Force TSO-DSO on Smart Grid Indicators
- UNI (Italian Standards Body)
- Unindustria Lazio
- UPA Utenti Pubblicità Associati
- Utilitalia (Federazione delle imprese ambientali, energetiche ed idriche) (Federation of Environmental, Energy and Water Companies)
- UNICHIM
- World Energy Council (WEC)

Acea **participates in occasions for dialogue with the business world and the scientific community** on **issues of national and international importance** and **offers its own specialist contribution on the occasion of thematic conferences**, forums and workshops on topics linked to its managed companies, also presenting publications and works of technical-scientific relevance.
To this end, in 2021 the Group participated in events and organised numerous initiatives (see Customers and the community, paragraph on Communication, events and solidarity; Strategy and sustainability in corporate Identity and the section on Relations with the environment), including the third edition of the **Acea Sustainability Day** during which institutions and companies discussed the challenges and opportunities for a fair and sustainable ecological transition, **Ecomondo** the most important green and circular economy fair in the Euro-Mediterranean area, the **Forum PA**, the largest national event on innovation, to create and strengthen connections between all the players operating in central and local administrations, technology companies, and territories around the missions, objectives, and actions of the National Recovery and Resilience Plan (PNRR), **SMAU Milan 2021** and the European event on innovation **Maker Faire Rome** (see box).

ACEA AT MAKER FAIRE 2021

In October 2021 Acea participated, for the eighth consecutive year, at **Maker Faire Rome-The European Edition**, Europe's largest innovation event. This edition was held both digitally and in person.
From 8 to 10 October, **Acea was present at the Gazometro Ostiense with a dedicated stand** where it presented the most **innovative solutions for industry 4.0 solutions applied to its infrastructures and industrial areas** to the community of makers and startuppers from all over Italy and to the public:

- G.I.M.M.I.: a project involving inspections and surveys with drones and satellites for an even safer and more sustainable electricity grid.
- Waidy Wow: the new version of the app that makes "smart" fountains, public fountains and water kiosks and involves an increasingly wide community of users.
- Workers Watch: a collaborative effort between the Acea Group and Beam Digital, to improve safety prevention and management efforts for Acea employees.
- Augmented Reality: the meeting of the real and virtual worlds, to simulate scenarios, share experiences and data, train people and rethink industrial processes.

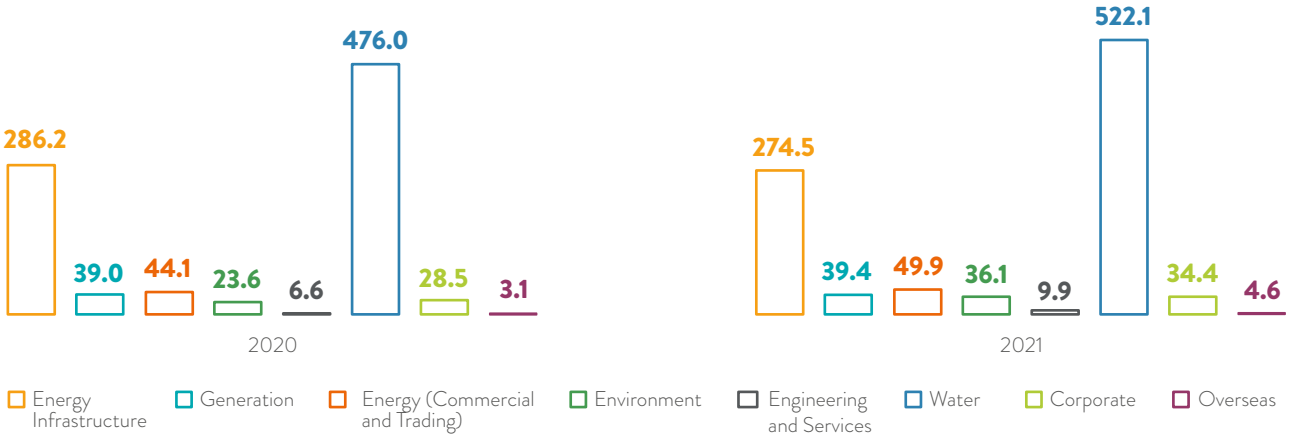
On **sustainability** issues, Acea participates in **networks of experts**, **working groups**, **studies and sector research** organised by the academic world, civil society, institutions or business entities. Indeed, the company is active as an associate in the **Global Compact Network Italy Foundation**, the representative body of the United Nations Global Compact in Italy, the **Sustainability Makers - the Professional Network** (formerly the **CSR Manager Network**), the national association that brings together the main Italian companies active in corporate social responsibility.
Acea's participation in **Utilitalia**, the federation that brings together the multi-utilities of water, environment, energy and gas, is also expressed through its participation in **technical panels** and **topical working groups**. In particular, **in 2021**, Acea participated in the following **working groups within the context of Utilitalia's Transition plan**: **Finance**, **Accountability**, **Corporate Mission and Sustainable Success**.
The company also participates in benchmark analyses on sustainability in Italian Utilities, like those carried out by the **Utilitatis** research centre and **Top Utility**.

THE COMPANY AS A STAKEHOLDER

THE MANAGEMENT OF COMPANY ASSETS

Acea protects and enhances its tangible and intangible assets, seeking a sustainable financial position and **governing the internal needs**, linked to the operating management and the **growth prospects**, consistently with the aims expressed in the business mission and the strategic plan.
In 2021 **investments** totalled **€ 970 million**, **up** 7% (€ 907 million in 2020). These were distributed by business segment as follows: € 36.1 million for the **Environment** area, in particular for work on Acea Ambiente's plants and for the change in the scope of consolidation attributable to Ferrocart; € 49.4 million for the **Energy** (**commercial and trading** area), both for Acea Innovation projects and for activities related to the acquisition of new customers and Acea Energia's IT implementation initiatives; € 522.1 million for the water area, with increases due to the capital expenditure plan distributed among Acea Ato 2, GORI and AdF and to the change in the scope of consolidation; € 9.9 million for the **Engineering and services** area, for the design and implementation of new processes and extraordinary maintenance of the head office and laboratories; € 274.5 million for the **Energy Infrastructure** area, for work on MV/LV networks, substations, measurement and remote control instruments and projects to re-engineer information systems; € 39.4 million for the **Generation** area, both for work on Acea Produzione's district heating plants and network and for investments to develop photovoltaic systems. Finally, the **Parent Company** and **Overseas** with investments for about € 34.4 million and € 4.6 million, respectively.

Chart no. 48 – Breakdown and investments by segment (2020-2021)



Depreciation, **amortisation**, **provisions and write-downs** amounted to **€ 675 million** (8.8% higher than 2020). The increase in depreciation and amortisation is related to changes in the scope of consolidation and investments in the period in all business areas. The increased impairment of receivables is mainly attributable to Acea Ato 2, Acea Ato 5 and GORI. Provisions for risks decreased slightly, essentially remaining stable.

THE COMMITMENT TO RESEARCH AND INNOVATION

Scientific and technological innovation at the service of business processes is one of the pillars of the **Group's strategic planning**, **an area in which it invested more than € 6 million in 2021**. At Acea, **innovation** is a **transversal** strategic lever that is **open** to the external ecosystem: Through its innovative approach, the company aims to **explore new business** and the creation of **new development models**.
The management of the Group's innovation line is managed by the **Technology & Solutions Function of Acea SpA**, which has the task of developing and implementing infrastructures, systems, products and services in the technological, innovative and digital field, directing and coordinating the preparatory activities for the generation of products and services in the market segments of interest, and by **Acea Innovation** which facilitates the Group's design and innovation initiatives, generating products and services for the business (B2B) and institutional (B2G) markets, particularly in the area of electric mobility.

The innovation **model** identifies internal needs or areas of interest and adopts typical Open Innovation processes and approaches, with the **collective generation of ideas and the involvement of internal and external stakeholders** starting from the conception process, moving on to the trialling of the design concept, to the implementation of the projects. According to this logic, the **promotion of the Group's culture of innovation and the development of internal entrepreneurship are fundamental** and to that end a dedicated crowdsourcing platform was created, which collects employees' design ideas and creates a company space for active involvement.
Also present is the **Innovation Board**, made up of innovation representatives from the various industrial entities, which, in a shared manner, defines and creates the Group's innovation strategy.
To render the approach to innovation systematic:

- the **"Acea Innovation Garage" corporate entrepreneurship programme was developed**, to be launched for the second time in 2021, with the aim of facilitating new project ideas to be implemented within the company, stimulating the entrepreneurial skills of employees;
- **idea generation workshops** are organised to creatively address business and innovation needs;
- **internal communities** are active, as **experimental spaces in which new tools and languages can be collectively studied and analysed**, **best practice can be shared**, **and new projects can emerge**, and include the Data Community, an informal space in which professionals from the various businesses meet and exchange knowledge on issues related to the world of data.

More than 40 initiatives on various topics of strategic interest to the company were organised through the **Acea Innovation Garage** in **2021** organised, both in person and remotely, including:

- **30 digital workshops and in-person initiatives** dedicated to sharing new ideas on: Circular Economy, Smart Water, Smart Energy, Smart Organization and Human, Business Process Management and Customer Experience Transformation;
- **8 meetups dedicated to the Innovation Community** aimed at exploring and narrating the world of innovation in Acea;
- **1 Hackathon**, in an Open Innovation perspective, to search for innovative solutions to be implemented on Digithall, Acea's digital workplace.

The Innovation Model involves the use of **market analysis**, **continuous scouting and development of national and international partnerships**, with **players in the innovation ecosystem active in sectors of strategic interest to the Group.** This allows Acea to activate privileged channels of access to ideas, business and technological opportunities, academic research and provides new talents to innovate business, processes and corporate products.
To this end, in 2021 Acea participated in the following programmes:

- **Startup Europe Partnership**, which promotes a sustainable and global entrepreneurial ecosystem thanks to programmes and activities intended to support combinations between scale-ups and international corporations, supporting the growth and development of relations through innovation. Acea can thus access highly innovative companies that, compared to a startup, have already gone through all stages of development and have an advanced business model and a product already on the market. Thanks to this valuable collaboration, Acea participates in summits with innovative European companies, the Israeli ecosystem that represents a point of reference for innovation, and is also given the opportunity to meet scale-ups from Silicon Valley, the cradle of innovation par excellence;
- **Elis Open Italy**: the objective is to support dialogue and cooperation between large companies, Italian start-ups/SMEs and innovation enablers such as accelerators, research centres, venture capitalists and young talent, through concrete innovation projects. For some time now Open Italy has created "a venue" where various stakeholders can meet and work together to incentivise the introduction and development of innovative solutions within the Italian economy, supporting an open innovation culture in Italy;
- **Osservatori Digital Innovation [Digital Innovation Observatories] of the Politecnico University of Milan**, a point of reference for digital innovation in Italy, in which Acea participates mainly through the **Startup Intelligence Observatory**, a community of discussion and open innovation at the apex of innovation. In 2021 Acea participated in the **Space Economy** Observatory, to explore the opportunities of space technologies;
- **Zero Accelerator**, the startup accelerator born from the collaboration between the National Network CDP Venture Capital SGR - Fondo Nazionale Innovazione, Eni, LVenture Group and Elis to support the best startups and innovative SMEs that develop projects and solutions in the greentech/cleantech field aimed at minimising carbon impact, facilitating the reduction of emissions, optimising the waste cycle by speeding up energy transition processes and promoting the circular economy;

In addition, in 2021, **collaborations** continued with **Talent Garden** on digital transformation and corporate innovation projects **InnovUp (formerly Italia Startup**), the non-profit association representing the Italian start-up ecosystem, extended to include all private and public entities, to encourage the emergence of a new Italian entrepreneurial fabric; and **ANFOV**, an association that promotes dialogue between companies and institutions involved in the telecommunications sector and monitors, analyses and encourages the development of the contiguous ICT scenarios.
Finally, **Acea is a partner of the Italian National Young Innovators Association** (ANGI) and, as part of the "National ANGI Award", collaborates in the awarding of the special "Innovation Leader Award" for young talent.
In recognition of its achievements, in 2021 Acea again received prestigious **awards in the field of innovation** (see box).

AWARDS IN THE FIELD OF INNOVATION

Acea 's commitment to innovation has been recognised by important institutional initiatives.
Acea won the **SMAU 2021 Innovation Award** with the "**Lean Procurement for innovative start-ups and SMEs**", a new subsidised model to engage innovative start-ups and SMEs that calls for a dedicated procurement process that overcomes the obstacles of traditional processes. In December, **GORI** won the Innovation Award at **SMAU Naples**, with the project "**Smart Metering. Use of IoT technology in Integrated Water Services management".**
Finally, at **Ecomondo 2021** Acea won the ecohitech Award with the **PASO project** "for the value of a solution concerning the aspects of maintenance and intelligent monitoring of critical infrastructure for energy efficiency".

With reference to the Group's industrial processes and infrastructure, the following boxes illustrate, by way of example, the main **research and innovation projects** carried out in 2021 by Acea SpA's Technology and Solutions Function, Acea Innovation, Acea Elabori and the industrial segments of the Group. We also recall what has already been illustrated in the paragraph Relations with institutions, and in particular *Projects for the innovative and sustainable development of the territory*, Customers and the community and the section *Relations with the environment*.

RESEARCH AND INNOVATION AT ACEA SPA

In 2021, the **Innovation unit of Acea SpA's Technology & Solutions Function** with the involvement of all the company's entities and external start-ups, launched and/or **realised numerous experiments and initiatives for the innovation and digitalisation of services**, including:

- the implementation of **SIDE**, the innovative project, developed in collaboration with Areti and the startup BlueTensor, which uses Artificial Intelligence and Computer Vision algorithms applied to images of secondary substations to uniquely identify and catalogue substation components;
- the launch of the **"OCR" experiment**, in collaboration with Acea Energia, to simplify the management of utilities by customers;
- the development, in cooperation with Acea Ato 2, of the **DepurArt** App usable by all citizens visiting some of the major purification plants, which guides them with audio descriptions, photos and videos, along the wastewater treatment cycle; in 2021 the project was developed at the Fregene plant;
- **the testing of a system of preventive detection of malfunctions or disturbances on Rome's public lighting network**, **such as interference caused by vegetation**, **using satellite images and artificial intelligence**, carried out in synergy with Areti;
- the project for the **usage of sensors and development of artificial intelligence algorithms in order to perform predictive maintenance** and ensure real-time monitoring of values of interest at the Scafati water purification plant, developed with Acea Elabori and GORI and in collaboration with the startup Ammagamma.
- the creation of a **new navigable web bill** for water;
- the **digitalisation of the services offered** to citizens with the consolidation of the **digital counter and the launch of the first Waidy Points** in the territory managed by Acea Ato 2;
- **the launch of the project for the evolution of the IT system for customer management (CRM)**, which provides for the complete redesign of commercial processes on the new SalesForce tool, according to the principles of customer centricity, complete digitalisation, flexibility and effectiveness drivers. The project will continue over the next two years with the progressive re-engineering of all business processes;
- the **consolidation of the Waidy Management System project,** which envisages the creation of an **IT platform to support decisions for the core water business**, in order to protect the water resource and reduce losses, improve the quality of the resource, and promote measures in favour of environmental sustainability;
- the **launch of the SAP Asset Management project**, which envisages the evolution of the app used by technicians within the workforce management model, by improving the user interface and the complete digitalisation of operational activities.

RESEARCH AND INNOVATION IN THE ENERGY AREA (COMMERCIAL AND TRADING)

n 2021, **Acea Innovation** was very active in the electric mobility area. It has further developed the **Charging Point Operator platform**, **integrating it in interoperability with 3 EMSP (E-Mobility Service Provider)** and created the **Acea Energia EMSP (Electric Mobility Service Provider) platform**, which launched in April.
As part of its activities in the sale of electricity and gas commodities and non-commodity services, **Acea Energia** has launched or implemented the following innovative projects:

- the first releases of the **E2CRM digital transformation programme**, which involved adopting the SalesForce CRM platform, enabling all processes to be implemented digitally, with a consequent reduction in contacts through traditional channels and paper-based flows; developing new functions on the portal reserved for customers in the Large&Business segment; activating a new funnel that makes customers converge towards the Acea.it website, in line with the latest digital developments; creating new reporting models and implementing tracking on all sales and post-sales processes;
- **the launch of the 'digital consultancy' channel on the Genesys platform**, a new way of interacting with customers that does not require the physical exchange of documents;
- implementation of PoC (Proof of Concept) to **verify the application of artificial intelligence (AI) model mechanisms in the claims classification phase**. The results of the PoC showed that large-scale implementation, planned for 2022, could increase the accuracy of complaint classification, with economies insofar as resources are concerned;
- **the start of the implementation project based on the datalake**, with the release of the first reports on the Qclik platform, which allowed an improvement in data monitoring aimed at preventing critical issues for customers and operations;
- the completion of technical implementations for the activation of **application-to-application communications with third parties** where required (IIS, Distributors, etc.). This reduces the processing times of requests and in the number of staff involved in handling cases.

RESEARCH AND INNOVATION IN THE ENERGY INFRASTRUCTURE AREA

In 2021, **Areti** launched, continued or concluded several innovative projects as part of its electricity distribution activities, including:

- **the PlatOne project**, which was financed by the European Community and was coordinated by the company. This project involves 12 partners from Germany, Belgium, Greece and Italy and **experiments with innovative management of distribution networks through the direct involvement of end customers.** Electricity service interruptions are resolved by a coordinated change in consumption and/or production of customers who are connected to the portion of the network affected by the event. The variations of individual customers are small and can be aggregated by a market participant (Aggregator) and organised into offers according to a predefined scheme. The most convenient offers that are technically compatible with the limitations posed by the infrastructure, are activated and monitored by a device, developed by Areti, that receives the Distributor's commands, transfers them to the actuators and interfaces with the new generation meter to read the measurement data in real time. The measurement data are then used to calculate the remuneration to be received by the customer for the service provided;
- the **POLEDRIC** project, for the construction of an **intelligent public lighting pole** in the city of Rome, is able to improve the public lighting service (through sensors and the use of advanced technologies) while **enabling additional environmental**, **security and communication services** (environmental sensors, traffic and parking monitoring sensors, video surveillance and video analysis services, etc.),from a **smart city** perspective. At the end of 2021, the partnership tender was concluded;
- The G.I.M.M.I. project (Massive and Targeted Infrastructure Inspection Management), to **reduce undiscovered faults on overhead lines** and asset monitoring, through periodic analysis of satellite images and targeted drone inspections;
- the **'AUTONOMOUS' project**, to **reduce the incidence of faults in the primary substation**, by means of preventive inspections either autonomously or remotely guided by a UGV (Unmanned Ground Vehicle) drone. In 2021, the testing of the solution continued with the setting up of a recharging box in which the drone, at the end of the mission, can recover and recharge itself, and the data collection and management platform was created, which is necessary for the integration of the new solution in the current inspection processes;
- the **Automa per Selezione Guasto in TLC [Automated Fault Selection in TLC] project**, aimed at supporting and **automating human operations by means of Robotic Process Automation techniques for remote fault selection on the network.** During the year, a demonstrator project was implemented to perform fault selection on a portion of a real network, using logic developed in matlab which, thanks to innovative Robotic Process Automation techniques, interacted with the SCADA system. The demonstrator project made it possible to verify the validity of the approach and to define the integration solution when fully operational;
- the project **Automation of Low Voltage Lines**, aimed at enabling remote control and automating the reclosure of low voltage lines from the secondary substation on disconnection for excess power;
- **the Bilateral LTE Automation project**, which involves the implementation of a field **automation solution to select the fault line and uses the 4G network to make the switches along the line communicate**. During 2021, development and testing of the solution was completed and mass deployment in the field began. The project also included the development of a central device management platform for the remote management of peripheral Industrial IoT devices that support the other remote and service monitoring solutions for the secondary cabin;
- a **pilot project** for the application of "**IoT Internet of Things**" technologies to **secondary substations**, with the aim of collecting and analysing measurements of **environmental parameters** and electrical quantities from the low-voltage network, to **improve plant maintenance** and **energy loss control.** Testing of the prototype on four secondary substations was completed in 2021.

RESEARCH AND INNOVATION IN THE WATER AREA

With the aim of improving operational performance carried out in collaboration with **Acea Elabori**, **Acea Ato 2** conducted **research activities and technological-digital innovation** on:

- the **satellite radar technique for remote monitoring Intasar Functional monitoring of the stability of elevated structures on the ground** (e.g. tanks) with specially designed reflectors to improve accuracy and resolution;
- **monitoring of emerging organic micropollutants (EOM) and endocrine disruptors in the wastewater of medium- to large-sized plants**, selected according to process scheme and territorial location; monitoring activities continued at the CoBIS and Roma Sud plants and those of the Tiber River relating to environmental risk assessment and analysis;
- the **advanced sensichips sensors**, completing in-depth tests with impedance methodology in different test modes (batch tests in wastewater);
- **ultrasound**, completing the VTA GSD technology trial that began in 2020, to assess achievable performance in sewage sludge disintegration pretreatment;
- the **study on the "SARS Virus CoV 2 carried out with the Istituto Superiore di Sanità**, concerning the circulation of the virus in waste water with participation in the SARI circuit, as ST3 laboratory, validated from sampling up to the quantitative results;
- **characterisation of the floating residue from the desanding/de-oiling process of urban wastewater and assessment of the best treatment technologies**; a number of plants deemed suitable for carrying out the study were selected and the qualitative and quantitative monitoring phase continued;
- full-scale **experimentation of Taron technology** at the Santa Fumia wastewater treatment plant, which uses a dynamic rotating disc filtration system that combines secondary sedimentation and tertiary filtration in a single step, optimising the wastewater treatment process;
- **lysis technologies for optimising biogas/biomethane production**, with the launch of an experimental study to increase biogas production from anaerobic digestion plants at some purification plants.

With regard to innovation applied to the management of **water distribution networks** new generation techniques - satellite, noise recorder and fibre optics - were tested for **hidden leak detection** (Noise Logger and Satellite Radar Interferometry).

For the **waste water purification** the main projects carried out by Acea Ato 2 concerned:

- the installation of the **new ozonolysis station for sludge reduction** at the Ostia plant, in view of the excellent results already obtained with the testing of the system;
- The **optimisation of the anaerobic sludge digestion compartments**, activated at some of the managed treatment plants, including in relation to the biomethanisation power of the sludge (primary, secondary, etc.);
- the **commissioning of the thermal dryer at the Ostia water treatment plant;**
- the renovation of the **Fregene purification plant,** where the **DepurArt** project was developed in collaboration with the Innovation unit of Acea SpA's Technology & Solutions function (*see also the dedicated box - Research and innovation in Acea SpA*).

Satellite monitoring of water resources continued in protected areas, for detecting morphological variations (new constructions, earthworks, etc.) followed by the relevant verification activities.

During 2021, the company designed, created and commissioned an **innovative experimental plant for potable water that can remove arsenic**.

In addition, with reference to **forecasting the availability of water resources**, Acea Ato 2 has implemented a **machine-learning algorithm based on the random forest technique** to identify meteorological proxies (temperature and/or precipitation) or management proxies **(volumes) correlated to the variability of the state of preservation of the resource**, **with reference to the different collection sources (springs**, **well fields**, **etc.).**

With the support of a specialist firm, **Acea Ato 5** conducted an **energy analysis on one of the main well fields** managed and implemented a corrective action to significantly reduce the plant's energy consumption. A **predictive maintenance project was launched involving some key assets for the management of water systems** (external electric pumps in lifting stations) and sewage (compressors), with the installation of wireless sensors capable of carrying out real-time analysis to prevent irreparable breakdowns of the monitored assets and the consequent plant stoppages.

AdF has carried out:

- the completion of the experimental **Augmented Reality project**, **in coordination with Acea Innovation**, to approach the new technology on field processes and empower the frontline workforce;
- **massive remote reading of meters** across the territory through drive-by and walk-by reading, covering around 50% of the installed base of meters. In addition, an analysis platform (**NEXTex**) has been developed as part of an internal project to control and monitor data from remote reading. This platform allows the analysis of field measurement information and instrument alarms, thus enabling effective asset management and detailed control of water consumption;
- the completion of a PoC aimed at defining a platform for managing and integrating data from smart meters, both drive-by and nbIOT, and no-meter sensors, with the aim of creating a **data hub**, **performing advanced management of events and alarms and feeding analytics systems;**
- the construction of a **centralised platform for the treatment of sludge from sewage treatment plants** by means of thermochemical hydrolysis.

As part of the **protection of water resources** effort, experimentation continued on various technologies concerning network efficiency, satellite monitoring of leaks, **a predictive methodology** (Rezatec algorithm) was implemented on the Grosseto municipal network was implemented **aimed at prioritising interventions and pre-locating leaks** which, on the basis of historical, geomorphologic and hydraulic data of the aqueduct graph, identifies the areas at greater risk of rupture; the installation of a system of multi-correlator geophones was also started with the same objective of promptly and accurately identifying leaks.

Finally, within the framework of internal projects implemented in agile mode, AdF has **developed two dashboards** integrated with SCADA systems and analytics tools, for **monitoring water requirements**, **planning water production**, **creating consumption forecast scenarios** using predictive algorithms, and for **monitoring the electricity budget** and the energy performance of the main plants.

GORI continued its implementation of **IoT technologies and advanced sensor technology** for environmental protection, with the installation of 300 sensors and remote monitoring of wastewater flood drains.

RESEARCH AND INNOVATION IN ENGINEERING AND SERVICES

In 2021, in collaboration with the Technology& Solutions Function of Acea SpA and the start-up BeamDigital, **Acea Elabori carried out experimentation on the Safety Check project**, for the remote monitoring of the safety conditions of the personnel working at the sites.
Implementation continued of the **'Master Reclamation' project**, a data retrieval system able to retrieve customer master data, using machine learning and artificial intelligence, and automate internal data quality processes.
With reference to **business process innovation** in 2021, **Acea Elaborì's achievement of BIM (Building Information Modelling) certification for engineering design is of particular note**. The BIM methodology employs intelligent digital models throughout all phases of a project's life cycle and works on seven dimensions, visualising not only progress and costs, but also the sustainability of the project and encouraging the implementation of choices oriented towards a positive impact on the environment.
Numerous other projects have been carried out by Acea Elabori for Group companies.

RESEARCH AND INNOVATION IN THE ENVIRONMENT AREA

In 2021, the following research and innovation activities carried out by the Environment business are worth mentioning:

- the completion of experimental activities for the development of a plant solution aimed at **recovering sodium bicarbonate and calcium chloride dihydrate** (reaction by-products) from the treatment of Residual Sodium Carbonate (RSC), deriving from the neutralisation phase of the acid fumes produced by the waste-to-energy plants, currently under contract, and the start of activities to define the industrial *scale-up*;
- The completion of **experimental activities for the treatment of fly-ash and bottom-ash** for the recovery of the inert fraction **present** and treatment for the reduction of hazardous characteristics, and initiation of activities to define the industrial scale-up;
- the filing of the application for an **experimental authorisation** for the **plasmix treatment pilot plant**. The plant is part of a much larger project to sustainably recover mixed plastics (plasmix) and transform them, through the GASIFORMING™ process, into pure methanol that can be sold on the market. The project implements circularity: it recovers material from waste destined for landfill or waste-to-energy, vertically integrates the plastics chain, and produces methanol from a renewable source.

3

RELATIONS WITH THE ENVIRONMENT

ENVIRONMENTAL SUSTAINABILITY AND THE PRIMARY CHALLENGES

In line with the **Green Deal** and the "Next Generation EU" recovery package, Italy has published the **National Recovery and Resilience Plan (NRRP)**, outlining the challenges in the short-term, also with regard to environmental sustainability, and the economic tools to achieve the established goals. The Plan sets out large investments in the **circular economy** and sustainable agriculture, in **renewable energy**, in the use of hydrogen and in the **national electricity grid supporting mobility**, in **energy efficiency**, and in the **protection of the land and water resources**, which will support the country in the **ecological transition**.
Although the health emergency continued in 2021, European guidelines were relaunched, with the goal of swiftly reaching climate neutrality by 2050, as established by the Paris Agreement and the Sustainable Development Goals, and supporting economic recovery of businesses across the area.
The pathway to 2050 involves intermediate targets for 2030, such as achieving a 40% quota of renewable energy (of total generation), as required by the Green Deal, halting deforestation and a minimum 30% reduction in methane emissions, defined by recent COP26 agreements (see info. box on *COP26 and 2021 climate change appeals*).
Acea has an important role to play in the achievement of these goals through development projects in the field of the **circular economy**, and in the context of **smart cities** through an **increase in renewables**, increased **resilience of electrical and water infrastructure**, a focus on safeguarding **water resources** and **technological innovation** for the management of infrastructure.

With regard to **climate change**, the Group is undertaking initiatives aimed on the one hand at the process of **adaptation** to these changes, for example, by making infrastructure more resilient and incorporating the analysis of critical scenarios into operations, and on the other hand at the **mitigation** process through the progressive reduction of climate-changing emissions.
Specifically, with regard to GHG emissions, again in 2021 Acea participated in the **CDP - Carbon Disclosure Project**, achieving a score of A-, confirming its *leadership* position (see *Corporate identity* info. box in the chapter *Strategy and sustainability*). Additionally, Acea was part of a working group together with A2A, Edison, Enel, the Hera Group, the Sofidel Group, Maire Tecnimont, Pirelli, Salvatore Ferragamo, Snam, Terna and VIU to develop the position paper ***Italian businesses moving towards decarbonisation: a fair and inclusive transition***. Officially presented on 19 January 2022 at the Italian Pavilion at the Dubai Expo the position paper had "the goal of demonstrating and developing the commitment of Italian companies that have signed the UN Global Compact on Decarbonisation, to play their role in achieving the objectives of the Paris Accords and the goals the European Union has set itself, to achieve climate neutrality by 2050"[113].
Meanwhile, with regard to a broader approach to climate change, Acea completed an important **project for alignment with the international recommendations of the Task Force on Climate-related Financial Disclosures-TCFD**, leading to the publication in 2022 of the company's first dedicated Report (see info. box for details in the section *Environmental and climate risks: in-depth analysis and disclosure*).

With regard to the **management of water**, in agreement with the relevant institutions, Acea continued preparatory actions for the **construction of the new upper section of the Peschiera-Le Capore Aqueduct** to safeguard the water supply in the city and province of Rome. Review of the project documentation has been launched and a report has been prepared aimed at defining the methodology for estimating CO_2 emissions generated by creation of the infrastructure (**project carbon-footprint**).
Acea has played a primary role with regard to the **circular economy**, for a number of years, with the aim of **reducing waste of resources**, for example by utilising process waste, and enabling **recovery of energy** and **secondary raw materials**. In this context, the Group has progressively expanded in the field of waste management (Environment Segment). With reference to financial year 2021, the companies Berg and Demap enter the scope of reporting, operating in the areas of storage, disposal and treatment of waste, as well as the construction of treatment plants, in the case of the former, and selection and packing of urban waste for consortia and other customers, in the case of the latter.
With regard to the circular economy, of particular interest there is also the innovative **BIOREF** research project, carried out by Acea Elabori in cooperation with IRSA-CNR, which is aimed at recovering products with high added value during transformation of the organic portion of urban waste and biological sludge. The project is the result of a partnership launched in 2020 with the signing of a **memorandum of understanding between CNR and Acea** for the technological development of waste-processing and treatment procedures (see also the chapter *Institutions and the company*).
During the **Ecomondo** trade fair, **Acea Ambiente** received a special mention from ISPRA for its **environmental declaration videos** and **efficient communicative use of the EMAS logo** (Eco-Management and Audit Scheme). Acea Ambiente was the only organisation in the waste sector recognised in this way. The videos, each around 15 minutes long, presented Acea Ambiente's commitment to safeguarding the environment and to the reduction of CO_2 emissions through the use of innovative technology, in line with the sustainability goals of the UN 2030 Agenda. The videos were shown at the Acea stand at Ecomondo and can also be watched online on the Group's website.

113 www.globalcompactnetwork.org/it/pubblicazioni-e-stampa-ita/pubblicazioni-gcni.html.

ACEA PROJECTS AT ECOMONDO 2021

Again in 2021, the Acea Group took part in **Ecomondo**, the most important trade fair for green and circular-economy sectors in the Euro-Mediterranean area, held in Rimini from 26 to 29 October. The event focuses on the chain of production and supply of the circular economy and offers a rich variety of initiatives and opportunities for dialogue every year. It supports international networking between companies targeted at development of an innovative and sustainable business ecosystem. Areas covered included energy, transport, and the recovery and exploitation of raw materials, with a focus on the European Green Deal and the Recovery Fund. The **Chief Executive Officer of Acea** spoke in the international plenary session on the Green Economy, dedicated to "Global challenges for businesses".
Acea had a 200 m^2 Group stand at the event, where it presented its most recent initiatives. These included a waste-management project called **SmartComp**, which enables on-site treatment of organic waste for the production of compost. **E-mobility** and the issue of sustainable management of water resources were featured with the new **Waidy Wow app**. The stand also presented the **Urbees** project for biomonitoring of air quality using bees, as well as the development of technologies for sustainable waste management, such as the new **Gasiforming** technology patented by Acea and developed in collaboration with the Politecnico di Milano university and the Inter-university Consortium for Materials Science and Technology (INSTM), to transform a mix of non-recyclable plastics into green fuels. Specifically, this project is aimed at exploiting *plasmix* (waste that cannot otherwise be separated from the mechanical sorting processes of plastics) through gasification for the production of syngas, a product forming the basis for the majority of organic composts sold by the basic chemicals industry. The zero-impact process enables reuse of all the different plastics currently used for waste-to-energy generation or that go to landfill.
During the event, a **memorandum of understanding was signed between Acea Innovation and Ancitel Energia e Ambiente**, aimed at the development of innovative projects on behalf of municipalities, public administrations and businesses. This strategic partnership is rooted in the creation of a specialised working group to identify regulatory instruments, opportunities for access to funding and planning actions based on the specific characteristics of local, infrastructural and economic contexts, with the goal of facilitating and accelerating the development of green-energy policies, energy-efficiency models, design of technology and implementation proposals aligned with circular-economy models and to promoted their rapid implementation.

Overall at Ecomondo, eight scientific projects were presented, three article were published — included in the documentation for conferences — two round tables were organised by Utilitalia and Enea/Italian Ministry of Economic Development, on the topics of "Laboratories and control of water quality: new challenges" and "Critical raw materials and the new european action Plan: strategies for more secure and sustainable supplies". In addition, two round tables were organised on research and relationships between businesses and the scientific community (research and technology hubs to face the challenges of the NRRP), with participation of several of the most prestigious Italian universities, and on the topic of delocalisation of waste treatment and the development outlook, with the participation of authoritative figures from the academic world.

ENVIRONMENTAL AND CLIMATE RISKS: IN-DEPTH ANALYSIS AND DISCLOSURE

CLIMATE RISKS

Climate change is one of the biggest environmental and social challenges of our times. Whilst the Covid-19 pandemic has been an emergency priority for the last two years, climate change continues to have grave impacts at a local and global level.
The United Nations Climate Change Conference held in Glasgow in November 2021 ended after two weeks of negotiations between the Parties to the United Nations Convention on Climate Change with significant progress made (see info. box for details). Nevertheless, the commitments made in Glasgow leave scope for further progress to be defined in the coming years, in order to reach the goal of containing the temperature increase to within 1.5°C.

COP26 AND 2021 CLIMATE CHANGE APPEALS

On 4 October 2021, shortly before COP26 in Glasgow, held from 31 October to 12 November, religious leaders representing leading world faiths united to request that the international community strengthen their ambition and intensify climate action. At the meeting Faith and Science: *Towards COP26*, promoted by the Holy See and the British and Italian Embassies to the Holy See, around 40 religious leaders **signed a joint appeal**, presented by Pope Francesco to the COP26 President-Designate, Alok Sharma, and the Italian Minister for Foreign Affairs, Luigi Di Maio, calling for the world to reach zero net carbon emissions as swiftly as possible and to limit the increase in average global temperature to 1.5°C above pre-industrial levels. At the Pre-COP26 event, organised in Milan from 30 September to 2 October, Italian Prime Minister Mario Draghi made a speech stressing the importance of taking swift action to attempt to overt the climate crisis and avoid paying "*a higher price for the climatic disaster that will occur*". The Prime Minister also reiterated the need for more ambitious targets and identified the pandemic as an opportunity to drive countries towards the right measures to fight climate change and support families in difficulty. At the end of the event, a document was presented by young environmental activists from all around the world containing proposals to invert current climate trends, including halting funding for the fossil-fuel industry, a transparent financial system for the climate and strengthening of adaptation measures.

COP26 ended with ratification of numerous agreements, one of the most important being the **Glasgow Climate Pact**, with which countries undertake to maintain the global temperature increase within 1.5°C compared to pre-industrial levels. Other important agreements include:

- **the agreement against deforestation**, signed by the leaders of more than 100 countries, who promise to halt it by 2030. The significance of this agreements lies in the fact that the signatory countries host 85% of the world's forests
- **renewed cooperation between the United States and China** in the climate battle. Both states declared that they would cooperate to achieve the goal of limiting global warming to below 1.5°C, as established in the Paris Agreement, by "taking more decisive and ambitious climate action in the next decade"
- **the Global Methane Pledge** officially launched by the European Union, this is an EU and USA joint initiative that has mobilised over 100 countries to reduce their collective emissions of methane by at least 30% by 2030, compared to 2020 levels.

In this context, **Acea** has continued its **climate-change mitigation and adaptation strategy** i) with an increase in the energy efficiency of Companies and, regarding water, with the reuse of purified wastewater in agriculture ii) implementing actions aimed at increasing the resilience of infrastructure, and iii) adopting a plan to **significantly increase generation from renewables**[114], and with the dual objective of achieving a **high level of efficiency for final domestic usage** and **usage in energy processes**, and **reducing carbon intensity** (gCO_2/kWh produced). The results obtained to date are shown in Table no. 62 on energy intensity indices and in Table no. 68 on emission intensity indices.

Acea assesses **climate risks**, **classifying them into physical and transition risks**, in accordance with the CDP Questionnaire (see *Corporate identity* info. box in the chapter *Strategy and sustainability*). As noted, at the end of 2021, **in synergy with the main Group companies**, it completed the first project for alignment with the Recommendations of the **Task Force on Climate-related Financial Disclosures (TCFD)**, which will also continue in 2022, **broadening the analysis** of the different types of potential impacts generated by climate change on the businesses managed (see info. box for details).

ACEA'S CLIMATE REPORT FOR ALIGNMENT WITH INTERNATIONAL TCFD RECOMMENDATIONS

The **11 Recommendations** of the Task Force of the Financial Stability Board (**Task Force on Climate-related Financial Disclosures – TCFD**)**on Climate-Related Financial Disclosures** currently represent the benchmark model at international and EU level. They are **applicable to all organisations**, are **focused on risks** and **opportunities** connected to climate change and increasing the capacity for a panorama based **on precise analyses of scenarios**. In June 2019, the European Commission issued a Communication entitled "Guidelines on non-financial reporting: Supplement on reporting climate-related information", which, whilst not binding, "encourages companies" to adopt the recommendations of the TCFD.

Facing the global challenge of the fight against climate change, and on the basis of the experience it has gained in the CDP field, Acea decided to launch a project between 2020 and 2021 to improve management in this area, according to the TCFD approach, strengthening its expertise in the **application of international climate scenarios**.

Specifically, the project involved **Acea Ato 2**, the main Group Company operating in the water sector, **Acea Ambiente**, which runs plants for WtE, composting, treatment and recovery of waste, **Acea Produzione**, which manages power plants, **Areti**, the distributor of electricity, and certain **key functions of the Parent Company**. For this initial process of alignment, the Companies **identified priority physical and transition risks** for assessment, linking parameters related to these risks with scenario analyses.

Specifically, in terms of physical risks Acea Ato 2 verified the risk of drought and water stress, Acea Ambiente and Acea Produzione assessed the risk of lightning strikes, and Areti assessed the risk of flooding, while the most significant transition risk was that of carbon pricing.

The project was completed at the end of 2021, with **results that will be presented** in an independent **Climate Report** to be published in 2022. Continuation of analyses is planned, focused on further risk types.

114 More specifically, in 2021 Acea Produzione purchased/installed some photovoltaic systems for 20 MW of power, reaching a total of 72.5 MW.

ENVIRONMENTAL MANAGEMENT

The majority of Group Companies have implemented **Integrated Management Systems** certified in accordance with standard UNI EN ISO (see info. box *Corporate Identity* in the chapter *Corporate governance and management systems*). The Parent Company itself has an **Integrated Management System with Quality**, **Environment**, **Safety and Energy components** that facilitates environmental *compliance* and a **Management and sustainability systems Policy** that guides the Group's approach to respecting and protecting the environment, also in line with the principles in the *Code of Ethics*.
The commitment of the Operating Companies to maintaining the efficiency of the Management System for environmental matters does not entirely exclude situations, usually provoked by contingent circumstances, that generate **non-conformities** that may be challenged by the competent Control Bodies. During the year the main operating companies of the group received **around 200 environmental fines**, with the consequent payment of **approximately € 250,000**. An additional **80 environmental disputes** are currently being settled.
The actions taken, and specifically the complete closure of biofilters and creation of three chimneys for atmospheric emissions, the Aprilia plant was released on 18 March 2021. November 2021 saw issue of a preventive seizure order for assets owned by Gesesa, with a value of € 78 million, due to objections of an environmental nature pursuant to Italian Legislative Decree 231/2001. The order was appealed by the Company and the Judicial Review Court, having accepted the appeal, cancelled the order in December.
Environmental problems of greater significance are forwarded to the Units responsible, which establish the facts reported and request the necessary action, as well as providing feedback to the Bodies involved. Exceptionally, it may happen that the Company receives significant reports from individual persons; in this case they will be checked and, where needed, it will intervene to resolve them.
With respect to electricity distribution, Areti may receive observations regarding alleged environmental damage in the case of buildings housing electrical plants. However, this concerns **installations indispensable for the correct exercise of the electricity distribution network**, created by the Company following **authorisations granted by Bodies which are custodians of the land** and therefore fully compliant with the legislation of reference, including both town planning and environmental legislation[115]. The Assets and Special Projects Unit, which protects the company's assets, receives the notes of dispute from the owners of the immoveable properties that host **transformer substations** or are adjacent to power lines, and subsequently the Areti Risk & Compliance and Safety Unit **carries out the instrumental checks** in response to the disputes. **In 2021 four complaints were processed**, which have not yet been closed as the counterparties have submitted appropriate appeals to the relevant Courts.

SAFEGUARDING OF LAND AND BIODIVERSITY

Areas connected to conservation and the promotion of biodiversity have an increasingly important role in the environmental agenda of leading international institutions. These are set out in the UN Sustainable Development Goals (Agenda 2030) and, in turn, with focus of the European Green Deal, concentrating on the main causes of this loss of biodiversity, including methods of land use and water basins, excessive exploitation of natural resources and pollution. The European Union, which in 2020 published *EU Biodiversity Strategy for 2030* (COM (2020) 380 final), is focused on defining binding targets to restore ecosystems that have been damaged, improve the health of habitats and species under protection, reduce pollution and re-green urban areas. Furthermore, Regulation 852/2020 (Taxonomy) includes the "protection and restoration of biodiversity and ecosystems" among the six environmental goals with which it is structured (see also *Disclosing sustainability: methodological note*).

POLICIES AND TOOLS TO PROTECT BIODIVERSITY

The topic of biodiversity is at the heart of the **Conference of the Parties (COP15)**, aimed at evaluating the successes and failures of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets[116] and drafting a global agreement to halt and turn around the decline in biodiversity. Negotiations between the parties, launched in 2019 to define a global agreement along the lines of the Paris Climate Agreement, generated **an initial draft document in 2021**, defining **four goals for 2050**: **to enhance the integrity of all ecosystems**, reduce the rate of extinctions and **guarantee the genetic diversity** of species; **value nature's contributions to people**, promoting their maintenance and enhancement, and supporting the **global development agenda for the benefit of all**; closing the **gap between financial and other means of implementation** currently available and necessary to achieve the goals set.
The challenges recognised at the international level have prompted some important organisations to launch initiatives to support achievement of the goals. These include the **TNFD (Taskforce on Nature-related Financial Disclosures)**, created through a partnership of Global Canopy, United Nations Development Programme (UNDP), the United Nations Environment – Finance Initiative (UNEP FI) and the World Wide Fund for Nature (WWF), with the aim of providing businesses with a framework to assess, manage and refer in relation to their dependence and impacts on nature, and the connected risks and financial flows. Better information will enable companies to incorporate the risks and opportunities linked to nature into their strategic planning, risk management and asset-allocation decisions.

115 In this case, the environmental regulatory reference is D.P.C.M. of 8 July 2003.

116 The Conference of the Parties in Nagoya in 2010 defined the Global Strategic Plan for Biodiversity 2011-2020 and new targets, the 20 "Aichi Biodiversity Targets", to be achieved by 2020. These targets aimed to highlight the causes underlying biodiversity loss, to reduce the pressure on biodiversity and promote sustainable development, to improve the status of biodiversity at all levels, to promote the benefits deriving from biodiversity and ecosystem services, and to support the development of expertise and capabilities to reduce biodiversity loss and to conserve resources in the period 2011-2020, through programmes of engagement.

In Europe, the ***EU Biodiversity Strategy for 2030*** represents an ambitious, long-term plan to protect nature, halting the current process of ecosystem degradation. This includes four specific actions: i) establishing a **larger** EU-wide **network of protected areas on land and at sea** ii) launching an **EU nature restoration plan** focused on how to manage them sustainably, addressing the key drivers of biodiversity loss iii) introducing **measures** to enable the necessary transformative change in awareness and iv) introducing **tools** to tackle the **global biodiversity challenge**. The approach also includes availability of funding to support actions and definition of a **new European legal and governance framework**. The Commission will propose binding targets for the restoration of ecosystems, will include a mechanism for review and tracking involving clear indicators to assess the progress of strategy implementation, and will establish any corrective actions to be taken.
In Italy, for adoption of the European policy, **in 2021** the **Ministry for Ecological Transition** launched a pathway for the definition of the **National Biodiversity Strategy for 2030**, through which it intends to contribute to the international goal of guaranteeing that by 2050 all ecosystems on the planet **are restored**, **resilient and adequately protected**.
Furthermore, the Ministry has published the ***IV Report on the state of natural capital in Italy*** (2021), which provides an update on the situation in Italy, with a particular focus on biophysical and economic assessment of ecosystem services and gives a panorama of strategies and actions to achieve the proposed goals.

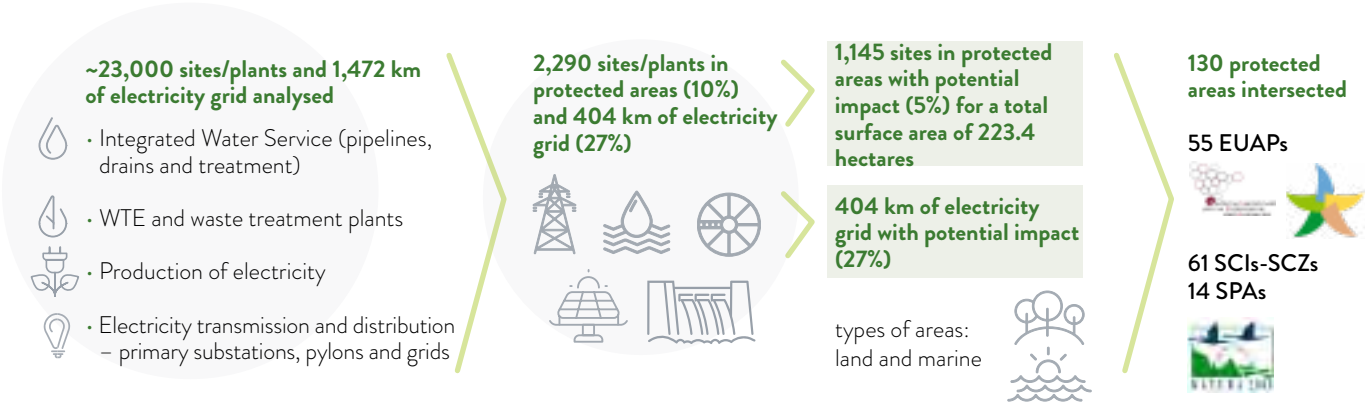
Acea Group Companies conduct activities that could **potentially** have **impacts on biodiversity**, such as processing waste, operation of power generation plants, management of water sources and treatment plants and the distribution of electricity. On this basis, Acea **focuses closely on safeguarding the ecosystems in areas where it operates**, as defined in the procedures of the **Environmental Management Systems**, which pursue continuous improvement with a view to reducing environmental impacts, in the context of assessments for the **planning and creation of plants**, as well as **management** of operational areas. The Companies manage processes in compliance with the environmental authorisations issued to each plant. The environmental provisions contained in the authorisations issued by the competent administrative authority are established on the basis of technical and environmental assessments considering the area surrounding each plant, to **safeguard the flora and fauna** present and protect the natural environment.
Specifically, the activities involved in the **Integrated Water Service** are aimed at the **maintenance of optimal environmental conditions** and sites where water is drawn, near to springs, are managed with attention to the **conservation of existing ecosystems and the preservation of the water flow**.
Likewise, with **treatment activities**, the primary goal is that **discharges**, after appropriate treatment, comply with the limits established by regulations in the sector and are therefore **compatible with the natural habitats of the receiving bodies of water**. In implementation of this commitment, targets have been established for **improved treatment efficiency** for certain Water Companies (see the paragraph *Strategy and sustainability, The 2020-2024 Sustainability Plan and operational goals*).
For **hydroelectric power stations**, **Acea Produzione** manages withdrawals and inputs of water in compliance with the Concessions issued by the competent authorities and with applicable regulations. **Management Projects** have been prepared for all reservoirs (pursuant to Italian Decree of the Ministry for the Environment of 30 June 2004), with relevant impact studies for those in protected areas. The company provides for the **protection of the habitats of all species present** in order to **mitigate the effect of the artificial barrier of the dams**, which interferes with the natural migration of fish and the gradual sedimentation of the riverbed, with consequent changes in the native flora of the banks. In addition, protection of the aforementioned basins ensures the living conditions of the "resident" and "migratory" birds, which use these sites for reproduction/feeding even during migration.
Other plants in the **energy segment**, active in the generation of electricity using fossil fuels and waste-to-energy, are incompatible with protected areas and therefore do not fall within them.
Acea has **identified those of its sites/plants located in areas with a high level of biodiversity or Protected Natural Areas (EUAP) recognised nationally and sites of the Natura 2000 Network** (SCIs, SCZs and SPAs) [117] established at European level, through **mapping of the infrastructure of the main operating companies** (Acea Ato 2, Acea Ato 5, GORI, Gesesa, AdF, Acea Ambiente, Acea Produzione and Areti)[118]. Analysis **conducted on over 23,000 sites/plants**, including pylons but excluding underground electricity grids and pipelines, has shown that **2,290 sites**, corresponding to **approximately 10%**, **represent potential interference with the system of protected areas**. Plants of the Environment Segment, carrying out waste-processing activity, are not located in protected areas.
Considering, instead, **only the sites which could have a more significant impact on biodiversity**, **the number drops to 1,145** and the total percentage to **5%**.
Significant impacts have been estimated taking into consideration the **design**, **implementation and management phases of plants**, and therefore exclude sites/plants with minimal impacts, such as the Water Kiosks of Acea Ato 2, the secondary substations of Areti and the photovoltaic plants included considered as residential plants of Acea Produzione.
The analyses conducted on the **overhead electricity distribution network (1,472 km analysed)** showed interference with protected areas for approximately **27%**, corresponding to **404 km of network**.
The **total number of natural areas intersected by sites/plants/networks with a significant impact total 130** (55 EUAP Protected Natural Areas, 61 Sites of Community Interest (SCIs)/Special Conservation Zones (SCZs) and 14 Special Protection Areas (SPAs)[119] for a **total area of 223.4 hectares**.

117 The Protected Natural Areas (EUAP) at national level are those areas recognised officially by the State pursuant to Framework Law 394/91. The Natura 2000 Network, established pursuant to "Habitat" Directive 92/43/EEC, is the main policy instrument of the European Union for the conservation of biodiversity. It is composed of Sites of Community Interest (SCIs) which are then designated as Special Conservation Zones (SCZs) and also includes the Special Protection Areas (SPAs) established by "Birds" Directive 2009/147/EC on the conservation of wild birds. The areas composing the Natura 2000 network are not reserves where human activities are excluded: the Directives intend to guarantee the protection of nature whilst also taking "account of economic, social and cultural requirements and regional and local characteristics".

118 Areas were mapped using QGIS, an open-source GIS application that enables viewing, organisation, analysis and presentation of spatial data, processing each layer of the sites/plants belonging to the Companies.

119 Where SCIs/SCZs and SPAs coincide, the areas are counted once amongst SCIs/SCZs. The figure for areas intersected was revised compared to that published last year, after verification.

Chart no. 49 – Acea sites/plants analysed, with potential impacts on biodiversity and protected areas intersected



NOTE: where SCIs/SCZs and SPAs coincide, they are only considered once under SCIs/SCZs.

In the areas affected, there are many **animal and plant species**, including some on the **International Union for Conservation of Nature (IUCN) Red List of Threatened Species** (in the categories "vulnerable", "endangered" and "critically endangered")[120], i.e. at risk of extinction in the short or medium term. These species therefore represent a conservation priority.

A total of 45 species are potentially affected. Specifically, there are **3 plant species** (1 critically endangered and 2 endangered) and **42 animal species**, of which 7 are critically endangered, 9 are endangered and 26 are considered vulnerable (see Chart no. 50 for details).

Chart no. 50 – Number of species listed in the IUCN Red List with habitat in the protected areas intersected

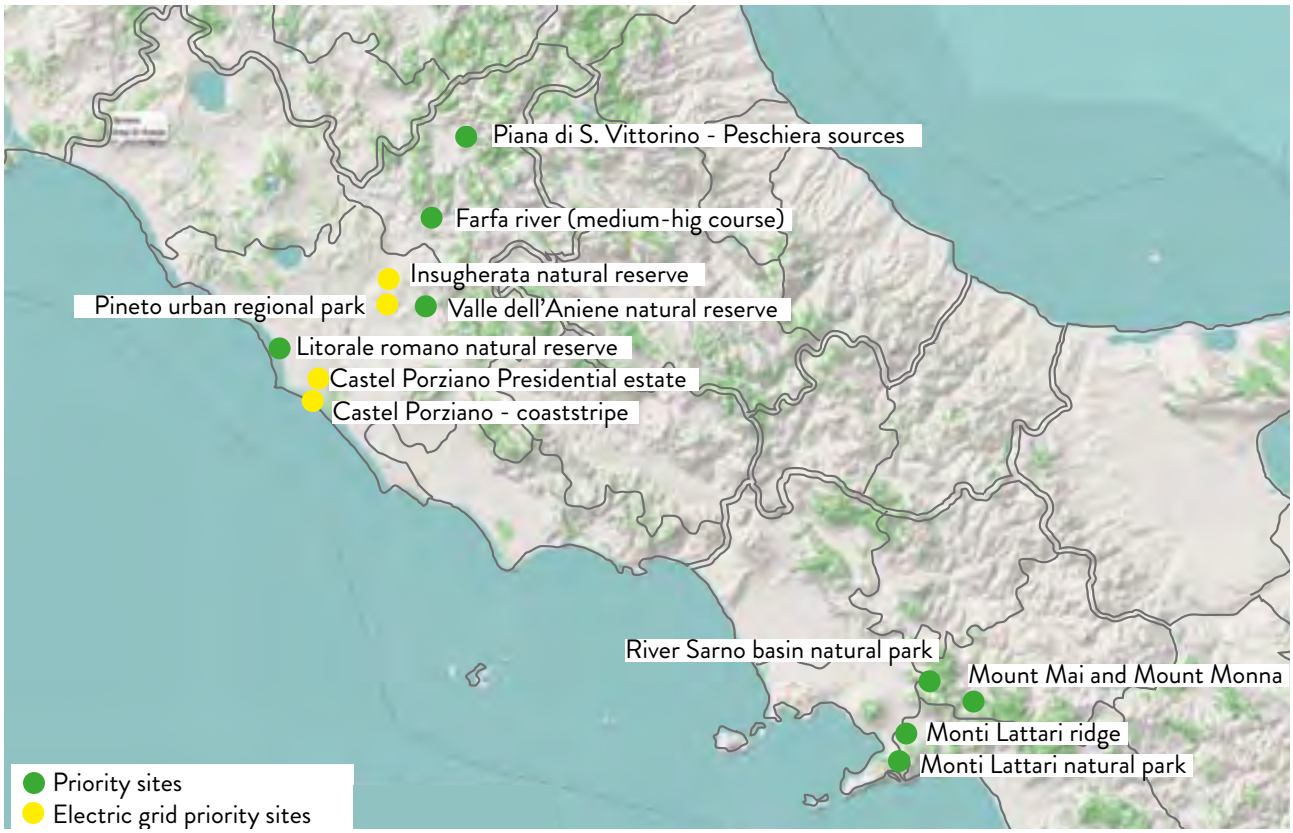
In 2021, Acea carried out **further detailed analysis** of potential impacts on biodiversity, with the aim of **identifying "priority" areas with high levels of biodiversity** in which sites/plants/networks of Group Companies are located, i.e. the most fragile habitats or those most greatly impacted by external factors. For this purpose, data for the protected areas intersected was supplemented with information provided by the ***Carta della Natura***, a national IT system created by ISPRA (Italian Institute for Environmental Protection and Research), which is a cartographic and evaluation tool used to **identify the distribution of Italian ecosystems across the country** and analyse them based on their current state, considering physical, biotic and human factors.

Based on this information, it was possible to internally prepare an **Environmental fragility index (EFI)**, aimed at evaluating the different habitats present and the portion of land occupied, the fragility of the habitat and the type of sites/plants present, for each protected area intersected by the activities of the main Group Companies[121]. This enables identification of **areas with high levels of biodiversity**,

120 There are 11 risk categories, from Extinct (EX), applied to species for which there is definitive evidence that the last individual example has died, and Extinct in the Wild (EW), assigned to species for which there are no longer natural populations but only individuals in captivity, through to the category Least Concern (LC), applied for species that are not at risk of extinction in the short or medium term. Between the categories of Extinct and Least Concern, there are the threatened categories, which identify species at progressive risk of extinction in the short or medium term: Vulnerable (VU), Endangered (EN) and Critically Endangered (CR).

121 For preparation of the EFI, the initial step was calculation of the relationship between the area of each habitat and that of the protected area containing it, generating a value for the portion of the protected site occupied by each habitat. This value was then multiplied by the fragility of the habitat as defined by ISPRA (Italian Institute for Environmental Protection and Research). Following this, all of the environmental fragility values of the habitats present in each protected area were added together. Having defined the EFI for each protected area intersected, this information was then cross-referenced with the individual Group plants with significant impacts located in the protected areas (plants identified as sites with potential impacts, from "low-medium to "high"). Finally, to identify the "priority" areas with high levels of biodiversity, the IFA was multiplied by the area intersected by the plants. The higher the value for the index, the higher the "priority" of the area.

to be considered as **priority areas**, due to their greater "vulnerability". In detail, **there are 12 of these areas**: in **eight** of these — Parco regionale dei Monti Lattari, Dorsale dei Monti Lattari, Piana di S. Vittorino - Sorgenti del Peschiera, Riserva naturale Valle dell'Aniene, Fiume Farfa (medium-high course), Parco regionale Bacino Fiume Sarno, Monte Mai e Monte Monna, Riserva naturale Litorale romano — **sites/plants** have potential impacts, on **four** there may be interference from **electricity distribution networks** (Parco Regionale urbano Pineto, Castel Porziano — fascia costiera, Castel Porziano Tenuta presidenziale, Riserva naturale dell'Insugherata).



Awareness of potential interference enables optimisation of operations and the Companies have planned and/or implemented **various actions to safeguard biodiversity**, some in "priority" areas with a high level of biodiversity, as summarised in the info box.

THE MAIN PROJECTS IN "PRIORITY" AREAS WITH A HIGH LEVEL OF BIODIVERSITY

"PRIORITY" AREAS WITH A HIGH LEVEL OF BIODIVERSITY	ACTIONS
Piana di S. Vittorino - Peschiera sources **River Farfa (medium-high course)**	The two areas are affected by the **Peschiera-Le Capore aqueduct system managed by Acea Ato 2** on which works are in progress to double the upper section of the aqueduct. The project meets the requirements of the **Envision protocol**, the first rating system for sustainable infrastructure, which evaluates the economic, environmental and social sustainability of infrastructure and includes specific evaluation criteria linked to biodiversity such as preservation of sites of high ecological value. In the river Farfa area, the Company has engaged the University of Naples Federico II for preparation of a technical and scientific study into the natural characteristics of the Farfa river that includes the collection site of the Le Capore spring. The study highlighted how the release of water downstream of the Le Capore springs has benefits on the ecosystem, supporting restoration of the natural river environment with its rich diversity of animal and plant species. For further information on the Peschiera project, see the info. box *works on strategic infrastructure, Peschiera-Le Capore and Marcio aqueducts: safety works and authorisations*.

River Sarno basin natural park	**GORI** is working on **important works to resolve pollution of the river Sarno hydrographic basin** through completion of the sewerage system and consequent collection and treatment. The project, carried out in synergy with various local players, also involves **the Marevivo Onlus environmental association** and will have significant impacts on recovery of the river ecosystem and, consequently on the entire Gulf of Naples. For further details, see the section Sustainability Plan and the info. box *Energy for the Sarno* in the section *Quality in the water area*, in the chapter *Customers*).
Valle dell'Aniene natural reserve	To check for any critical issues in the habitats surrounding the **major treatment plants** in Rome, **Acea Ato 2** has conducted special monitoring of **areas it is responsible for and the surroundings**. The studies conducted look at the treatment plants of Roma Nord, Roma Sud, CoBIS and in 2021 that of Ostia, the latter being located in the Riserva naturale Litorale romano area. The results achieved so far have demonstrated that the plants analysed, in particular those of Roma Nord and Roma Sud, **have a positive effect** on the ecosystem, constituting **synanthropic biodiversity hotspots**, i.e. places where species that coexist or are learning to co-exist with humans, tending to form a rich and stable ecological community. Indeed, the specific environmental conditions and the low impact of man-made structures facilitates the presence of an extremely particular wildlife community. Similar monitoring is planned for 2022 at the Roma Est treatment plant located in the **Valle dell'Aniene natural reserve area**.
Litorale romano natural reserve	In the **Litorale romano natural reserve** area, **Areti** is carrying out a programme of **decommissioning and demolition of overhead power lines and pylons**.

The initiatives launched by the Companies also involved other others, again of particular natural interest, although not classified as "priority" areas.
In order to limit the **potential impacts** of overhead infrastructure for the **distribution of HV and MV electricity on birds**, **Areti employs risk mitigation initiatives** in collaboration with the relevant authorities, making use of the best technological solutions for problems that are likely to occur in sensitive areas or areas of particular naturalistic value. Specifically, in compliance with the *Memorandum of Understanding for restructuring of the electricity grid*, works continue for the **decommissioning and demolition of overhead power lines** within **important areas subject to protection**, including Parco di Veio, Riserva Naturale della Marcigliana and, south of Rome, Riserva Naturale Decima Malafede and Riserva Naturale del Litorale romano. For details of the works performed in 2021, see the section *Energy distribution* in the chapter *Energy Segment*. Furthermore, Areti and the Park Authority of **Parco naturale di Veio signed a pledge of commitment** with which the Company guarantees financial and operational support to launch **a plan** for the **monitoring of birdlife** with installation of **bird-deterrent devices** on earth cables of overhead lines, composed of plastic spirals that make the cables more visible, significantly reducing the risk of bird collision. Areti's commitment included the printing of two illustrated volumes providing information on nesting and wintering birds, a study on fatality rates of birdlife along high-voltage and medium-voltage power lines, updating and reprinting of the tourist map of the Veio Park with addition of the paths of power lines involved in the work.
For a number of years, on the SCI/SCZ sites of **Villa Borghese and Villa Pamphili**, **Acea Ato 2** has also been monitoring the presence of **Peregrine Falcons** in part of the **Acqua Vergine springs** area, a **species** which despite preferring open, wild areas, can nest in artificial structures, such as towers and bell towers in heavily built-up areas. Every year a large community including scholars, ornithologists and simple enthusiasts follows the lives of the Peregrine Falcons who live among the Acqua Vergine springs, thanks to a webcam managed by Ornis Italica, an association of researchers promoting the Birdcam.it project, which broadcasts images of a nest situated on Acea infrastructure (www.birdcam.it). 2021 saw an excellent breeding result for the nest on the piezometer of the Salone water centre, with the hatching and growth of three peregrine falcons. The Company also has operations in the Castelli Romani area, where the **Parco regionale dei Castelli Romani**, is located. This regional park is characterised by its volcanic nature, which influences the chemical and physical properties of the water, and by limited water resources and a prevalence of wells. Here, in collaboration with the Municipality of Rocca Priora and the Park Authority, the Company has established **a project**, currently under analysis and evaluation by local authorities, for **redevelopment and restoration of the Pantano della Doganella marsh**, which has dried up over time, with the aim of recreating the conditions for **natural filling of the basin** with precipitation.
In the context of the project for development of the Water Safety Plan for the water systems fed by the waters of the Santa Fiora springs (see also the sub-section *Water Safety Plans*), **AdF** launched a **scientific partnership agreement with the Institute of Geoscience and Georesources of the CNR** (National Research Council) of Pisa, also aimed at assessing the vulnerability of the aquifer as a scientific knowledge base for definition of appropriate protection areas by the competent Authorities. In addition, in 2021 the Company supported **local authorities and associations** for projects to **protect local flora and fauna**, **combating the effects of climate change**, **habitat loss and/or the loss of specific pollinators**. These include support for the Research Centre into Biotechnical Tools in the Farming and Forestry Sectors (CRISBA) for the conservation of local flora (dunal plants and wild orchids) and the Posidonia Association for the development of a protocol for the proper conservation of the species, currently under series threat of extinction.
In 2020, as a tool to monitor **ecosystem quality** in areas where its plants are located, at the San Vittore del Lazio (Frosinone) waste-to-energy plant **Acea Ambiente** launched the project "**UrBees**", in collaboration with bee-keeping experts and the Sacro Cuore Catholic University, aimed at environmental monitoring by observing the **behaviour of bees**, **as bioindicator insects**. Biomonitoring is an innovative tool for environmental control that allows the **effects of pollution to be identified**, observing living organisms and their biological parameters through the study of ecological changes due to the effects of one or more polluting substances present in the biosphere.

Honeybees, in particular, are one of the best "sentinel species". They support plant biodiversity and enable determination of **qualitative and quantitative data regarding the health or lack thereof of a specific ecosystem**, **along with mapping of an area's biodiversity**. The observations made have highlighted **the overall good health of the bees and the absence of instances of unexpected illnesses or depopulation**. Thanks to the busy flight of the bees, 2021 saw production of "39-flower honey", in May, and "26-flower honey", in June, from a blend of 39 and 26 botanical species, respectively[122]. The area of the plant which houses the beehives has also been re-greened with species of plants recommended for bee-keeping (oleanders, laurel and boxwood). Finally, at other Acea Ambiente sites, green areas are created with **planting of native tree species** aimed at reducing the visual impact of installations and increasing the variety of plant and animal species in surrounding areas.

MANAGEMENT OF WATER RESOURCES, SPRINGS AND PROTECTED AREAS

Through the Companies **Acea Ato 2**, **Acea Ato 5**, **GORI and Gesesa**, the Group mainly uses springs located in uncontaminated areas for water supply.

The supply system of the area managed by Acea Ato 2 is composed of **seven large aqueduct systems** that transport water from **14 main sources** to the distribution networks and from numerous smaller local sources (mainly wells), for a **total flow that exceeds 21,000 litres/second**. The drinking water distribution network extends for, more than **13,600 km**[123]. In addition to this priceless natural resource, following upgrading works on the Grottarossa drinking water plant, Lake Bracciano, and the river Tiber also represent water reserves, after appropriate treatment, to be used only in the event of water emergencies.

EVALUATION OF GROUNDWATER AVAILABILITY

In accordance with that established by the criteria of the Water Framework Directive (WFD, 2000/60/CE), investigation of the availability, in quantitative terms, of potential groundwater resources and the possible impacts associated with the withdrawal of water resources from springs can be performed by monitoring certain variables through implementation of appropriate interpretive models.
The main aspects to monitor can be identified as precipitation (rain and snow), evapotranspiration, surface run-off and therefore infiltration into the soil in the area where the balance is assessed. For the refilling areas representative of the aquifers managed by **Acea Ato 2**, a continuous calculation methodology was implemented (from 1990 to today), for quantification of the components of the hydrological balance at a daily level. This methodology, re-proposed by Acea Ato 2 in accordance with national guidelines (Technical criteria for analysis of quantitative status and monitoring of groundwater stores. ISPRA 157/2017), whilst it is **still in the experimental phase**, can already be considered **a valid tool for monitoring the quantitative status of groundwater stores**.
Acea Ato 5 has continued a study on water availability performed on certain important sources. Analysis of precipitation and withdrawals has been performed for the years 2017-2021. Specifically, in 2021 a net **increase in precipitation** was recorded due to abundant rainfall in January and February, followed by a slight reduction until the summer. Rainfall patterns are therefore a primary factor in refilling springs. This information and the study methodology have enabled forecasting of low availability.
At AdF, in order to monitor the impacts of water withdrawals on sources used, an initial report was prepared on sources, which, on a monthly basis, allows assessment of significant changes in methods of utilising wells and significant reductions in the available resources from the source. A second phase involved creation of **dashboards dedicated to real-time evaluation of the quantitative and qualitative characteristics of sources**, on the basis of the information gathered from remote monitoring by the company and regional meteorological and hydrogeological data. Also on the basis of this monitoring, three-monthly updating is carried out on a document shared with the Tuscan Water Authority regarding possible water-emergency status, with indication of critical issues involving "drought" (lack of resources) and management or infrastructural actions planned to handle such issues.

In the Municipalities that fall within OTA 5 Lazio Meridionale - Frosinone, **Acea Ato 5** manages **80 sources**, **74 of which are active**, with 39 wells/well fields and 35 springs. In addition to these sources, the Company purchases/sells water through exchange points with other operators and with a Municipality in a neighbouring area. From the sources, the water is transported to the Municipalities through a supply network, which follows a complex distribution network beginning with tanks and dividing elements before reaching all users served, and totalling **6,027 km**.
Gesesa, which operates in district 1 "Calore Irpino" in the Campania Region, for the supply of drinking water, manages approximately **2,060 km** of network, springs, primarily seasonal, and collects the majority of the water utilizing groundwater wells. There are three large collection systems: the Benevento plain, constituted of two well fields Pezzapiana and Campomazzoni, a well located at the aquifers of Monte Taburno and a well located near to the Grassano spring.
AdF, which operates in Optimal Territorial Conference no. 6 "Ombrone" (ex OTA 6), manages the drinking water system through a network that stretches approximately **8,330 km**. Almost 50% of the water is drawn from the **Fiora springs** located on the slopes of Monte Amiata, while in the Siena area, the most significant systems are the Luco well field and the Vivo aqueduct, which takes water from the three springs of Amiata Ermicciolo, Ente and Burlana, located in the Vivo d'Orcia area.
The water system managed by **GORI** in the **Sarnese Vesuviano**

122 A photo-report has been published on the project, available at the following link: www.youtube.com/watch?v=P-IPb6F0i4M
123 The value is higher than that added in chart no. 54, which features a geo-referenced value.

territorial district has three main subsystems: Vesuviano, Monti Lattari and Ausino. The Vesuviano System is the most extensive of the three and arises from the functional integration of the Sarno aqueduct and the Vesuviano aqueduct, in turn interconnected with external elements of the Campano aqueduct, the West Campania aqueduct and the Serino aqueduct. This is responsible for supplying the majority of the OTA 3 municipalities. The Monti Lattari System serves the territory of the Sorrento Peninsula, the Island of Capri, and the Stabiese plain. Finally, the Ausino System, represents the supply framework for the municipalities of the OTA that occupy the eastern edge of the territory. The water drawn from endogenic sources represents approximately one third of the total, while the remainder originates from systems outside the OTA.

All of the Companies guarantee operation and correct maintenance of collection infrastructure, primary and secondary water plants, supply systems and distribution networks and user meters. Extraordinary maintenance is also performed (renovation, upgrading and/or expansion of plants and networks).

WORKS ON STRATEGIC INFRASTRUCTURE, PESCHIERA-LE CAPORE AND MARCIO AQUEDUCTS: SAFETY WORKS AND AUTHORISATIONS

In 2021, Acea Ato 2 continued activities aimed at making the water supply system more secure, resilient and sustainable, in compliance with the Concession's capacity. In fact, having prepared the projects for the **New Upper Section - Peschiera** and **New Marcio Aqueduct**, Acea Ato 2 began planning further strategic works on a significant scale. This development took place despite difficulties during the pandemic in adapting to a constantly evolving regulatory framework:

- with Italian Prime Ministerial Decree of 16 April 2021, the Extraordinary Commissioner was appointed to "Safeguard the Peschiera-Le Capore aqueduct system"
- with Italian Decree Law 77/2021 - "*Semplificazioni bis*" (L. 29 July 2021, no. 108) the works in question were introduced in Annex 4 of art. 44 and will be subject to a specific authorisation procedure.

Following implementation of Decree Law 77/2021, the Guidelines were issued for drafting the technical and economic feasibility project to act as a basis for assignment of public contracts for works under the National Recovery and Resilience Plan (NRRP), **with which planning of large-scale aqueduct works has been aligned**.
Finally, with Italian Ministerial Decree of the Italian Ministry of Infrastructure and Sustainable Mobility (MIMS) 517/2021, in the context of "Safeguarding and modernisation of the Peschiera water system", four sub-projects were identified involving creation of important sections of supply systems/aqueducts, which could benefit from co-financing with sums from the NRRP. To access NRRP funding, these works must be completed by the deadlines set out in the Plan itself.

Table no. 47 indicates the location and surface areas in square metres of the zones subject to absolute protection[124]. It is noted that the sources illustrated are all drawn in "areas under water stress", as defined at international level [125]by the World Bank Institute. The water drawn is freshwater[126], apart from 1.2% of the amount drawn by AdF, corresponding to approximately 0.8 million cubic metres, which is from marine sources. The amounts drawn by the Companies from the springs listed are indicated in the *Environmental Accounts*.
To protect **areas where springs are located**, Acea Ato 2 also employs **satellite monitoring**. Surveillance is concentrated in the places showing – on the basis of the comparison between two images taken from space at a distance of several months – an **unjustified or suspect morphological variation**, such as new, unsurveyed constructions, earth movements, small landfills. The Company performs checks on site to identify any threats to water resources, ensuring **precise monitoring**. In fact, **in 2021**, **thanks to the use of a satellite to perform change detection** and additional inspections carried out along the supply and collection network, **65 violations were identified**.

Table no. 47 – The main sources under protection

sensitive area	municipality	area (m²) (*)
IN OTA 2 – LAZIO CENTRALE		
Peschiera springs	municipality of Cittaducale (Rieti, Latium)	375,322
Le Capore springs	municipality of Frasso and Casaprota (Rieti, Latium)	997,848
Acqua Marcia spring	municipalities of Agosta-Arsoli-Marano Equo (Rome)	1,181,979
Acquoria spring	municipality of Tivoli (Rome)	17,724
Pantano Borghese Acqua Felice springs	municipality of Zagarolo (Rome)	779,143
Simbrivio springs	municipality of Vallepietra (Rome)	180,385
Ceraso springs and wells (Simbrivio aqueduct)	municipality of Vallepietra (Rome)	14,370
Pertuso springs	municipality of Trevi – Filettino (Latium)	133,711
Doganella springs	municipality of Rocca Priora (Rome)	350,000

124 The areas of absolute protection are the areas immediately surrounding the catchments or off-springs, as defined in Legislative Decree no. 152/2006.
125 www.wri.org/aqueduct
126 Water with total dissolved solids ≤ 1,000 mg/l.

Acqua Vergine springs	municipality of Rome	500,000
Torre Angela wells	municipality of Rome	70,829
Finocchio wells	municipality of Rome	64,166
Laurentina wells	municipality of Ardea	13,661
Pescarella wells	municipality of Ardea	2,433
Lake Bracciano	municipality of Rome	169,200
IN OTA 5 – SOUTHERN LAZIO (*)		
Posta Fibreno wells	municipality of Posta Fibreno (Frosinone)	20,000
Tufano wells	municipality of Anagni (Frosinone)	18,000
Capofiume spring	municipality of Collepardo (Frosinone)	10,000
Madonna di Canneto spring	municipality of Settefrati (Frosinone)	10,000
Forma d'Aquino wells	municipality of Castrocielo (Frosinone)	20,000
Carpello wells	municipality of Campoli Appennino (Frosinone)	15,000
Mola dei Frati wells	municipality of Frosinone	5,000
IN THE PROVINCE OF BENEVENTO – OTA – CALORE IRPINO		
12 wells	municipalities of Benevento, Telese Terme, Castelpagano, Vitulano, Melizzano, Sant'Agata de' Goti, Cautano and Forchia	9,110
Ciesco spring	Castelpoto	307
Faitillo and Orto dei Ciuffi spring	San Giorgio La Molara	2,412
Gradola spring	Tocco Caudio	707
Monticelli spring	Castelpagano	358
Pietrafitta and Ruggiero spring	Torrecuso	2,242
San Vito spring	Frasso Telesino	249
Voneventa spring	Molinara	516
IN THE SARNESE VESUVIANO DISTRICT		
Vado spring	municipality of Bracigliano (Salerno)	1,338
Forma spring	municipality of Gragnano (Naples)	322
Imbuto spring	municipality of Gragnano (Naples)	187,159
S.M. Lavorate spring	municipality of Nocera Inferiore (Salerno)	5,971
S.M. La Foce spring and well field	municipality of Sarno (Salerno)	60,202
Fontana Grande source	municipality of Castellammare di Stabia (Naples)	330
centres of Murata, Pugliana, Casaliciello, Santa Lucia and Tartaglia	municipalities of Cercola, Ercolano, Pollena Trocchia, Roccarainola and San Giorgio a Cremano (Naples)	15,473
centre of Monte Taccaro and Angri well field	municipality of Angri (Salerno)	43,072
well field of Suppezza, Gragnano, San Mauro Montalbino, Mercato Palazzo and Santa Lucia	municipalities of Castellammare di Stabia, Gragnano, Nocera Inferiore and Sarno (Salerno)	46,610
wells of Traiano, Stromboli-Vesuvio and Petraro	municipalities of Castel San Giorgio, Mercato San Severino and Nocera Superiore (Salerno)	7,203
21 wells in the province of Salerno	municipalities of Bracigliano, Castel San Giorgio, Corbara, Fisciano, Mercato San Severino, Nocera Inferiore, Nocera Superiore, Pagani and Siano (Salerno)	10,657
4 wells in the province of Naples	municipalities of Castellammare di Stabia, Palma Campania, Roccarainol and San Giorgio a Cremano (Naples)	1,529
IN OPTIMAL TERRITORIAL CONFERENCE NO. 6 "OMBRONE"		
Spring of Galleria Alta – Galleria Bassa – Fonte Carolina	municipality of Santa Fiora (Grosseto)	37,046
Ermicciolo Spring	municipality of Castiglione d'Orcia (Siena)	3,885
Arbure Spring	municipality of Castel del Piano (Grosseto)	7,443
Ente Spring	municipality of Arcidosso (Grosseto)	327
Burlana Spring	municipality of Seggiano (Grosseto)	2,442
Luco well field	municipality of Sovicille (Siena)	10,063

(*) The surface area data is estimated.

ENERGY SEGMENT

SCOPE

The chapter *Energy Segment* includes Acea Produzione, the PV companies, Areti, the Acea Ambiente and Ecogena energy production plants (Ecogena is only included for data on energy produced and Energy Efficiency Certificates). Waste-to-energy activities are also described in the chapter Environment Segment.

1,009 GWh total energy produced: **69%** from renewable sources (**698 GWh**)

approximately **220,000 t of CO_2** saved through the production of **electricity** from **renewable sources** instead of traditional ones

16 MW installed and **4 MW** of **PV** purchased, for a total of **72.5 MW** installed

synergies between businesses: project defined involving **Roma Sud treatment plant** and **Tor di Valle power plant**

The Group, which operates in the **generation** of electricity and thermal energy, in the **distribution** of electricity in Rome and Formello, including management of public lighting, and in the **sale** of electricity, heating and gas, **manages the entire chain of production and supply** through the operations of separate independent Companies, as required by electricity-market regulations.
To improve the **management of distribution infrastructure**, Acea implements hi-tech innovative solutions — remote control, IoT and smart grids — enabling **increased resilience**. The increased flexibility of the grid also responds to the trend of increasing numbers of **prosumers** connected (see also chapters *Customers and the community* and *Institutions and business*).

ENERGY PRODUCTION: FOSSIL AND RENEWABLE ENERGY SOURCES

With the goal of increasing **generation of renewable energy**, in line with the development plan outlined in the Industrial Plan, in 2021 Acea acquired a further 4 MW in the photovoltaic segment and installed 16 MW, thus reaching 72.5 MW in total.

GROUP PLANTS

Through **Acea Produzione**, **the PV Companies**[127] and **Acea Ambiente**, the Group **generates electricity** primarily from renewable sources. **The majority of production is provided by hydroelectric plants** and **another significant portion**, also partially renewable, **from waste-to-energy plants utilising paper-mill waste** and **Solid Recovered Fuel** (SRF).
Acea Produzione is equipped with plants for generation from renewables, both hydroelectric and photovoltaic, and fossil fuels (thermoelectric), with the latter primarily through the **high-efficiency co-generation plant** of the Tor di Valle power plant, which had greater availability during the year. At this power plant, activity was also completed for construction of the third co-generation unit, composed of a 9.5 MWe internal-combustion engine, with an increase in installed power from 19 MW in 2020 to 28.5 MW in 2021.
The power park includes:

- **seven hydroelectric power stations** located in the Latium and Abruzzo regions for a total of **122 MW**,
- **2 thermoelectric power stations** located within the Municipality of Rome area: Montemartini (78.3 MW)[128] and Tor Di Valle (28.5 MW), for **106.8 MW_e total available installed capacity**,
- one **photovoltaic park**, for a total of **72.5 MW_p**.

127 For the PV Companies included, see *Disclosing sustainability: methodological note*.

128 The power station is operational only in the event of extraordinary energy demand, and operation can also be managed remotely from the control room at the Tor di Valle Power Station.

The generation of energy from waste-to-energy processing is assigned to **Acea Ambiente**, taking place at **two plants** located in San Vittore del Lazio and Terni, and both with percentages of **biodegradable** material (renewable source) varying between 40% and 50%. The total gross electrical power currently available is approximately **58 MWe**.
In addition, Acea Ambiente produces electricity using **biogas** derived from the anaerobic digestion process at the Orvieto Technology Hub and the composting plants of Aprilia and Monterotondo Marittimo.

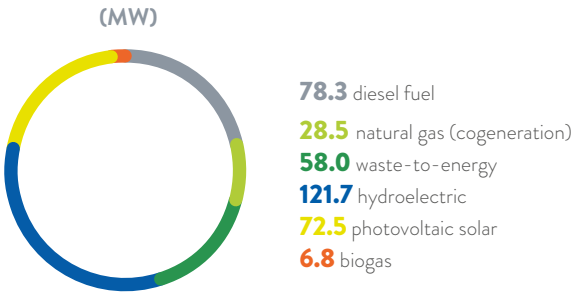
Table no. 48 – Installed power of the electric power stations of Acea Produzione

hydroelectric power stations	thermoelectric power stations
A. Volta di Castel Madama (Rome) power station - gross power **9.4 MW**	Tor di Valle power station: high-efficiency cogeneration (CAR) section (*) (Rome) methane fuel - gross power **28.5 MW**
G. Ferraris di Mandela (Rome) power station - gross power **8.5 MW**	Montemartini power station (Rome) diesel fuel - gross power **78.3 MW**
Salisano power station (Rieti) - gross power **24.6 MW**	
G. Marconi di Orte power station (Viterbo) - gross power **20.0 MW**	
Sant'Angelo power station (Chieti) - gross power **58.4 MW**	
Cecchina power station (Rome) - gross power **0.4 MW**	
Madonna del Rosario power station (Rome) - gross power **0.4 MW**	
general total: gross capacity 229 MW	

(*) The CAR plant in Tor di Valle provides district-heating service in the area south of Rome.

The installed capacities of the Group, which **overall amount to approximately 346 MW**[129], are presented in Chart no. 51, distinguished by energy source.

Chart no. 51 – Installed electrical power of the Group broken down by energy source (MW) (2021)



ELECTRICITY PRODUCED

In 2021 overall gross generation of electricity increased by 10%, rising from 916 GWh in 2020 to 1,009 GWh in 2021. This increase is due to several factors: greater rainfall in the year influenced hydroelectric generation (up 15%), the new photovoltaic component (+5% energy generated) and the waste-to-energy sector (+3%). This latter increase was due to Terni plant experiencing a lower number of shutdowns, making it more efficient in terms of energy usage compared to the previous year. The **production of biogas** also increased, above all thanks to the Aprilia plant, now running at full capacity. For further details, see the *Environmental Accounts*.

The share of electricity generated by **renewable sources**, about **698 GWh**, is **predominant**, corresponding to approximately **69% of the total**, with the following contributions:
- 434.7 GWh from hydroelectric power,
- 153.5 GWh from waste-to-energy,
- 31.4 GWh from biogas (Orvieto, Aprilia and Monterotondo Marittimo plants)
- 78.6 GWh from solar panels (see Chart no. 52 and Table no. 49)[130].

After completion of **upgrading and actions to increase efficiency in 2021** the only **revamping that took place involved the Sant'Angelo power plant**, with the goal of optimising use of available water resources, with the same specifications in terms of installed power and authorised by concession.
In addition, Acea Produzione and Acea Ato 2, are collaborating on **a particularly important project rooted in the development of synergies between the businesses managed by the Group**. The project involves installation of an additional two 1.5-MWe internal combustion engines at the Tor di Valle High Efficiency Cogeneration Plant (CAR), which **will be powered by the biogas from the adjacent Acea Ato 2 Roma Sud treatment plant**. The Tor di Valle plant will in turn provide the treatment plant with **thermal energy to heat the sludge in the digesters**[131] (see info. box for details). Construction of a 267.3 kWp photovoltaic plant has been authorised at the same power station. The worksite, launched in November 2020, was closed in 2021 and the plant is currently operational.

129 The total installed power includes the Acea Produzione plants, the waste-to-energy plants and the Orvieto, Aprilia and Monterotondo Marittimo plants (Acea Ambiente) for the production of biogas.

130 The photovoltaic plants of AdF and the Terni waste-to-energy plant are not included (as they are owned by AdF and Acea Ambiente, respectively): the former produced and self-consumed 12.5 MWh in 2021, while the latter produced 444.3 MWh of which 61% was consumed on site.

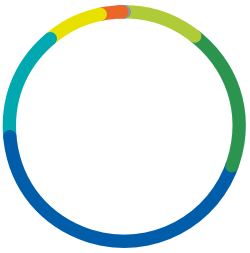
131 In January 2021, the request was submitted to the Ministry for the Environment (MATTM) for preliminary verification for application of an EIA.

SYNERGY BETWEEN THE ROMA SUD TREATMENT PLANT AND THE TOR DI VALLE POWER PLANT

Since 2017, the Roma Sud treatment plant has been powered with electricity from the Tor di Valle power station (managed by Acea Produzione), with alternative power from the MV grid. Acea Ato 2 and Acea Produzione are working to increase synergy between these two plants with the **transfer of biogas produced by anaerobic digestion section** of the treatment plant to the power plant, for it to be used in the generation of electricity and thermal energy, as well as **transferring thermal energy from the power plant to the digesters of the treatment plant** to support the anaerobic digestion process.
In the future scenario, with creation of the **thermal sludge drying** plant, this synergy will be further developed with the possibility to provide thermal energy for the drying plant, utilising the residual heat from the electricity generation units already installed at the co-generation plant.
This will enable **replacement of the methane gas used at the Tor di Valle power plant with biogas produced through anaerobic digestion** of sludge, with **zero environmental impacts**, in terms of CO_2 emissions, because it is derived from the breakdown of organic substances. Similarly, the same benefit will be seen for the treatment plant, which will utilise renewable thermal energy produced by the biogas of the power plant.
In 2021, a technical and economic feasibility study was launched to evaluate the environmental, economic and authorisation aspects of the works, in preparation for implementation.

A significant portion of the energy **from waste-to-energy production**, as already noted, is associated with the combustion of the **biodegradable fraction of waste** used as a primary source. In particular, the **renewable share of the fuel** (SRF) entering the **San Vittore del Lazio plant** was **43.0%** of the total of waste-to-energy production in 2021, while at the **Terni plant** this share was **43.4%**. The percentages **are in line with 2020 for both plants**, but lower than years previous to the pandemic. In fact, **a change in SRF composition was recorded**, particularly for the San Vittore del Lazio plant, which is probably linked to the strict limitations applied in the restaurant industry and catering through canteens in schools and business, etc.

Chart no. 52 – Electricity produced subdivided by primary energy source (TJ) (2021)



NOTE: the values reported in the chart are expressed in TJ (1 GWh=3.6TJ).

Table no. 49 – Electricity produced (by primary energy source) (2019-2021)

primary energy source (TJ (GWh) (*))	2019	2020	2021
electricity produced (by primary energy source)			
diesel fuel	4.9 (1.4)	5.4 (1.5)	5.9 (1.6)
natural gas (cogeneration)	320.1 (88.9)	326.4 (90.7)	381.9 (106.1)
waste to energy (approximately 57% of the total in 2021)	643.8 (178.8)	716.8 (199.1)	730.4 (202.9)
total thermoelectric	**968.8 (269.1)**	**1,048.6 (291.3)**	**1,118.3 (310.6)**
hydroelectric	1,533.4 (426.0)	1,354.7 (376.3)	1,564.9 (434.7)
waste to energy (approximately 43% of the total in 2021)	642.2 (178.4)	529.3 (147.0)	552.7 (153.5)
biogas	71.2 (19.8)	96.9 (26.9)	113.0 (31.4)
photovoltaic solar (**)	95.0 (26.4)	269.9 (75.0)	283.0 (78.6)
total renewables	**2,341.8 (650.5)**	**2,250.7 (625.2)**	**2,513.6 (698.2)**
general total	**3,310.6 (919.6)**	**3,299.3 (916.5)**	**3,631.9 (1,008.9)**

(*) 1 GWh = 3.6 TJ.
(**) Photovoltaic includes the production at the plants located on sites of the water area (Acea Ato 2 and Acea Ato 5) for a total of 1 GWh produced.

THERMAL ENERGY PRODUCED

The **Tor di Valle** thermoelectric power plant generated **approximately 99 GWh of thermal energy**. The heat generated was used to serve 42,680 residents in the area south of Rome (Mostacciano, Torrino and Mezzocammino) by means of a district-heating network which provides a volume equal to 3,861,163 cubic metres[132]. In the last two years, **35 of the current 361 thermal substations serving the district-heating network were replaced**, to increase process efficiency and service reliability for users (see also the section *Strategy and sustainability*, the *2020-2024 Sustainability Plan* and the *operational goals*).

The Company **Ecogena**, certified as an ESCo (Energy Services Company) in accordance with UNI CEI 11352:2014, **develops the energy efficiency initiatives for the Group** and reports their results to Gestore dei Servizi Energetici (GSE) for the awarding of Energy Efficiency Certificates (EEC).
The activities assigned to Ecogena include also the design and building of **cogeneration and trigeneration** plants[133] for the production, in combined mode, of **electrical**, **heat and cooling energy**.
In 2021, the **co-generation plants managed**, combined with **district-heating** networks, due to **end of two contracts** assigned to the plants present in the regions of Latium and Umbria, reduced to a total electrical power of **1.9 MW** (4.9 MW in 2020).
For details on production in the three-year period, see table no. 50.

Table no. 50 – The production of energy by Ecogena plants and energy efficiency certificates - EECs (2019-2021)

energy produced (TJ (GWh))	2019	2020	2021
electricity	51.5 (14.3)	36.0 (10.0)	24.1 (6.7)
of which plants owned by Ecogena	*49.0 (13.6)*	32.2 (8.9)	22.0 (6.1)
of which plants owned by third parties	*2.7 (0.7)*	*3.9 (1.1)*	*2.1 (0.6)*
thermal energy	103.3 (28.7)	87.2 (24.2)	83.8 (23.3)
of which plants owned by Ecogena	*89.2 (24.8)*	*73.2 (20.3)*	*76.2 (21.2)*
of which plants owned by third parties	*14.0 (3.9)*	*14.0 (3.9)*	*7.6 (2.1)*
refrigeration energy (all owned plants)	37.6 (10.5)	39.4 (11.0)	39.9 (11.1)
EECs			
Total EECs (all from plants owned by Ecogena)	954	943	443

NOTE: Other information on EECs is provided in the *Energy savings* section of the chapter *The use of materials, energy and water*.

ENERGY DISTRIBUTION

THE DISTRIBUTION NETWORKS

distribution grids in Rome and Formello: approximately **31,700 km**

approximately **9,800 GWh** of electricity demand on our grid

improved territorial protection (underground HV network/ total HV network): **47 %**

automatic satellite system for grid monitoring: the **G.I.M.M.I.** project

132 Data from August 2021.

133 Cogeneration, i.e. the combined production of electrical and thermal energy, allows high efficiencies to be achieved, between 80 and 90%. Trigeneration, which is a special application of cogeneration, allows use of a part of the thermal energy recovered in order to produce cooling energy in the form of cooled water for air conditioning in rooms or for industrial processes.

Areti manages the **electricity distribution network** of Rome and Formello, extending over **approximately 31,700 km** and capable of supplying about **2.8 million residents**. In terms of volumes of electricity distributed, about 9,200 GWh in 2021, Acea is the third largest Italian operator in the sector.
Table no. 51 presents the principal plant data of the Company, including the number of primary and secondary substations, the transformers[134] and the km of overhead and underground distribution lines.
The environmental indicator related to the **protection of the land**, calculated as a percentage share of the **underground high-voltage network** (HV) **in relation to the total of the HV lines in use** (overhead and underground), improved and was 47% in 2021, also as a result of the continuing **transformation and modernisation** of the high and extra-high-voltage electricity distribution grid.

Table no. 51 – Number of overhead and underground distribution lines and plants (2019-2021)

Areti				
systems and output				
	u.m.	**2019**	**2020**	**2021**
High-Voltage/High-Voltage – High Voltage/Medium-Voltage primary substations	no.	70	70	70
High-Voltage/High-Voltage and High-Voltage/Medium-Voltage transformers	no.	170	171	170
transformation power	MVA	7,781	7,881	7,921
substations in use	no.	13,238	13,292	13,309
Medium Voltage/Medium Voltage - Medium Voltage/Low Voltage transformers	no.	12,883	12,897	12,893
transformation power	MVA	6,282	6,298	6,313
overhead and underground networks				
high voltage network – overhead lines	km	282	282	275
high voltage network – underground lines	km	243	243	244
medium voltage network – overhead lines	km	422	421	420
medium voltage network – underground lines	km	10,470	10,211	10,269
low voltage network – overhead lines	km	1,642	1,642	1,642
low voltage network – underground lines	km	18,417	18,511	18,829

MEMORANDUM OF UNDERSTANDING FOR THE RESTRUCTURING OF THE ELECTRICITY GRID

The **plan to modernize the high-voltage electricity distribution grid (150 kV)**, defined in the **Memorandum of Understanding** signed in 2010 among Areti SpA, the Municipality of Rome and Terna SpA continues year on year, as noted above. The actions reduce the environmental impact, through demolition of lines and removal of pylons, as well as contributing to energy savings through works to reconfigure and optimise the HV grid:

- works continued to dismantle decommissioned HV lines, with removal of a total of 48 pylons for 150-kV and 60-kV lines
- 3.6 km of 150-kV underground lines with oil-filled cable were decommissioned on the Belsito - Tor di Quinto stretch, and another 3.6 km with the same specifications on the Belsito - M. Mario/Flaminia stretch
- works continued for creation of the new Roma Nord - San Basilio stretch of 150-kV underground line, with a length of 3.4 km
- creation of the new stretch on the 150-kV Selvotta - Castel Romano overhead line has begun (5.8 km with 24 pylons)
- New 150-kV HV XLPE cables have been commissioned on the stretches Belsito - Tor Di Quinto" (3.8 km) and Belsito - M. Mario/Flaminia, each with a length of 3.8 km.

The management of the electricity distribution network of Rome and Formello is characterized by the **continuous improvement of the performance**, with a particular focus on energy efficiency. Areti carries out works, including reclassification of medium-voltage levels from 8.4 kV to 20 kV and installation of MV/LV transformers with very low losses, which help to **limit network losses**. In 2021 **losses of energy on the grid** were **approximately 6% of total issued power**, in line with the previous year. For further information see the *Energy savings* section in the chapter *The use of materials, energy and water*.
Upgrading of electricity lines supports the energy transition. In this context, **some projects launched by Areti**, **such as PlatOne and G.I.M.M.I.**, are particularly challenging. The first, which also involves Acea Energia, aims to optimise management of the increase expected in loads on the distribution grid, actively involving customers. The second focuses on a system to improve grid monitoring and increasing the efficiency of maintenance. See the corresponding info. boxes for details.

134 With regard to polychlorinated biphenyls (PCBs), pursuant to Legislative Decree no. 209/99 and Law no. 62/05, Acea disposed of transformers with PCBs above the 500 ppm threshold in 2009. In 2021, 114 transformers with PCBs above 50 ppm but below the 500 ppm threshold, including 28 for public lighting, were reported to Arpa, and 8 transformers were disposed of, for a total weight of 10,650 kg and a quantity of PCBs of 846 ppm.

PLATONE

The PlatOne (PLATform for Operation of distribution Networks) project is funded by the European Horizon 2020 project and involves ten public-private partnerships from Italy, Greece, Belgium and Germany, with coordination by the German Aachen University. Through the companies, Areti and Acea Energia, Acea heads the Italian pilot project on Rome, in three specific areas of the capital, working with ENEA, Siemens, RSE, ENG and Apio.
The project promotes an innovative approach to the management of distribution grids, aimed at increasing safety and stability. In the coming years, urban distribution grids will see a significant increase in loads, linked, among other factors, to the **diffusion of electrical vehicles and heat pumps** as well as an increase in **distributed generation connected via medium and low voltage**. Specifically, there could be consumption or generation peaks in certain periods of the year that are critical for the gird. Therefore, to optimally manage these it is possible to **actively involve end users** in grid operation, through creation of a "**local flexibility market**". The PlatOne platform experiments with this solution, developing a multi-platform system capable of involving all market players.
For the end customer, the project implements and standardises a technological solution enabling the resource and certifying all energy transactions connected to flexibility using blockchain technology.
In addition, the user is provided with **an app**, for interaction with the aggregator, e.g. offering the possibility to **modulate loads during certain time periods**. The aggregator processes the flexibility supply of its customers and sends them to the market platform, where flexibility demand of the distributor is also received, connected to grid requirements. By linking supply and demand, and the possibility to actively involves customers in the management of infrastructure, a virtuous cycle is generated enabling the distributor to optimize flows and enabling customers to receive an economic benefit in exchange for the service they offer.
To enable customers to access the flexibility market, it is necessary to install:

- a second-generation **meter**
- a **device** called a **light node**, required to receive activation commands and certify energy transfers.

In addition, to increase flexibility, **micro-photovoltaic plants** have been installed for certain customers, equipped with batteries.
The Italian project, launched in July 2021, will contribute to the creation of an integrated and efficient local ancillary services market, with implementation of advanced IT technology enabling prosumers to sell or purchase electricity entirely automatically.

G.I.M.M.I. GRID INNOVATION PROJECT

The G.I.M.M.I. project (Massive and Targeted Infrastructure Inspection Management) is an innovative end-to-end solution combining **satellite monitoring**, **artificial intelligence (AI) and drones in a single system**. The satellite platform enables Areti to periodically acquire images of HV and MV overhead lines. These are processes and analysed by an algorithm using AI technology that enables identification of human or plant interference. Once interference has been identified and classified on the basis of the level of severity, it is possible to launch targeted inspections using drones.
Implementation of these systems for HV and MV grids offers multiple benefits. The quick response and precision of information enables **specific inspections** in place of mass cyclical inspections, thus reducing the number of inspections, increasing their efficacy and reducing working times, supporting prevention or quick resolution of outages, to the benefit of many customers and the operator. For example, controlled and targeted pruning of vegetation can prevent events that would lead to potentially serious damage to the grid. In addition, the reduced impact of motor vehicles and elimination of helicopter flights for cyclical inspections contributes significantly to reducing CO_2 emissions.
The project, launched in 2021, involves GMatics, a start-up offering satellite monitoring and analysis services using AI algorithms. It is also monitored by the Drone Observatory of the Politecnico di Milano university, which has the task of analysing, mapping and providing indications of current and future trends for drone applications.
An upgrade is currently being studied for the creation of automatic work orders on company SAP systems, enabling planning of inspections, guaranteeing traceability and filing on the system.

ENVIRONMENT SEGMENT

SCOPE

The chapter includes ACEA Elabori, for the project Smart Comp; the activities of the waste treatment hub, waste-to-energy plants and compost production plants, all within Acea Ambiente; and the activities of Aquaser and Acque Industriali. In 2021, the Company Bio Ecologia merged by incorporation into Acea Ambiente, bringing the plant of the same name. The companies Berg and Demap were also added.

27,744 t of quality compost produced: **+50%** compared to 2020

approximately **18,170 kNm³** of biogas produced and, from this, **31 GWh** of energy

waste-to-energy: approximately **407,100 t** of waste input and approximately **92,800 t** of waste output: **23%** (output/input)

Gasiforming: technology to transform a mix of **non-recyclable plastics into green fuel**

Acea is expanding its capabilities in management of the final part of the waste cycle, **for optimised recovery**, **recycling and reuse** and, where possible, **recovery of energy**. Specifically, it oversees:

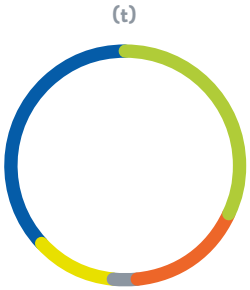
- **the treatment of municipal solid waste** (MSW) and other types of waste (like green waste from separate collection, industrial waste, etc.), **for the recovery of material** and disposal of the residues in landfills
- **storage**, **selection**, **sorting and separation of multi-material waste** originating from separate waste collection, such as plastic material and metal packaging, for subsequent **recovery**
- **the treatment of liquid wastes** such as leachates and liquid sludge;
- **incineration with energy recovery** and consequent reduction in land required for disposal
- **the production of high quality compost** for agricultural use.

The management of solid and liquid waste is performed **using advanced technology and modern systems**, upgraded or expanded in recent years, in order to improve and renew processes and increase recovery of materials and/or energy. The Companies operating in waste management **carry out research**, also in collaboration and partnerships with university institutions and companies in the circular-economy field. Included in this context is the Acea Smart Comp local composting activity carried out by Acea Elabori.
During 2021, Acea Elabori continued, in collaboration with Tuscia University and Enea, the **Acea Smart Comp Project**, which goes beyond the logic of waste transition and proposes a new model for managing organic waste, from large plants to local waste management. This project enabled the Company to become organic waste free during 2020 and to patent the control system for electric composters, that will be industrialised. During the third quarter of 2021, experiments for Acea Smart Comp were completed at the Auchan locations of Villars in Lyon and Sain Priest, both in France, with the intention of establishing the plants in the mass-retail industry. Activity for the project, overseen by the Acea Elabori team, saw the involvement of collaborators from outside the Group, through cross-disciplinary working tables aimed at technological development and remote control, refinement of the process model and further distribution of the product. Experiments with the Acea Smart Comp solution were successfully completed at the barracks for the Carabinieri Salvo d'Acquisto in Rome and the process of moving from the experimental stage to normal operations has begun.
At the Ecomondo event, Acea Ambiente presented the new **Gasiforming** technology, developed in collaboration with the Politecnico di Milano University and the Inter-university Consortium for Materials Science and Technology (INSTM). This patented system is designed to **transform a mix of non-recyclable plastics into green fuels** (see the info. box on Ecomondo, in the chapter *Environmental sustainability and the primary challenges*).
The following paragraphs provide further details of operational aspects of activities in the circular-economy field.

WASTE-TO-ENERGY, COMPOSTING, DISPOSAL OF LIQUID WASTE AND RELATED SERVICES

Chart no. 53 illustrates the types of processing and recovery of materials or energy for the Environment Segment.

Chart no. 53 – Incoming volumes of waste managed by type of plant/activity (2021)



407,121 waste-to-energy (pulper waste and SRF)
208,661 composting (including Orvieto)
41,206 waste entering the Orvieto hub (landfill)
144,100 Intermediation and selection
467,126 liquid waste, wastewater and leachate

WASTE-TO-ENERGY

In the context of circular-economy logic, after maximum recovery of materials, the recovery of energy represents a key phase, which provides energy and economic advantages and leads to a **notable volumetric reduction and the biological stabilisation of waste**, minimising disposal of this waste in landfills without processing.
In addition to the activities already described of solid and liquid waste treatment and anaerobic-digestion lines at composting sites, **Acea Ambiente** also manages the waste-to-energy process through the plants of San Vittore del Lazio and Terni. The two plants are operated according to the certified Environmental Management Systems and registration with the European EMAS III scheme (see also *Corporate identity*, *Management systems*).
In its current configuration, the San Vittore del Lazio plant is the **largest in the Latium Region** and plays an important role in the management of municipal waste, both for the advanced technologies used for its construction and for its considerable treatment potential[135]. It is composed of **three independent waste-to-energy lines** designed to be fed with Solid Recovered Fuel (SRF), with the following characteristics:

- 52 MW_t of thermal power for line 1 and 56.7 MW_t of installed thermal power for each of the other two lines, for a total thermal power of approximately 165 MW_t
- 13.9 MW_e of electric power for line 1 and 15.1 MW_e for each of the other two lines, for a total power of approximately 44 MW_e;
- approximately 400,000 t/year of SRF, sludge and other waste at full treatment capacity.

Acea Ambiente has submitted an application for the creation of a **fourth waste-to-energy line**, enabling full processing of waste entering the plant in the case of shutdowns for upgrading or scheduled maintenance, as well as treatment of sewage sludge in compliance with the indication of the Waste Management Plan approved by the Latium regional authority. The application is moving forward through the procedure and is awaiting final approval.
In 2021 **307,391 tonnes of waste** were processed by the waste-to-energy plants and approximately **268 GWh** of electricity was generated, in line with 2020 figures.

Table no. 52 – The San Vittore del Lazio waste-to-energy plant: operating data (2019-2021)

	u.m.	2019	2020	2021
incinerated fuel	t	340,531	319,122	307,391
gross electricity produced	GWh	276.27	269.38	267.74
conversion efficiency (*)	kWh/kg SRF	0.81	0.84	0.87

(*) Relationship between gross electricity produced and quantity of SRF converted to energy.

The Terni plant is composed of **a waste-to-energy line** and has the following characteristics:

- 52 MW_t of thermal power installed;
- 13.6 MW_e of electrical power installed;
- 120,000 t/year of pulper waste (paper mill waste resulting from the pulping of waste paper), as the maximum potential for incoming waste.

The waste-to-energy plant is **also equipped with photovoltaic systems**, the primary system on the pulper waste pre-treatment area and a secondary system on the adjacent building, which in 2021 generated approximately 444 MWh of electricity, with around 61% consumed on site and the remainder sold to the grid.
In 2021 **99,730 tonnes of pulper waste** were processed by the waste-to-energy plant and approximately **89 GWh** of electricity was generated, up on 2020 figures.
For data on the emissions of both waste to energy plants see the chapter *Air emissions*, in addition to the data in the *Environmental accounts*.

Table no. 53 – Terni waste-to-energy plant: operating data (2019-2021)

	u.m.	2019	2020	2021
waste-to-energy paper mill pulper	t	94,092	90,215	99,730
gross energy produced	GWh	80.93	76.77	88.67
conversion efficiency (*)	kWh/kg pulper waste	0.86	0.85	0.89

(*) Relationship between gross electricity produced and quantity of pulper waste converted to energy.

135 With reference to Decree Law 133/2014 (referred to with the name "*Sblocca Italia*"), the plant has been defined as a strategic structure of primary national interest for the protection of health and the environment, as per Latium Regional Decree no. 199 of 24/04/2016.

In 2021, **certain experiments** were completed applying circular-economy logic to waste-to-energy plants:

- development of a plant solution aimed at **recovering sodium bicarbonate and calcium chloride dihydrate** (reaction by-products) from the treatment of Residual Sodium Carbonate (RSC), deriving from the neutralisation phase of the acid fumes produced by the waste-to-energy plants, currently under contract, and the start of activities to define the industrial scale-up
- **treatment of fly-ash and bottom-ash** for the recovery of the inert fraction present and treatment for the elimination of hazardous characteristics, and initiation of activities to define the industrial scale-up

Please also see *The commitment to research and innovation* in the chapter *Institutions and business*.

INTEGRATED WASTE TREATMENT - ORVIETO PLANT

In Umbria, the Company **Acea Ambiente** manages an important **systems hub for waste treatment**, **recovery and disposal**, ensuring the integrated cycle of municipal solid waste and equivalent materials, produced in the regional basin that includes all municipalities in the province of Terni. The landfill site is also authorised to receive special waste.
The hub includes the following main plant sections: mechanical biological treatment of municipal solid waste, composting and refining of the organic fraction of the sorted waste and disposal in landfills. Management takes place in accordance with the certified Management Systems (see the section *Management systems* in *Corporate identify*), with the goal of **maximising recovery of materials** (production of high-quality compost) and supporting both the **production of renewable energy** (utilising biogas produced for energy) and the **reduction of waste sent to landfill**.
In 2021, total waste entering the plant was **108,361 tonnes**. 67% (approximately 72,500 tonnes) was sent to landfill and almost all of the remainder was sent to the **anaerobic digestion and composting** section of the treatment plant **for the production of biogas and compost**.
The end product resulting from the aerobic process is refined and subsequently analysis for its chemical and physical classification as **high-quality compost**, for us for commercial growing, environmental restoration and, in general, for maintaining green areas.
At the Orvieto site there are **two energy production plants** powered respectively by the **biogas** produced by the anaerobic section of the treatment plant and by the biogas produced naturally by the landfill site. The latter is collected through a supply network and sent to two internal combustion engines that transform it into electricity, which is then sold to the local public grid.
The electricity generated is broken down as follows:

- approximately **2.6 Mm³ of biogas** and **4.7 GWh of energy** were produced at the treatment plant in **2021**;
- approximately **6.6 Mm³ of biogas** and **9.3 GWh of energy** were produced at the **landfill site**.

Overall, **approximately 14 GWh** of electricity was fed into the grid. (for further details, see the *Environmental Accounts*.)
The Orvieto hub is also equipped with a **photovoltaic plant** owned by Acea Produzione, which did not generate energy in 2021 as it was undergoing upgrading works.

HIGH-QUALITY COMPOST PRODUCTION

Experimentation is currently underway with the University of Tuscia on high-quality compost produced by the Orvieto plant hub, totalling **approximately 3,560 tonnes in 2021**, for use as agricultural fertiliser, applying the direct product and sowing wheat crops on land at the plant itself.
In addition to the Orvieto site, Acea Ambiente has **three other composting plants** in Aprilia, Monterotondo Marittimo and Sabaudia respectively.
At the **Aprilia plant** the deed of seizure expired on 18 March 2021. Thanks to upgrading and expansion works, completed in 2020, the plant can recover up to 120,000 tonnes/year of organic waste, with production of electricity and thermal energy integrated with the pre-existing composting section. Furthermore, in 2021, with issue of the new Integrated Environmental Authorisation (IEA)**a compost bagging line** and **a line for production of SRF from plant waste were installed**. Both of the lines were created and approved during the year and will be operational from January 2022. The **Monterotondo Marittimo plant** has a recovery capacity for the organic fraction of municipal solid waste, garden waste (grass cuttings and material from pruning), and sludge, of (70,000 t/year. Both sites have implemented a **new anaerobic digestion and composting section**, which enables **recovery of electricity and thermal energy**. For details on the quantities of biogas and energy produced, see the chapter *Energy segment* and the *Environmental Accounts*.
At the Sabaudia plant, operations were suspended from 31/10/2019, to allow **upgrading work** on the plant[136]. The liquid waste treatment section is currently inactive. Upgrading work will enable a capacity of 60,000 t/year.

INTERMEDIATION AND TRANSPORT OF WASTE

In 2021, **Aquaser**, which **loads**, **transports**, **recovers and disposes of waste produced by treatment plants**, managed a total of **390,000 tonnes of waste** (493,000 tonnes in 2020).
With regard to **intermediation**, during the year Aquaser took charge of **approximately 155,000 tonnes of waste**, of which **134,000 tonnes of sludge** is attributable to the **Group's water companies**[137], and in particular approximately **76,600 tonnes to Acea Ato 2**, **Acquedotto del Fiora and Acea Ato 5**. The dried out and dehydrated sludge coming from the three Companies was sent to the following end destinations:

- 68% to material recovery operations (pretreatments aimed at agricultural use and composting);
- 13% to recovery of energy (waste-to-energy);
- 19% for disposal.

Also this year, due to regulatory constraints direct spreading was not used in agriculture.
Aquaser **used its own means** to transport approximately **45,000 tonnes of non-hazardous waste**.

136 The plant has been shut down for the whole of 2021. At the end of the upgrading work it will be possible to continue with publication of the call for tenders for definitive planning and creation of the new composting plant. The upgrading project will increase the treatment capacity to 60,000 t/year of incoming waste.

137 The data detailed here for the sake of completeness concerns sludge for which Aquaser has managed the entire supply chain, from loading to transport and final disposal, originating from the following Group Companies: Acea Ato 2, Acea Ato 5, Acquedotto del Fiora, Umbra Acque, Publiacqua, Acque and Acea Molise.

SELECTION AND SEPARATION OF MULTI-MATERIAL WASTE

The **Demap** plant, located in the province of Turin, carries out **selection and implementation of recycling for plastic and plastic/metal packaging**. Specifically, it handles the storage, selection, sorting and separation of single and multi-material waste originating from separate waste collection, such as plastic material and metal packaging, **for subsequent recovery**. The Demap plant is affiliated with the Corepla Consortium, a group of companies established pursuant to Italian Legislative Decree 22/97 to organise and manage post-consumption plastic packaging, and performs its activity on the basis of a contract for the selection of waste plastic packaging with the Consortium itself. In 2021 approximately **57,000 tonnes of material** entered the plant and were then processed for final separation and recovery.
Another 10,500 tonnes of waste were handled by Berg in the role of broker, even though the main business involves the storage and processing of hazardous and non-hazardous liquid waste, as illustrated below[138]. See also the *Environmental Accounts*.

TREATMENT OF LIQUID WASTE

The Group treats liquid waste on behalf of public and private Companies through the Companies Acque Industriali and Berg and the Bio Ecologia plant, merged into Acea Ambiente.
Acque Industriali performs brokerage services and treatment of liquid waste for private and public companies, as well as activities connected to the integrated water cycle, primarily consisting of the **recovery and disposal of organic sludge**, through management of **four main platforms** located in Pontedera, Pisa Nord, Empoli and Poggibonsi, which received over **92,400 tonnes of liquid waste** in 2021. In addition, the Company provided brokerage services for approximately 54,000 tonnes of waste during the year.
Acque Industriali uses technologies that **support recovery of raw materials contained in waste**, **energy savings and efficient use of resources**, such as stripping/absorption of ammonia in a closed cycle that enables **recovery of ammonium sulphate**, which can be used as an agricultural conditioner. In 2021, approximately **219,700 kg** were produced. In addition to the above, the Company provides services for design, creation and management of plants for the treatment of wastewater for third parties, decontamination of polluted sites and environmental consulting for the management of plants, investing in research and development in the relevant sectors, in collaboration with recognised Research Bodies. For details of the type of incoming waste, the resources used, the waste produced and other specific information, see the **Environmental Accounts**.

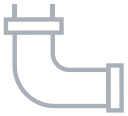
The **Berg** plant is a **polyfunctional platform for the storage and processing of hazardous and non-hazardous waste**, authorised for the sale and brokerage of waste and the creation of plants for treatment and processing of liquid waste.
Specifically, the plant has two departments: storage and treatment of liquid waste and storage and treatment of solid waste. In 2021 the plant **processed approximately 133,000 tonnes of waste**, **both solid and liquid**, and provided brokerage services for a further 10,500 tonnes of waste.
The **Bio Ecologia**[139] plant in Chiusi handles the chemical/physical and biological treatment of **non-hazardous liquid waste**[140] **and treatment of sewage**. In 2021 approximately **93,000 tonnes of liquid waste** were processed and approximately 149,000 m^3 of wastewater.

WATER SEGMENT

SCOPE

The scope includes the companies Acea Ato 2, Acea Ato 5, AdF, GORI and Gesesa.
Acque, Publiacqua and Umbra Acque, water companies not included in the scope of the *Consolidated Non-Financial Statement* (pursuant to Legislative Decree no. 254/2016). They have been included only in the water graphs, with evidence of their contribution, and in a few other global data (water fed into the system and analytical calculations). Specific data concerning these Companies are provided in a separate chapter: *Water company data sheets and overseas activities*.

more than **6 million** citizens served and **481 Mm^3** of drinking water issued by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa



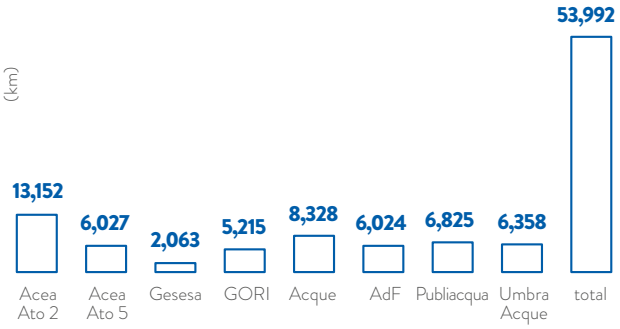
approximately **34,790 km** of drinking-water network managed by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa

738,488 analytical tests on drinking water (Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa)

138 In 2021, Bio Ecologia did not carry out any waste brokering activity.
139 (*) On 1 May 2021, Bio Ecologia Srl was merged by incorporation into Acea Ambiente.
140 The quantities of liquid waste authorised for treatment (excluding wastewater) have a maximum limit of 99,900 tonnes/year.

The Acea Group is a national leader in terms of number of citizens served and one of the primary operators in the water sector. Activities regarding **management of water resources** for all phases defined by the **integrated water service** are performed with a particular focus on preservation and safeguarding of water and natural ecosystems from springs to surface bodies where water returns into the environment. Safeguarding of water resources translates primarily into **recovering leaks** (see the section *Attention to water consumption*), the **circular economy**, activities to combat **climate change**, **protection of springs** and other sites of interest at an EU, regional or local level and natural parks (see section *Safeguarding of land and biodiversity*) and also **monitoring** of internal water consumption, with the end goal of reducing consumption.
The **total** pool of users served in Italy **by the Group**[141] is about 8.5 million residents, with **volumes of drinking water fed into the network** in 2021 equal to approximately **1,318 million cubic metres**. The distribution networks of the main Group Companies operating within the integrated water service stretches approximately 54,000 km (see Chart no. 54).

Chart no. 54 – The water distribution network of the main Group Companies in Italy (2021)



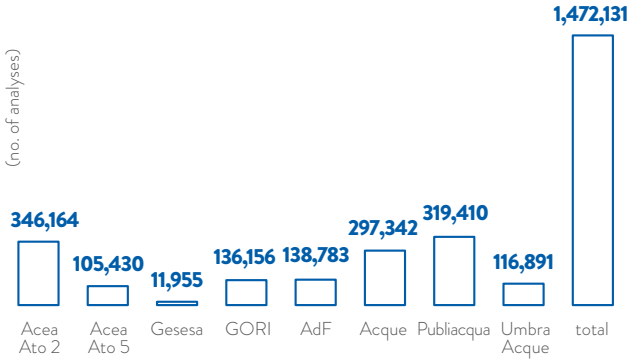
NOTE: the kilometres of network include the aqueducts.

The **volume of drinking water drawn and issued by Acea Ato 2**, **Acea Ato 5**, **GORI**, **AdF and Gesesa** in 2021 was approximately **1,040 million cubic tonnes**, with total issue[142] of 481 million cubic metres for more than **6 million citizens** served. The specific data on the three Companies, are provided in the *Environmental Accounts*.
99.9% of the volumes drawn are fresh water, with the remainder, approximately 1 million m^3 being seawater and drawn in the Tuscany area. The sources are located in areas at potential risk of water stress, as defined by the map of the Aqueduct Water Risk Atlas, drawn up by the World Resources Institute (WRI)[143] that illustrates the water availability of the different countries, taking into consideration risks caused by climate change, including extreme weather events (drought and flooding). The Companies in the water segment implement various initiatives to mitigate the impacts associated with these risks, including **Water Safety Plans** (see the section *Water Safety Plans - WSPs*), actions to **minimise leaks** on distribution networks and investments to ensure greater security of water supplies.
In the **ATO 2 - Lazio Centrale** optimal territorial area alone, which includes Rome and another 112 Municipalities[144], in 80[145] of which, at 31 December 2021, Acea Ato 2 managed the entire IWS, having taken over the sewerage service in the Municipality of Rocca Canterano in August 2021. The **volume of water drawn and issued from and to the network**, serving approximately 3.7 million citizens, was approximately **668 million cubic metres**[146].

WATER QUALITY

Water quality is monitored by all the companies in the operating segment (see chart no. 55). The **analytical checks**, in addition to those performed by the Local Water Authorities, are performed on a scheduled, ongoing basis and regard both drinking water issued to users, essential due to the associated health effects, and water returned to the environment following treatment. The results of drinking water analyses are compliant for all Companies, at around 99%.

Chart no. 55 – Analytical checks on drinking water, total and by Company (2021)



N.B.: for Acea Ato 2 analysis data does not include analyses performed by Acea Elabori.

In **Rome**, the qualitative characteristics of the water collected and distributed are monitored through **continuous testing**, with instruments located **along the water systems** and through **daily sampling** at the collection points and in the distribution network. In Latium there are areas of volcanic origin where the water has potability issues linked to the natural presence of some substances in greater concentrations compared to those indicated by regulations. In these areas, Acea Ato 2 continues to take action aimed at resolving these problems, e.g. increasing the number of drinking water plants capable of removing unwanted substances and reducing them to concentrations well within legal limits. Monitoring of the chemical/biological parameters of the water in the distribution network of the water system allows a high quality and safety level to be achieved.

141 The data for total number of citizens served by the water business, volume fed into the network, and size of the networks and checks on the water (shown in specific charts) include the main Operating Companies of the Group, including those outside the scope of the *Consolidated Non-Financial Statement*.

142 This refers to the total amount of drinking water dispensed and billed in the network by the Companies within the scope.

143 For identification of areas under water stress, as indicated by the standard GRI 303, the Aqueduct Water Risk Atlas was employed, available on the World Resource Institute website: www.wri.org/aqueduct.

144 On 14/07/2021 with Regional Council Resolution n° 10, which followed Regional Executive Resolution no. 752 of 03/11/2020 on the same subject, Optimal Territorial Area n° 2, Central Lazio-Rome, was modified including in it the Municipality of Campagnano di Roma, which previously belonged to OTA no. 1 North Lazio-Viterbo.

145 In 17 other municipalities the integrated water service was managed partially.

146 The items of the water balance of the past three years were calculated using the calculation criteria supplied by ARERA. See the *Environmental Accounts* for details.

Overall, in 2021, **346,164 analyses were conducted in the area managed by ATO 2**, for a total of 11,926 drinking-water samples. In addition to the analyses conducted to **check water quality**, performed by Acea Ato 2, with the support of Acea Elabori, another 840 analyses were performed by Acea Elabori for **study and research purposes** aimed at continuous improvement of monitoring of the drinking-water system.
Acea Elabori, **accredited pursuant to the ISO/IEC 17025 standard**, performs and certifies chemical and microbiological analyses in different substrates, including water (see Table no. 54 for the analyses performed on Rome drinking water). **AdF**, which outsources analyses to Publiacqua SpA, took 4,757 samples, identifying representative withdrawal points in the context of districts, with equivalent characteristics, into which the entire network of the aqueduct is divided. All withdrawal points are georeferenced using the GPS system and area available in WebGis. In 2020, AdF launched works for creation of an in-house laboratory and in 2021 it carried out a tender procedure for the purchase of instrumentation. The laboratory will be subject to accreditation in compliance with standard ISO IEC 17025:2018.

Table no. 54 – Analyses in Rome (2019-2021) and main quality parameters of the drinking water distributed in Latium, in Campania and in Tuscany (2021)

ANALYSES PERFORMED BY ACEA ELABORI ON DRINKING WATER – ROME HISTORICAL NETWORK (2019-2021)							
withdrawal area	no. withdrawal points	no. samples			no. analyses		
	2021	2019	2020	2021	2019	2020	2021
collection	57	329	227	344	11,968	13,579	15,267
water system and water feed pipes	22	164	135	104	5,617	4,950	3,997
tanks/water centres	22	203	85	198	7,096	3,048	7441
distribution networks	405	3,095	3,619	3,379	99,835	120,372	107,709
total	**532**	**3,791**	**4,066**	**4,025**	**124,516**	**141,949**	**134,414**

MAIN AVERAGE CHEMICAL AND MICROBIOLOGICAL CHARACTERISTICS OF THE DRINKING WATER DISTRIBUTED IN LAZIO, IN CAMPANIA AND IN TUSCANY (2021)							
parameters	measurement unit	average value Acea Ato 2	average value Acea Ato 5	average value GORI	average value Gesesa	average value AdF	parameter Legislative Decree no. 31/01
chlorides	mg/l Cl	7.8	6.7	43	21.0	27.0	<250
sulphates	mg/l SO_4	11.0	7.7	24	24.0	41.0	<250
calcium	mg/l Ca	80.1	87.5	113	exempt (*)	61.0	not applicable
magnesium	mg/l Mg	14.9	15.6	28	exempt (*)	11.0	not applicable
sodium	mg/l Na	7.3	4.3	29	45.0	17.0	<200
potassium	mg/l K	4.3	1.1	14	exempt (*)	2.3	not applicable
calculated fixed residue	mg/l	347.0	347.7	548	299.0	302.0	(**)
nitrates	mg/l NO_3	3.6	3.8	18	8.0	4.1	<50
fluorides	mg/l F	0.13	0.12	0.53	0.2	0.14	<1.50
bicarbonates	mg/l HCO_3	326.5	343.3	470	exempt (*)	223.0	not applicable

(*) In accordance with Legislative Decree no. 31/01 and in agreement with the health authority, Gesesa is exempted from supplying the parameter.
(**) maximum value recommended: 1,500 mg/l.

FILTRATION OF DRINKING WATER: GESESA LAUNCHES PROJECT IN PEZZAPIANA

In 2021, Gesesa launched a project for the creation of an **activated-carbon filtration system** for treatment of drinking water for the water plant in Benevento, in the Pezzapiana area. The filtration plant will provide adequate water resources for the city of Benevento, maintaining the values for the substances tetrachloroethylene and trichloroethylene below the Contamination Concentration Limits (CCL) defined by Italian Legislative Decree 152/2006.
In addition, the project promotes **circularity criteria**, with the plant-based activated carbon used as adsorbent, once no longer functional, rather than being disposed of, are subject to thermal regeneration by specialised companies.
Once fully functional, therefore, the filtration system will improve management of water resources upstream and will promote the reuse of the adsorbent material downstream. The project is aimed at efficient management of water resources through technological innovation, minimising environmental impacts.

During 2021, Acea Ato 2 designed, created and commissioned an **innovative experimental plant for processing water destined for human consumption capable of removing arsenic**. The plant uses an innovative filtration medium made with amyloid proteins from dairy-industry waste (ß-Lactoglobulin), capable of capturing not only arsenic but also vanadium and lead. It has a treatment capacity of approximately 5 l/s (18 m^3/h), corresponding to the drinking-water requirements of a small settlement of around 600 families (2,000 people).
With regard to the **processing of drinking water**, at the Grottarossa and Montanciano plants, monitoring and analysis activity continued on treatment processes (chemical conditioning/pre-oxidisation, clariflocculation, sand filtration, granular activated carbon (GAC) filtration, post-oxidisation/disinfection), evaluating the efficiency of the removal of pollutants, specialised parameters for emerging organic species, both microbiological and sub-products of disinfection, in relation to the main management parameters of the plant. In addition, with reference to **forecasting the availability of water resources**, Acea Ato 2 has implemented a **machine-learning algorithm based on the random forest technique** to identify **meteorological proxies** (temperature and/or precipitation) **or management proxies** (volumes drawn) correlated to the variability of the state of preservation of the resource, with reference to the different collection sources (springs, well fields, etc.)

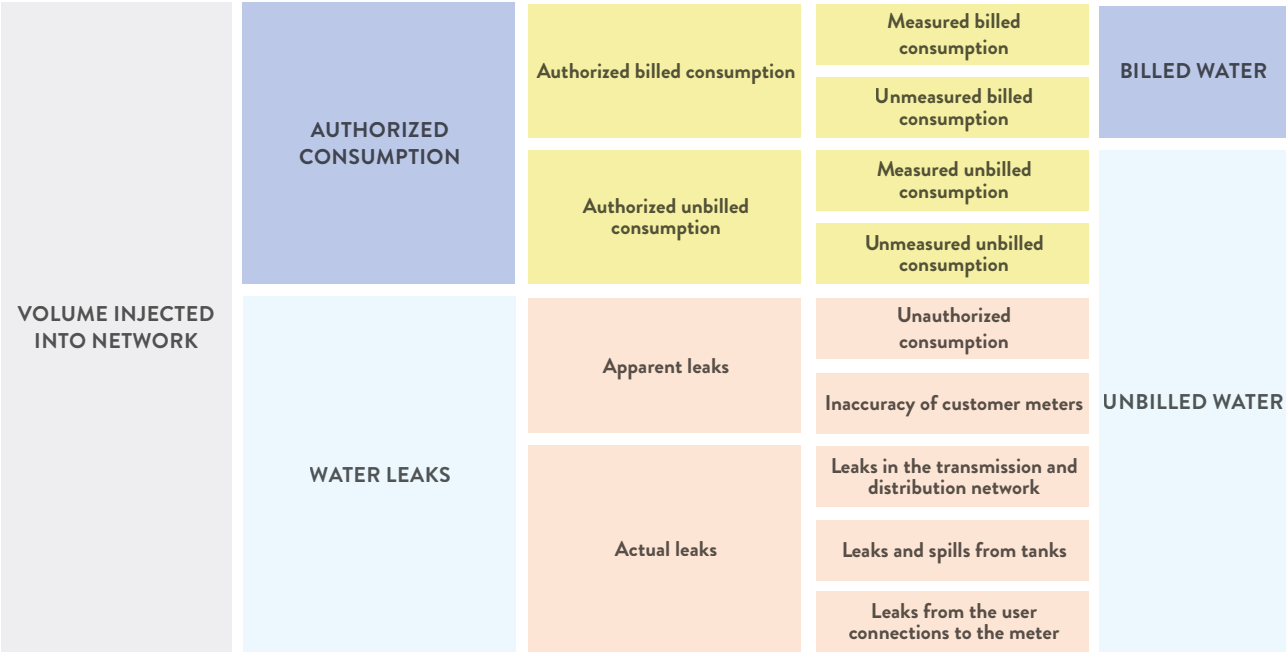
WATER SAFETY PLANS (WSPS)

The implementation of a **Water Safety Plan** (WSP) is required pursuant to the Decree of the Italian Ministry of Health of 14/06/2017, in implementation of EU Directive 2015/1787, which adopted the WSP methodology developed by the World Health Organization (WHO). Use of the WSP enables **prevention and reduction of the risks inherent in the drinking water service**, analysing dangerous events along the entire water supply chain, from collection to treatment and distribution, and through to the user's meter. The risk is calculated on the basis of the severity and probability of the pollution event or water shortage and after such assessment, the following are defined: **actions to mitigate risks**, **monitoring systems**, **operating procedures** under normal and emergency conditions, the **water quality control** plan, and the methods for **informing the public** and the competent authorities. In Italy, the Istituto Superiore di Sanità (ISS) has adopted WHO guidelines and approves WSPs.
Acea Ato 2 began implementation of the WSPs back in 2018, with an initial pilot project for the water system connected with the emergency drinking water plant for water from the river Tiber, in the Grottarossa area, with supervision of the Istituto Superiore di Sanità (ISS). For the WSP in question (completed in 2019), in 2020 the initial draft of the Plan was finished and submitted to the Ministry of Health. The Company has therefore launched the WSPs for the **ten major aqueduct systems managed**, stretching approximately 640 km. At 31/12/2021 the WSPs for the following aqueduct systems had been completed and submitted to the Ministry of Health: Peschiera-Capore, Appio Alessandrino, Marcio, new and old Simbrivio aqueducts, Laurentino and new Vergine aqueduct. In December 2021, a final meeting was held on the WSP of the Doganella aqueduct system, for which submission of documentation to the Ministry of Health is expected in 2022. Since April 2021, Acea Ato 2 has also launched implementation of the **WSPs for the distribution networks**, starting with the municipality of Guidonia Montecelio, for which the documentation has been shared with the Bodies involved, in November 2021. Overall, implementation of the **Water Safety Plans in Acea Ato 2** will involve 100% of the population served by aqueduct systems and from sources managed locally.
AdF also launched a project back in 2019 for the development and implementation of the **Water Safety Plan**, focusing initially on the aqueduct systems of the **Santa Fiora springs**, for six *Water Supply Zones* (WSZ) and a basin with 2,775 residents. The project, **completed at the end of 2021**, saw **active involvement of the main stakeholders** in the local area (local bodes/local health authority/ARPAT/District Basin Authority) and activation of a hydrogeological and geochemical study on the Santa Fiora springs, conducted in 2020 in the context of a scientific partnership with the Institute of Geoscience and Georesources of the Pisa branch of the CNR (National Research Council). Through the project, AdF acquired the necessary know-how to develop a planning tool as detailed by the **new EU Directive 2020/2184** on drinking-water quality, through refinement of a methodology for describing the environmental context and aqueduct infrastructures required for the subsequent risk assessment phase, according to an FMEA (*Failure Mode and Effect Analysis*) approach. In 2021, WSPs were created on the water systems fed solely by the North branch of the Dorsale Fiora resource, for 16 WSZs and more than 17,000 citizens.
After creating a cloud environment in 2020 for sharing, also with Control Bodies, of information on the drinking-water supply chain and useful for the implementation and approval of WSPs, in 2021 **GORI**, completed activity for the description of aqueduct systems, with requests being sent to the relevant local health authorities to identify the necessary figures for risk assessment, control measures and their efficacy. Operating Instructions and procedures are being drafted for the management of documents and accesses to the cloud, along with an **operating instruction manual for risk management**.
In 2021, **Gesesa** continued with training plans and authorisations on the draining necessary to manage WPSs, which will be prepared in collaboration with the University of Sannio. During the year, **Acea Ato 5** set up a multifunctional in-house team for implementation of plans.

WATER LEAKS

Sustainable management of water also requires **minimising losses on distribution networks**, with all operational Group Companies in the water area involved. Again in 2021, as in the previous year, there was **intensive activity to identify leaks**, quantified as described in chart no. 56, in order to recover the greatest possible quantity of water. In particular, the **dividing the network into water districts** makes it possible to optimise operating pressures, reducing losses, with targeted searches in the field in the most critical districts. With greater control of the individual parts of the network, it is possible to reduce losses, promptly identifying them or picking up on other anomalies.

Chart no. 56 – Water loss accounting model



NOTE: the image refers to the model of the International Water Association.

Overall, to date, **Acea Ato 2** has created **581 measurement districts** for over **11,500 km of distribution network**. The activity consisted of surveys, flow and pressure measurements, map production, user analysis and water balancing, creation of measurement stations, installation of shut-off and adjustment elements, mathematical modelling and searches for leaks. The results of efficiency actions were imported into the GIS systems. In addition, 2021 saw optimisation of the quality of process measurements, through verification and calibration of meters installed on sources and drinking water plants, and **progress in survey activity and georeferencing of networks**. The actions implemented enabled a reduction in water-loss volumes of more than **13% compared to 2019**[147].

Thanks to efforts to improve the efficiency of metering and to combat illicit use, at **Acea Ato 2** the overall losses for the year fell to about 39.8% (they were equal to 44.7% in 2019). Furthermore, in line with the downward trend of the previous two years, total losses on the Rome network were down by 28.6% (29.5% in 2020 and 34.2% in 2019).

In 2021 **Acea Ato 5** completed district planning for the networks of nine new municipalities. In addition, efficiency was improved for districts previously created in order to rebalance operation of the network and optimise the distribution service. The Company has created **97 new districts** covering **520 km of network**. Active control of pressures has continued, with installation of meters, reducers and flow-control valves at strategic points, with the goal of improving management of flows into the zones managed, reducing differences between daytime and night-time pressure levels. In 2021, **31 water pressure control valves** were installed.

On the supply network, as planned, 137 km of network was inspected, with the addition of further stretches identified after study of the single-line diagrams performed during the year. No significant leaks were identified and **approximately 30 km of network** was restored: this activity led to **cartographic reconstruction**, during the year in question, **of 925 km of network**. On the basis of these works, 2021 losses were slightly lower, at approximately 67% (68% in 2020) of resources issued to the aqueduct system, and volumes lost were down 17% compared to 2019.

At **Gesesa** during 2021 a Recovery Plan was launched for water resources in the city of **Benevento**, which involves **replacement of damaged pipes**, **implementation of remote control technology**, **application of a system to reduce water leaks and reduction of operating pressures on the network**. Losses in the year were 57.8% of water issued to the aqueduct system (59.4% in 2020). Actions will continue in 2022, also involving other Municipalities.

AdF conducted intensive activity to search for system leaks on its own water networks. In total in 2021, the Company inspected approximately 3,000 km of distribution network and created districts covering 300 km of network, with 115 of this on networks not yet subject to monitoring of night-time minimums. This enabled a decrease in the average size of districts and **district planning for approximately 90% of the distribution network**, with 87% coverage of total users. Monitoring was launched for a portion of the water distribution network in the town of Grosseto using a fixed leak-detection system, with a noise logger. The activities launched by AdF have allowed a significant reduction in the volume of water lost, achieving a reduction of 13% compared to 2019. Action taken enabled a reduction in losses, from 42.5% in 2020 to 39% in 2021.

147 The reference year is 2019, for all Companies, in accordance with the goals set out in the 2020-2024 Sustainability Plan.

In 2021, there was also continuation of three pilot studies for experimentation of new innovative technology applied to searching and detection of water leaks. The first of these, involving satellite searches on 600 km of network, gave good results both in terms of the number of leaks detected and the speed of detection. The second, based on a predictive methodology that identifies the areas most at risk of breakages, gave good results in the city town of Grosseto, enabling definition of 23 critical areas, in which 16 hidden leaks were identified. The third is a study based on reducing network pressure, to guarantee the minimum pressure required for maintenance of optimal operation at the critical point, which will be combined with analysis on the reduction in CO_2 emissions due to reduced pumping to issue water at the tank upstream of the network.

In 2021 **GORI** launched various actions in the municipalities of Nola, Angri, Nocera Inferiore, Castellammare di Stabia, Gragnano and Torre Annunziata, including verification and full mapping of networks for GIS representation and activities aimed at water-network optimisation[148]. Tradition leak-detection activity also continued for the remaining municipalities in the District. Overall, GORI conducted searches for leaks on **1,676 km of water network**, of which 1,118 km was analysed using "systematic" searches for leaks, and 558 km on the basis of "faults". In 2021, eight pressure regulation valves were installed and repair work was performed on approximately 141 km of water network. The combined action of the strategies enabled a reduction in volumes lost of approximately 14% compared to 2019. See the *Environmental Accounts* for details on individual water balances.

SEWERAGE SERVICE AND TREATMENT SYSTEM

13,712 km of sewerage network and **484 treatment plants** managed by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa, for **779 Mm³** of water treated

approximately **152,790 t of sludge produced** by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa, of which **67% recovered** (44% in 2020)

Water resources, after uses for the various civil purposes, is **collected through the sewer pipes** and **sent to the treatment plants**. There, wastewater is treated enabling **removal of pollutants via physical processes** (filtering, sedimentation, flocculation) **and biological** methods (aerobic and/or anaerobic decomposition of the organic substance with bacteria), and the production of sludge.
With **865 treatment plants** (of which **484** managed by Acea Ato 2, Acea Ato 5, AdF, GORI and Gesesa), the total volumes of water processed by the Group[149] in 2021, were **981 Mm³**, of which **779 Mm³** by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa[150]. The total number of Group treatment plants has decreased, from 895 plants in 2019 to 865 in 2021, on the basis of the **project for centralisation of treatment of wastewater** in order to streamline the service, which involves the main Companies (see info. box for more details on Acea Ato 2). For the Companies Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa, volumes of wastewater processed and percentage coverage of sewerage and treatment services for the total number of users served by the aqueduct are presented in Tables 55 and 56. The sewerage networks managed in 2021 total **22,381 km**, of which **13,712 km** relate to the five Companies listed.

Table no. 55 – Volumes of wastewater treated by Water Companies operating in Latium, in Campania and in Tuscany (2019-2021) (Mm³)

company	2019	2020	2021	destination
Acea Ato 2	599.8	596.9	601.5	returned to the environment (river/channel) and sea (in sea 0.3%)
Acea Ato 5	21.3	21.2	25.0	surface water body (river)
GORI	45.2	70.1	124.0	surface water body and sea (in sea, in 2021, 23%, equal to approximately 28 million cubic metres[151])
AdF	25.8	23.3	25.9	surface water body and sea (0.9% in sea)
Gesesa (*)	n/a	2.2	2.3	surface water body (river)

(*) In 2020, Gesesa began installing flow meters at the entry to treatment plants. Estimated data.

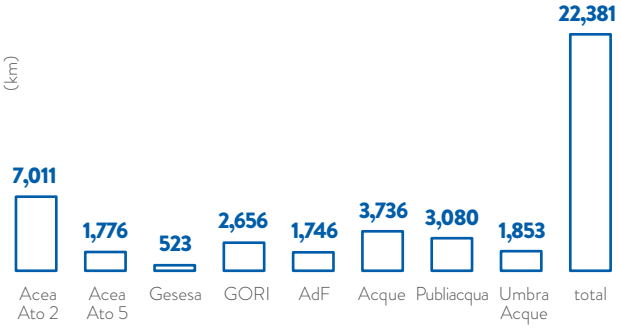
148 For example, the phase of planning optimisation of network includes construction of mathematical models of the network, calibration with smart mobile instrumentation, planning of optimal districts, pre-localisation of leaks and checks in the field, smart leak detection guided by the mathematical model, identification of stretches to be replaced and definitive planning with related preparatory activity.

149 Again in this case, the data relating to the number of treatment plants, the volumes treated, the size of the networks and the controls refer to the main Group companies operating in the water sector, including those not included in the full scope of consolidation.

150 Gesesa started installing the first flow meters on certain plants in 2020 and estimating the quantities of wastewater treated.

151 Plants that discharge into the sea for the Company GORI are those on the islands of Capri, the Sorrento Peninsula and that of Foce Sarno.

Chart no. 57 – Sewer networks of the main Group Companies in Italy (2021)



The water in output from the plants cited, after having undergone the purification treatments described, **has chemical and biological properties compatible with the life of the receiving body of water** and in accordance with the parameters established (as per Italian Legislative Decree no. 152/2006).

Almost 100% of the wastewater treated, which can be defined entirely as "fresh water", containing less than 1,000 mg/l of total dissolved solids, **flows into bodies of surface water**. Only 0.9% of the water treated by AdF is discharged into the sea and 23% of the water treated by GORI, approximately 4% of total water treated[152]. The portion of water discharged into the sea travels through underwater pipes, following treatment at the coastal treatment plants of the Sorrento Peninsula (Sorrento, Massa Centro and Marina del Cantone), the island of Capri (Gasto, Occhio Marino and La Selva) and Foce Sarno. The main basins affected by discharge are presented in Table no. 57.

Table no. 56 – Percentage coverage of the sewer and purification services for total user accounts of the Water Companies in the NFS (2019-2021)

company	2019		2020		2021	
	sewer	purification	sewer	purification	sewer	purification
Acea Ato 2	91.5%	88.1%	91.7%	88.4%	91.5%	88.3%
Acea Ato 5	66.5%	55.9%	66.8%	57.3%	67.1%	57.7%
GORI	82.3%	66.0%	84.0%	70.4%	86.7%	76.1%
Gesesa	80.3%	30.4%	80.6%	33.9%	80.6%	34.8%
AdF	84.2%	73.5%	84.2%	73.6%	84.1%	74.8%

Table no. 57 – Hydrographic basins affected by discharges of water companies within the scope of the NFS

company	hydro graphic basins affected
Acea Ato 2	basins of rivers Tiber, Aniene, Mignone and Arrone
Acea Ato 5	basins of rivers Gari, Sacco, Cosa and Liri, Fosso della Maddalena, tributary of the River Sacco, Fosso del Diluvio, tributary of Lago di Canterno
Gesesa	basins of rivers Calore, Sabato, Isclero and Tammaro
GORI	hydrographic basin of the river Sarno and Regi Lagni canals
AdF	basins of the rivers Ombrone, Orcia, Fiora, Albegna, Elsa, Pecora

NOTE: prior to discharge, wastewater is treated in the treatment plants managed by the Companies themselves.

CENTRALISATION OF ACEA ATO 2 TREATMENT PLANTS CONTINUES

To improve the quality of treated water, Acea Ato 2 has defined a Centralisation Plan for treatment plants aimed at **streamlining the service**, centralising treatment, where sustainable, at a limited number of sites identified through analysis of the land from a geomorphological and urban-planning perspective.

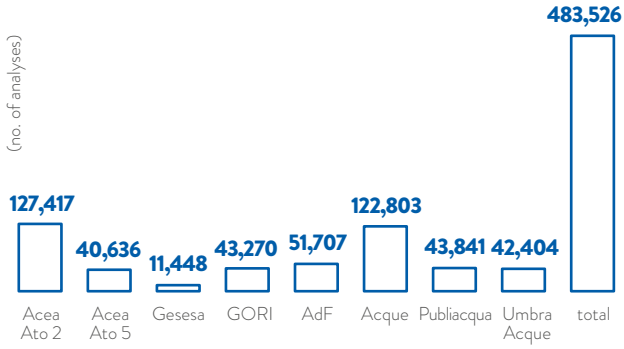
In fact, with a high number of small and medium-sized treatment plants managed (117 treatment plants with capacity below 10,000 P.E.), service coverage is guaranteed primarily by large and medium-large treatment plants (43 treatment plants with capacity above 10,000 P.E.). From the date of acquisition of the Integrated Water Service (2003), and subsequent steps, 14% of treatment plants with low and medium capacity have already been eliminated. The reduced fragmentation in favour of medium-large plants, combined with integration of sewerage collector systems, has allowed **greater control of treatment efficacy** and optimisation of management and energy costs.

Acea Ato 2 has therefore prepared a rationalisation plan, which it keeps up to date, choosing between centralisation and upgrading of small plants on a case-by-case basis. The optimal solution depends on many factors that must be carefully evaluated for the specific case. In 2021, the Centralisation Plan reached the goal of **eliminating a further 5 minor treatment plants** (Guado Tufo Sacrofano, Grotte Portella Frascati, Valle Focicchia and Valle Vergine Rocca di Papa and La Botte Guidonia) **as well as one medium-sized plant** (Lucrezia Romana – Ciampino).

152 The discharge of water, as for intake, occurs in areas at potential risk of water stress, as defined by the cited Aqueduct Water Risk Atlas.

The Company manages treatment processes in line with the provisions of the authorisations required for each plant and on the basis of the regulatory context in which they operate. The discharge limits are established for each plant, through an authorisation issued by the competent administrative body, which, on the basis of technical and environmental assessments during evaluation, may set stricter parameters compared to those applicable nationally. In this regard, for example, the regulatory framework in which Acea Ato 2 operates is characterised by prescriptive standards for discharge which are **slightly higher** compared to the national regulatory reference level, and similarly, for Acea Ato 5, in the Province of Frosinone, authorisations regarding the quality of water discharged are stricter than those established by sector-wide regulations. This is a precautionary approach.
The Company that performs analyses to verify the proper treatment of waters indicated the percentages for non-compliance with discharge limits, which are nevertheless very low, relative to the total quantities analysed: 3.3% for Acea Ato 2, approximately 3.4% for Acea Ato 5 and Gesesa, 0.8% for GORI and 4.3% for AdF. In 2021, no hazardous substances were identified in analyses of Group wastewater.

Chart no. 58 – Analytical checks on wastewater, total and by company (2021)



Specifically, for **Acea Ato 2**, **127,417 analyses** performed **confirm the high purification performance** achieved by the **treatment process**.
In the "historic" area managed by Acea Ato 2, which includes **Rome and Fiumicino**, **the main treatment plants treated in 2021 approximately 516 million of cubic metres of wastewater**, a figure that is slightly higher than the previous year (512 million cubic metres in 2020). Considering also the smaller treatment systems and the plants of the municipalities acquired in OTA 2 (a total of 164) a **total volume of approximately 602 million cubic metres of wastewater treated**, in line with 2020 (597).
Table no. 58 shows the details of the most important parameters from the main treatment plants of Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa. Other indicators of the efficiency of purification are described in the section *Key environmental performance indicators – Water Segment* of the *Environmental Accounts*.

Table no. 58 – Output parameters of the main treatment plants managed by Acea Ato 2, Acea Ato 5, GORI, AdF And Gesesa (2021)

	Acea Ato 2	Acea Ato 5	GORI	AdF	Gesesa (Benevento)	concentration limits in surface water (Legislative Decree no. 152/06)
parameter	average of values (mg/l)					
BOD5	5	4	8	9	8	≤ 25
COD	20	21	15	32	19	≤ 125
SST	8	3	19	10	5	≤ 35
nitrogen (ammoniacal, nitrate and nitrous)	6	6	7	20	3	-
phosphorous	1	3	1	4	1	-
	quantity output (t)					
COD	16,041	925	1,892	585	25	-
SST	7,443	313	2,402	196	6	-

The sludge produced during the purification process **is mostly** sent for **recovery of material** (see the section *Intermediation and transport of waste* in *Environment segment*).
In 2021, actions continued to reduce the **quantity of sludge produced by treatment plants** managed by the Group Companies. Specifically, **Acea Ato 2 began use of its thermal dryer at the Ostia plant**. As a result of actions taken in recent years, in 2021 the reduction in the quantity of dehydrated/dried sludge was over 5% (compared to 2019), in line with the targets defined in the 2020-2024 Sustainability Plan. In 2024, it is expected that the sludge produced will be dried at the largest plants (Roma Est, Roma Nord, Roma Sud, Ostia and COBIS).
In 2021, **AdF completed works at the Grosseto San Giovanni plant** for **centralisation and thermochemical hydrolysis of sludge** produced by treatment plants under its management, launching activity in the second half of the year. The works enabled a 30.5% reduction in volumes of sludge produced compared to 2019. With the planned integration of anaerobic digestion and cogeneration processes, it will be possible to contribute to the energy independence of the plant through the production of biogas.
For **Acea Ato 5**, increasing focus on identifying innovative technological solutions aimed at **recovering material from treatment sludge**, in line with circular-economy principles, guided the choice towards use of the Fiuggi Colle delle Mele treatment plant, which is particularly efficient and has an appropriate residual capacity, for treatment of liquid waste produced. In 2021, the Company launched works for activation of the same sludge treatment methods for the Ceccano treatment plant.
At **Gesesa**, in 2021 the centrifuge was installed at the Ponte delle Tavole treatment plant, which was already operational, and assessment is underway for further specific actions. *At the end of 2020*, **GORI** began using a sludge-drying system at the Angri treatment plant. Authorisation and technical activity is underway for the upgrading of existing dryers at the treatment plants of Nocera Superiore and Foce Sarno, which came under management in 2019 and 2020, respectively, and for which activation is expected within two years. Construction of a drying system is also planned at the Nola plant.

In 2021, **Acea Ato 2** also completed preparatory activities for the **production of biomethane**, with a project target of 1 million Sm^3 per year in 2024, as an **opportunity for water operators in the circular-economy context**. Once fully operational, the "biomethane" project aims to produce over 2 million Sm^3 of biomethane per year through upgrading of biogas available at the two large treatment plants for civil wastewater of Roma Est and Roma Nord. This is a renewable energy source, the development of which was included by the Italian Government in the National Recovery and Resilience Plan (NRRP) with the provision of capital funding to incentivise production. In the year, the Company completed design of the two plants, including the points of input of biofuel to the gas network managed by Italgas Reti and verification of compliance with fire-prevention regulations with the collaboration of the Rome Fire Department. According to plans, the two plants should be operational by the first quarter of 2023.

PROMISCES PROJECT

Together with SIMAM and another 24 European partners, in November 2021 Acea Elabori saw the kick-off of the Promisces (***Preventing Recalcitrant Organic Mobile Industrial chemicalS for Circular Economy in the Soil-Sediment-Water System***) in Paris, with the aim of identifying the current barriers that prevent circularity in the soil-sediment-water (SSW) system and defining strategies to overcome them. More specifically, the project is intended to **remove highly persistent**, **mobile and potentially toxic substances** (identified within the European REACH regulations[153]), to help contribute to the goal of zero pollution and to improve protection of human health.
The project, financed by the European programme Horizon 2020, calls for seven case studies in Europe. Acea Elabori will work to remove PFAS (per- and polyfluoroalkyl substances) from dredged up materials to allow for reuse. PFAS are a highly persistent type of pollutants that damage ecosystems, creating high water and soil reclamation costs and with significant impacts on human health.
The project will take place over multiple years, during which techniques to monitor and model the substances and sources of pollution will be analysed, in order to enhance relevant scientific knowledge and support the promotion of solutions to prevent, mitigate and remedy this issue in the SSW system. In cooperation with interested parties, tools and strategies will be developed (as well as techniques and regulations) for sustainable management in the context of the zero pollution action plan.
By defining advanced treatment techniques for water purification and leachates from landfills, the project will contribute to circularity and the protection of ecosystems, as well as to the activities of the various companies in the Acea Group working in the integrated water system and protection of water.

Acea also works with **ENEA on projects aimed at sustainable management of the waste and water cycle**, with the objective of applying innovative technologies and solutions to industrial projects. In the context of the Framework Agreement signed with the Agency, in 2021 Acea began two studies. The first focuses on the creation of a self-tracking tool for continuous **improvement of the quality and reliability of analysis services offered by Acea Elabori**. The second is aimed at preliminary investigation for the **definition and implementation of sampling and MP (microplastics) analysis methodologies on water lines of treatment plants and in recipient bodies of water**.

THE USE OF MATERIALS, ENERGY AND WATER

energy efficiency (Areti and the Water Segment): approximately **24 GWh of savings per year** and approximately **7,500 t** of CO_2 **emissions avoided**

approximately **420 GWh of electricity consumed** by Group Companies **from renewable sources** with GO certification and **132,360 t** of CO_2 **emissions avoided**

47,700 m^3 of water recovered: **23%** of the total used in industrial processes in the Environment Segment

"Piaggio Reuse": the **Acque Industriali project** to eliminate the withdrawal of water from external sources, reusing water discharged from the production cycle

153 Regulation (EC) 1907/2006, the integrated European regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

CONSUMPTION OF MATERIALS

The main materials used in production processes differ according to the business sector. For the **Companies in the Environment Segment**, the most important resources include **incoming waste for production of compost and electricity** (waste-to-energy from pulper waste and SRF). Thermoelectric plants, managed by **Acea Produzione**, use **fossil fuels (natural gas and diesel) for the production of electricity**. For the electricity distribution process, carried out by **Areti**, one important gas is sulphur hexafluoride SF_6, used **in medium and high-voltage plants** for its specific electrical and thermal insulation properties. For the **Companies in the water segment**, there is use of **chemical products** required for process management, such as reactants for drinking water processing, disinfection and treatment of wastewater. Finally, **Acea Energia** and the structures managing commercial activity for the **Water Companies**, whilst all committed to processes of digitalisation, all use **paper** for customer invoicing. Please see Table no. 59 and the *Environmental Accounts* for details of resources used by each area.

Table no. 59 – Type and consumption of materials by the main Group Companies (2019-2021)

materials	u.m.	2019	2020	2021
incoming waste for composting and landfill	t	153,330	221,950	249,867
pulper	t	94,092	90,215	99,730
SRF	t	340,531	319,122	307,391
methane	Sm^3 x 1,000	23,703.0	23,495.6	26,101.5
diesel fuel	l	574,405	587,028	646,730
SF_6	t	21.9	22.3	22.3
various chemicals of water companies	t	15,775	17,951	18,804
paper	t	356	352	341

NOTE: Data on incoming waste includes waste sent for anaerobic and aerobic treatment at the Orvieto landfill and waste processed for the production of compost (sludge, green, OFMSW and other agrifood waste). Pulper and SRF for waste-to-energy are resources with a renewable component linked to the biodegradable fraction of the waste. In 2021, the renewable and biodegradable portions of pulper waste and SRF were approximately 43%. The data for paper are related to the billing of the Companies Acea Energia, Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa. Some values for the previous two-year period have been adjusted for consolidation.

ENERGY CONSUMPTION

GROUP ENERGY CONSUMPTION

Total energy consumption, both **direct and indirect**, is approximately **12,850 TJ**, down by 1.8% on 2020, due primarily to reduced energy usage of SRF[154] and lower electricity consumption for the distribution of drinking water (see Tables 60 and 61).
Whilst some areas have seen an increase in consumption, such as the treatment segment, primarily due to the management of new plants by GORI, in general **indirect consumption has decreased**, due in particular to lower consumption for the segment involved in the distribution of drinking water, due to greater rainfall and therefore reduced energy use for pumping systems.

Electricity consumption of the main Companies, particularly connected to the distribution of drinking and non-drinking water, treatment, waste-management plants and internal consumption sites, **originates from renewable sources with a Guarantee of Origin**, **for a total of approximately 420 GWh**, which in 2021 **was equal to 57% of specific consumption (731.8 GWh)** (Table no. 60).
The trends of **energy consumption intensity indexes** show improvement and certain increases in efficiency are specified in Table no. 62.
Approximately 0.9 GWh are produced by on-site PV plants for self-consumption at Group plants.

Table no. 60 – Direct energy consumption of the main Companies in the Group (2019-2021) (*)

	2019	2020	2021
energy per source		TJ (GWh)	
RDF/SRF and pulper waste (waste-to-energy) – non-renewable share	3,283.0 (911.9)	2,849.4 (791.5)	2,770.1 (769.5)
biogas (100% renewable – waste management and water segment)	243.9 (67.7)	420.8 (116.9)	424.1 (117.8)
SRF and pulper waste (waste-to-energy) – non-renewable share	3,280.8 (911.3)	3,859.1 (1,072.0)	3,659.0 (1,016.4)
methane (for electricity generation, district heating, processes, water area dryers and heating for offices) (***)	1,280.5 (355.7)	1,238.6 (344.0)	1,330.0 (369.4)

154 Due to lower running levels in the first two months of 2021.

LSC oil for process (disposal of Acque Industriali wastewater)	1.8 (0.5)	2.0 (0.6)	1.3 (0.4)
PG (heating)	0.7 (0.2)	0.8 (0.2)	0.6 (0.2)
diesel (for electricity generation and other uses, composting plants)	38.3 (10.6)	47.7 (13.3)	48.2 (13.4)
petrol (road haulage)	3.9 (1.1)	7.1 (2.0)	18.0 (5.0)
diesel (road haulage)	126.3 (35.1)	124.5 (34.6)	124.8 (34.7)
GPL (road haulage)	0.0 (0.0)	0.5 (0.1)	0.6 (0.2)
total	**8,259.1 (2,294.2)**	**8,550.6 (2,375.2)**	**8,376.7 (2,326.9)**

(*) The figures for the two-year period 2019-2020 have been restated to include Bio Ecologia, Demap and Berg, making them comparable with 2021.
NOTE: The energy produced by the Group plants and fed into the network is illustrated in the *Environmental Accounts* (Products – Energy Segment).

Table no. 61 – Indirect energy consumption of the main Group Companies (2019-2021) (*)

types of indirect consumption (TJ (GWh))	2019	2020	2021
electrical energy losses on the distribution networks and transport	1,188.4 (330.1)	1,076.7 (299.1)	1,090.4 (302.9)
own use of electricity for the implementation of distribution and transmission activities	142.1 (39.5)	128.9 (35.8)	110.6 (30.7)
losses and self-consumption in the production of electrical energy	233.1 (64.8)	251.5 (69.9)	279.6 (77.7)
electricity consumption for the production of PV energy (**)	8.2 (2.3)	14.3 (4.0)	12.2 (3.4)
electrical consumption for Ecogena plants (**)	19.4 (5.4)	19.7 (5.5)	13.7 (3.8)
losses of heat in the district heating network	109.7 (30.5)	99.8 (27.7)	86.0 (23.9)
consumption for public lighting	252.3 (70.1)	241.1 (67.0)	242.4 (67.3)
consumption for production processes, distribution of electricity and thermal energy and public lighting	**1,953.2 (542.6)**	**1,831.9 (508.9)**	**1,834.9 (509.7)**
electrical consumption for waste management plants (**)	43.2 (12.0)	41.7 (11.6)	35.2 (9.8)
electricity consumption for distribution of drinking water (***)	1,477.5 (410.4)	1,719.6 (477.7)	1,588.1 (441.1)
electricity consumption for wastewater purification (***)	904.8 (251.3)	902.7 (250.7)	972.5 (270.2)
consumption of electrical energy for the offices (**)	41.4 (11.5)	36.9 (10.3)	38.7 (10.8)
electricity consumption for other operating processes (Integrated Water Service, waste management, offices, etc.)	**2,466.9 (685.2)**	**2,700.9 (750.3)**	**2,634.5 (731.8)**
total indirect energy consumption	**4,420.1 (1,227.8)**	**4,532.9 (1,259.1)**	**4,469.4 (1,241.5)**

(*) The figures for the two-year period 2019-2020 have been restated to include Bio Ecologia, Demap and Berg, making them comparable with 2021.
(**) Energy with GO certification (Guarantee of Origin).
(***) Energy with GO certification (Guarantee of Origin) for 57%.

Table no. 62 – Energy intensity indices (2019-2021)

ENERGY CONSUMPTION INTENSITY INDEX	u.m.	2019	2020	2021
electricity consumed for public lighting per lamp	TJ/lamp	0.00112	0.00106	0.00106
total electricity consumed by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa/water issued into aqueduct systems (*)	TJ/Mm^3	2.202	2.436	2.457
electrical energy consumed by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa for sewer service and treatment/water treated (**)	TJ/Mm^3	1.31	1.26	1.25

(*) The increased consumption of electricity is primarily due to increases in consumption by GORI, which in recent years acquired and launched management of plants previously controlled by the Campania regional authority.
(**) there has been a slight decrease, and therefore an increase in efficiency, in the ratio of energy consumed to water treated.

ENERGY CONSUMPTION OUTSIDE OF THE GROUP

Acea works to increase awareness and monitor its supply chain in relation to energy issues. Since 2015, it has monitored **energy consumption outside the Group**, requesting a representative panel of its suppliers to fill out a specific questionnaire. In December 2021 the questionnaire was sent to 100 suppliers, the principal parties in terms of value of orders for the year. Thanks to the results from 40 of those contacted (equal to 42% of the total Acea expenditure for the procurement of goods/services and works), the total energy consumption for all suppliers was estimated at 390,506 GJ[155]. Since 2021, the questionnaire has included a specific section on water consumption (see the section *Attention to water consumption*, further on in the document).

ENERGY SAVINGS

Ecogena is the organisation registered to develop **energy-efficiency initiatives for the Group Companies** and report their results to the Gestore dei Servizi Energetici (GSE) for the **awarding of Energy Efficiency Certificates** (EECs). At 31/12/2021, the plants managed by Ecogena received **8,980 TEE** pursuant to Italian Ministerial Decree of 5 September 2011.
For Areti to achieve the energy-saving goal, actions were focused on the purchase of EECs on the market managed by the electricity market operator (GME). **The 2020 requirement**, with **expiry postponed to July 2021**, is 54,848 EECs. On top of this, there is the residual portion of the 2019 requirement equal to 48,947 EECs with respect to the initial 122,369 EECs, and the residual portion relating to the 2018 requirement equal to 10,102 EECs. The total requirement was therefore 113,897 EECs, of which the minimum to be cancelled was 43,011, with this quantity being correctly cancelled. Since 30/06/2021 the management contract for EECs for Areti's compliance was terminated and **this activity returned directly under the control of Areti**.

ENERGY EFFICIENCY ACTIONS

Again in 2021, Acea launched **actions aimed at recovery of energy efficiency**, in particular at the **headquarters** and the **Companies of the Water**, **Energy Infrastructure and Environment operating segments**. At the headquarters there was replacement of window fixtures in the stairwell, lift motors and various lighting fixtures with LED technology in certain offices and corridors. Energy consumption of the headquarters continued to be lower than the historical average, also in relation to the health emergency. At Acea's La Fornace conference centre, also used for employee training, a photovoltaic plant is in use. This produced 10.6 MWh in 2021, with 4.2 MWh for self-consumption and the remaining 6.4 MWh issued to the national electricity grid.
Considering the **photovoltaic systems** at the plants of Acea Ato 2, AdF and Terni, total energy consumption (on-site self-consumption) was approximately **950 MWh**, with a consequent **300 tonnes of CO_2 emissions avoided**.
For the **Water Segment**, in 2021 consumption saw a slight reduction (-2.4%) due in part to an increase in rainfall and in part to energy-efficiency measures. Below is a description of the **energy-efficiency actions** taken by the Companies in relation to routine operations.
In this regard, in 2021 **Acea Ato 2** achieved **a total saving of 8.9 TJ** (2.48 GWh). In particular, consumption has been reduced for energy used in the recovery of water losses in Roma, through significant measures taken to recover the resource, **with a saving of approximately 2.6 TJ** (0.72 GWh). There have been increases in efficiency corresponding to **4.7 TJ** (1.29 GWh) at two water plants and for the treatment segment **there have been increases in efficiency for a saving of 1.7 TJ** (0.47 GWh) through specific actions to optimise two treatment plants. For **Acea Ato 5** increases in efficiency, corresponding to **3.2 TJ** (0.90 GWh), are attributable to the replacement of multiple pumps used for withdrawal at springs and well fields, installation of inverters, elimination of two treatment plants and a sewerage pumping plant, and replacement of traditional lamps with LED lamps. **GORI** implemented actions to increase efficiency for a saving of **62.6 TJ** (17.4 GWh), primarily through use of water sources with greater efficiency, new remote-management methods and the use of electric pumps with a greater yield. **AdF** increased efficiency for a saving of **5.3 TJ (1.5 GWh)** through actions on the aqueduct, with replacement of older pumps, district planning, management of pressure levels and leak detection. Gesesa has achieved an initial saving through increased efficiency of **1.4 TJ** (0.4 GWh) resulting from actions to manage pressure levels in the context of the current district-planning process. Overall, the above actions have enabled the **water segment to avoid** approximately **7,130 t of CO_2**.
For the **Environment** Segment, activities to **increase energy efficiency** in 2021 have involved actions at the **San Vittore del Lazio plant**: replacement of two electric motors **with new** more effi-

155 The figure is obtained by readjusting the consumption of respondents relative to the total purchased during the year.

cient models on lines 2 and 3, and replacement of traditional lamps with LED lamps, an annual overall saving from increased efficiency of 151,000 kWh. Other minor actions include replacement of LED systems at the Aprilia plant (5.8 MWh), and replacement of the centrifuge for drying of sludge[156] at the Chiusi plant of Bio Ecologia (23 MWh/year). For Acque Industriali in August 2021, the LSC-oil boiler of the Pontedera plant was replaced with a GPL system, for an annual increase in efficiency in 2021 that saved 840 kWh. 57 tonnes of CO_2 emissions were avoided.

In the Networks segment, the Company **Areti** continued in 2021 **with works to increase efficiency** on the electricity distribution network managed, including:

- the use of **257 MV/LV transformers** with **very low losses**, which allowed a reduction in electricity consumption of 388 MWh[157]
- other **actions on the HV/MV/LV distribution network** aimed at optimising the structure of the MV network and upgrading of HV and LV lines, currently estimated at a total of 1,127 MWh saved (including use of transformers).

Table no. 63 shows the types of actions and relative energy savings for Areti, for the last three years. **In 2021**, the total **energy saving** was **4 TJ** (1.1 GWh) and **355 tonnes of CO_2 emissions were avoided**[158].

Table no. 63 – Energy efficiency in Areti (2019-2021)

ENERGY SAVINGS ACHIEVED (GJ)

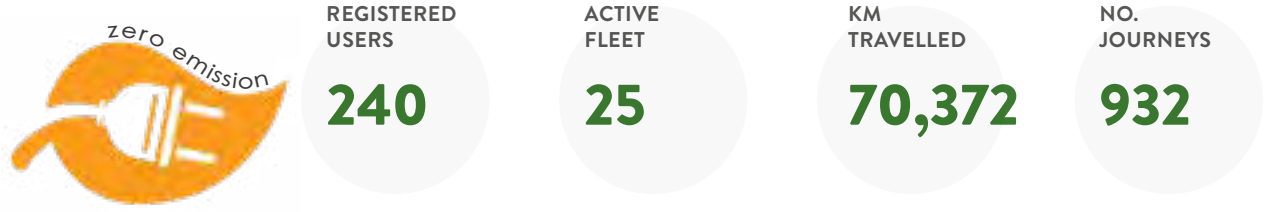
action	2019	2020	2021
reduction in losses from the network	4,860	6372 (*)	4,057 (**)
of which reduction in losses through the purchase of new transformers	*1,454*	*1,141*	*1,397*

(*) consolidated figure
(**) estimated figure

Consumption for public lighting in 2021 was **67 GWh** (242 TJ), in line with 2020 consumption. The ratio of LED lamps to total lamps remained unchanged at 91.7%.

Again in 2021, a further positive contribution was provided by the **25 electric vehicles** already in use in 2019 by the Company's staff in the context of a car-sharing scheme (Renault ZOE cars). In 2020, 100 electric Renault Kangoo cars were also purchased, destined for 24-hour personal work use, assigned individually to single employees. Of these, at the end of 2021, approximately 40 are already operational. In 2021, Areti monitoring calculated a total for all journeys of approximately 284,444 km, consumption of approximately 46 MWh and a net saving of approximately 28,670 kg of CO_2 linked to the absence of use of vehicles running on diesel.

Chart no. 59 – Car-sharing data (2021) (*)



(*) The chart refers to the ZOE model cars in the car-sharing scheme. It does not include Renault Kangoo vehicles assigned individually.

In 2021 Acea Ato 2 also added to its fleet of vehicles with **15 electric box trucks** and completed installation of on-site charging stations at the treatment plants of Roma Sud, Ostia, Roma Nord, Roma Est and Cobis.

156 The increased efficiency of performance of the centrifuge primarily enables an increase in volumes that can be processed, along with an energy saving.

157 In 2021, 257 transformers with very low losses were moved from the company warehouse, partially for replacement of traditional transformers and partly to equip new MV/LV substations.

158 Calculations for estimation of CO_2 emissions avoided in the entire section *Relations with the environment* have been carried out using the 2021 Terna location-based conversion factor, equal to 0.315 tonnes of CO_2/MWh. In the Sustainability Plan reporting, the same estimate is made using the 2019 conversion factor, in line with the calculation for definition of the 2024 target.

ATTENTION TO THE USE OF WATER RESOURCES

The main water intake of the Group is related to **production processes**, such as the production of thermal energy at the Tor di Valle plant, that of electrical energy at the waste-to-energy plants and the production of compost. Water resources are also used for cleaning of units in treatment plants, backwashing fine grilles and anaerobic digestion units. Water is also used in small quantities for laboratory activity.
While in 2020 accounting for industrial and civil water usage, including reuse, was greatly improved, **in 2021 the increase in the portion recovered**, **approximately 2.2 million m³** (515,000 m³ in 2020) led to lower consumption of drinking water. Some Companies in the water sector launched specific projects and actions for reuse of treated water (see the box on reuse of water used for technical purposes by GORI). The recent European Regulation 2020/741 on the reuse of treated water in agriculture, in addition to provisions that will be adopted with national regulations, facilitates a significant reuse of treated water in coming years.
The Group promotes informed and careful use of water resources, **also throughout the supply chain**, raising awareness among suppliers through issue of a questionnaire (see also the sub-section *Energy consumption outside of the Group*).

REUSE OF WATER USED FOR TECHNICAL PURPOSES BY GORI

At the treatment plants currently managed by GORI there is reuse of treated effluents **for usage within the plant itself**. The wastewater reused, defined as "for technical purposes", is distributed within plants through specific pipes and used for various purposes, including washing equipment (screens, units for thickening and drying of sludge), backwashing of certain parts of the treatment plant (membranes, fabric or sand filters), and washing of sand and screens. The quantities of water used for these activities are not currently measured. In 2022, a monitoring programme will be launched for all uses of water for services within the treatment plants, including activities carried out using water for technical purposes as previously described, and other uses (cooling, irrigation of green areas, fire-protection uses, toilets, etc.) that are currently carried out with drinking water. Through installation of specific flow meters, the goal is to implement a water-audit methodology that enables assessment of the water footprint for treatment processes and identification of strategies for greater savings and reuse of water within the individual plants. Reuse of treated wastewater is an effective response to water stress which also affects the territorial area managed by GORI.

In order to reuse water from treatment processes and minimise consumption of drinking water, in the period 2020-2021, the Company **Acea Ato 2** completed **the industrial water network** (non-drinking water) **for the treatment plants of Roma Sud**, **Roma Nord**, **Cobis and Ostia**. In the period 2022-2023, there are plans for expansion of the industrial water network for the Roma Est treatment plant, as well as for the launch of similar works at the Parco Leonardo treatment plant (Fiumicino), increasing the quantity of water reused with a circular-economy approach.
The works described have enabled a reduction in the quantity of drinking water used for industrial processes, also impacting the figure for the Group. In fact, in 2021 (see Table no. 64), total water consumption, excluding water recovered, was down 7%.
Not all Companies have been successful in obtaining authorisations for reuse: in 2021, Acea Ato 5 submitted a plan to the Area Authority for the reuse of wastewater discharged by certain treatment plants, included in the Plan of Works, selected on the basis of the potential reusers.
Excluding the plants with capacity below 2,000 Population Equivalent, with dimensions too small to guarantee constant provision to potential reusers, assessment was carried out within the scope of plants for which adaptation/upgrading works are already set out under the current Plan of Works. This assessment identified a single plant located in the municipality of Pontecorvo and situated near large agricultural companies/land-improvement cooperatives that could benefit from reuse of the treated water. However, analysis of overall costs and works time frames led to its feasibility being excluded.

The **Companies in the Environment Segment** limit the consumption of drinking water, **mainly using water from wells**. In addition, at the **plants of San Vittore del Lazio**, **Orvieto**, **Aprilia**, **Monterotondo Marittimo** and **Terni**, there are active **systems for the recovery of rainwater**. At the Terni plant, for example, rainwater is collected in **two tanks** equipped with a filtration system and storage tanks, before industrial use. The **Aprilia composting plant** also has a **system for the treatment of residual water from waste awaiting processing** for reuse in production processes, and only for industrial uses (e.g. washing vehicles). Other water reused for industrial purposes, since 2021, has been obtained from the evaporation line for liquid digested material. At the **Monterotondo Marittimo**, plant, in order to reduce water consumption aimed at greater consolidation and safeguarding of resources, there is a recovery system for rainfall that, after constructed-wetland treatment, enables collection of the water in special aerated lagoons, both as a reserve for fire-fighting and as a reserve of industrial water for process use. In December 2021, works were also completed for the creation of new fire-fighting tanks that allow allocation of the recovered water reserve only for industrial use within the site. At the **San Vittore del Lazio waste-to-energy plant**, every year rainwater is used in the production of demineralised water, after treatment in a specific chemical-physical plant, and is completely reused in the process. There is therefore zero discharge. Finally, the **Orvieto plant hub collects rainwater** from the roofs of some buildings, channelling it into the fire-fighting tank serving the building where compost maturation and storage phases take place. Thanks various solutions described, **the volume of water recovered from the Environment Segment** was approximately **47,700 m³**.
Attention to management and consumption of water is also highlighted by the Piaggio Reuse project, led by Acque Industriali (see specific info. box).

PIAGGIO REUSE

Piaggio Reuse is a project led by Acque Industriali aimed at establishing a **circular water management model** at the Pontedera plant complex, in the province of Pisa. Currently co-existing at the Pontedera complex are the chemical and physical treatment plant of the Piaggio plant, the civil wastewater treatment plant of Acque SpA and the industrial wastewater treatment plant of Acque Industriali, which primarily processes effluents from the Piaggio plant. The project involves a qualitative increase in water leaving the wastewater treatment plant, through creation of a **biological post-treatment phase using MBR** (Membrane Bio Reactor) technology that generates a flow of water **for reuse within the production cycle** and brings a consequent drastic **reduction**, or complete elimination, **of water drawn from groundwater resources**. A similar effect is expected on the volumes of water discharged, with lower environmental and economic costs. The project began in 2021 with an initial step in the form of a pilot project, and will be extended in 2022 to the full-scale plant. The results of the project could be replicated on all industrial plants with very high water consumption.

Group water intake associated with industrial processes and civil uses is presented in Table no. 64.

Table no. 64 – Water intake of the main Group Companies (2019-2021)

type of intake (Mm³)	2019 (*)	2020	2021
industrial processes (district heating, thermoelectric generation, Ambiente plants, Water companies)	**0.380**	**0.851**	**2.419**
of which aqueduct (*)	*0.237*	*0.229*	*0.108*
of which well	*0.092*	*0.104*	*0.105*
of which river water (**)	*0.003*	*0.003*	*0.003*
of which recovered water	***0.048***	***0.515***	***2.202***
water consumption for civil use (***)	**2.079**	**2.615**	**2.533**
total water consumption	**2.459**	**3.466**	**4.952**
total water consumption excluding recovered water	**2.411**	**2.951**	**2.749**

NOTE: Intake of freshwater occurs in areas at potential risk of water stress, as defined by the Aqueduct Water Risk Atlas, the map drawn up by the World Resources Institute (WRI).
(*) This item includes water transported by tankers to the Aprilia site (7,580 m³ in 2021).
(**) Consumption refers exclusively to the withdrawal from the Paglia river near the Orvieto composting plant.
(***) Civil consumption derives from: aqueduct (99.9%), well and tankers.

WATER INTAKE OF PANEL OF SUPPLIERS MONITORED

Since 2020, to raise awareness along the supply chain of the importance of safeguarding water resources, the Sustainability Planning & Reporting Unit, with the support of the Procurement and Logistics function, has sent a panel of suppliers (on an experimental basis) a request for environmental data including information on water intake, divided by process and civil uses. **40 suppliers** out of 100 suppliers invited to replied to the section on water resources, corresponding 42% of the total expenditure of the Acea Group for procurements of goods, services and labour. Water intake for the above suppliers in 2021 equalled approximately 10,750 m³, divided into 7,050 m³ for industrial uses and 3,700 m³ for civil uses. Acea intends to continue with this request in the coming years as well, improving data collection and continuing to raise awareness on this issue.

Discharges of water intake occur within **authorised** and **closely controlled processes**. For example, at the **Terni waste-to-energy plant**, residual water from production processes is **first treated by internal treatment plants**, before being discharged into public sewerage. Water used in the waste-to-energy process at the **San Vittore del Lazio** plant, instead, is collected and stored in special underground tanks and disposed of as waste, as it may contain components that make it unsuitable for normal discharge. Wastewater from toilet facilities of production lines and offices are collected in septic tanks and subsequently sent for disposal. Sewage from the headquarters is instead collected and transferred in an "Imhoff tank" with a sub-irrigation system for clarified material into the soil. Rainwater is reused in the production of demineralised water, after treatment in a specific chemical-physical plant, without external discharge.
Water intake for industrial uses in activities connected to the integrated water service, and in particular water treatment, undergoes the **same treatment as waters transported via public sewerage**, i.e. it is retreated at the head of the treatment plant and sent to the locations described in the section *Sewerage service and treatment system*, in the chapter *Water segment*. All civil water intake from the aqueduct ends up directly in the public sewer system.

EMISSIONS

continuous analysis of waste-to-energy emissions: **values of pollutants significantly lower than legal limits**

improvement in Scope 1 **emissions intensity index** (production of energy from thermoelectric WtE): **369 g/kWh**

ATMOSPHERIC EMISSIONS

Atmospheric emissions due to Acea plants are subject to scheduled and continuous monitoring. Plants are managed according to the UNI EN ISO 14001 and UNI EN ISO 45001/OHSAS 18001:2007 standards. The waste-to-energy plants and the Orvieto plant are also **registered under the European EMAS III scheme**, extended until 2024.

The most significant macro-pollutants connected with the main production processes of Acea Ambiente and Acea Produzione plants are presented in Table no. 65. The data, tracked through the Continuous Emissions Monitoring Systems (CEMSs) are in line with the values for previous years, with the exception of SO_x emissions. In fact, in 2021 the greater concentration and therefore greater mass of sodium hydroxide (SO_2) is attributable to the trend in the chemical constituents of fuel. The values are still very low.

Table no. 65 – Total atmospheric emissions of pollutants from the main Group plants (2019-2021)

emissions (t)	2019	2020	2021
CO_2	7.02	8.22	7.68
NO_x	188.19	190.67	198.11
SO_x	0.33	0.90	1.60
particles (particulate matter)	0.60	0.60	0.74

NOTE: the emissions refer to the plants of Acea Ambiente – waste-to-energy and Acea Produzione.

Specifically, monitoring of the **waste-to-energy plants** is carried out by means of fixed and mobile stations that **sample and analyse the fumes coming out of the chimneys**, **measuring concentrations** for numerous parameters that are periodically checked by internal personnel and certified by qualified external laboratories. Again in 2021, the **values of the main pollutants** were also **significantly below the legal limits** (see Table no. 66).
At the **San Vittore del Lazio plant**, during the year surveys were performed on odorous emissions, as well as monitoring of diffuse and fugitive emissions and continuation of a biomonitoring campaign using bees as bioindicator insects (see section *Safeguarding of land and biodiversity*, in the chapter *Environmental sustainability and the primary challenges*). Finally, each waste-to-energy line is equipped with systems to monitor emissions from the chimney, enabling continuous tracking for concentrations of pollutants 24/7, with availability of data on the Group website (www.gruppoacea.it). Environmental monitoring is performed at all plants, For example, in October and November 2021, there was a campaign of monitoring for chemical and biological risk at the Aprilia plant, including areas of the new anaerobic-digestion section.

Table no. 66 – Concentrations of atmospheric emissions generated by waste-to-energy plants (2019-2021)

		San Vittore del Lazio plant (*)				Terni plant (*)			
pollutant	**u.m.**	**scope of reference** (**)	**2019**	**2020**	**2021**	**scope of reference (**)**	**2019**	**2020**	**2021**
HCl	mg/Nm³	8	0.151	0.145	0.064	8	3.580	3.807	3.701
NO_x	mg/Nm³	70	29.652	29.925	29.488	180	128.650	125.989	120.644
SO_2	mg/Nm³	40	0.003	0.086	0.310	25	0.430	0.969	0.928
HF	mg/Nm³	1	0.023	0.020	0.016	1	0.080	0.00	1.040
CO	mg/Nm³	40	0.803	0.604	1.083	25	1.140	1.057	0.049
total particles (particulate)	mg/Nm³	3	0.007	0.010	0.049	25	0.790	0.763	0.760
PAH (polycyclic aromatic hydrocarbons)	mg/Nm³	0.01	0.00001	0.0000	0.000007	0.01	0.0000	0.00000	0.00002
dioxins and furans (PCDD +PCDF)	ng/Nm³	0.1	0.0074	0.0094	0.0023	0.1	0.0087	0.0000	0.0000
heavy metals (Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V)	mg/Nm³	0.5	0.0387	0.0246	0.0315	0.3	0.033	0.03	0.04

(*) The analysis of PAH, dioxins and furans and heavy metals and their composites are four-monthly and discontinuous. The "<" symbol identifies the concentration values that are equal to or below the thresholds that the devices used by the laboratory are capable of measuring.
(**) Reference parameters, Legislative Decree no. 46/2014, 2000/76/EC and AIA, are separate for each waste-to-energy plant.
NOTE: For San Vittore del Lazio, over the years the recorded concentrations of the parameters HCl, SO_2, dust and HF were close to the instrument's detection limit. Therefore, in these measurement areas deviations are to be considered insignificant for absolute changes in concentrations and masses.

Monitoring carried out on installations at risk[159] has shown **the absence of emissions** in significant quantities **of substances responsible for reducing the ozone layer** (for consumption see the section *Resources used*, in the *Environmental accounts*).

GREENHOUSE-GAS EMISSIONS

Acea quantifies its CO_2 emissions by **monitoring and evaluating the carbon footprint of the individual macro production processes** according to the guidelines of the GHG protocol[160] which requires reporting in the categories of **direct** (**Scope 1**) and **indirect** (**Scope 2** and **Scope 3**).
Direct Scope 1 emissions **mainly come from** the Group's **two waste-to-energy plants** and the **thermoelectric power plants**. Three plants are subject to the **Emission Trading Scheme** (ETS) (the waste-to-energy plant in Terni and the thermoelectric plants in Montemartini and Tor di Valle). The allowances assigned under the NAP (National Allocation Plan) are lower every year and in any case small, compared to the actual emissions recorded. Data for the three-year period 2019-2021 is presented Table no. 67.

Table no. 67 – CO_2 emission allowances as per the National Allocation Plan (NAP) and actual emissions by plant (2019-2021)

plant (t)	**2019**		**2020**		**2021**	
	assigned by NAP	**actual**	**assigned by NAP**	**actual**	**assigned by NAP**	**actual**
Tor di Valle (*) (**)	4,775	46,993	3,782	44,227	3,564	49,863 (***)
Montemartini	0	1,513	0	1,546	0	1,704
Terni waste-to-energy plant (**)	0	99,281	0	122,338	0	123,552 (***)

(*) As with previous years, in 2021 the applicable legislative framework allowed the Tor di Valle plant to benefit from free of charge emission allowances (3,564 t) as it serves a district-heating network.
(**) The 2020 figures for actual emissions have been updated with the certified figures.
(***) Estimated emissions, pending certification by the responsible body.

Scope 1 emissions include other components deriving from certain processes of plants in the Environment Segment (composting, treatment and disposal of liquid waste), from drying at treatment plants, from petrol and diesel vehicles in the fleet, from leaks of sulphur hexafluoride (SF_6) that may arise at Areti plants, from combustion processes for heating of premises and offices, and finally from leaks of freon gases from air-conditioning units.
The figures for CO_2 issued emitted by waste-to-energy plants in

159 This is primarily air conditioning equipment using refrigerant gases subject to the 1987 Montreal protocol, particularly chlorofluorocarbons.
160 See www.ghgprotocol.org for more information.

the two years 2020-2021 **was down on 2019** (see Table no. 68). This is due primarily to **a decrease in the biodegradable fraction** of waste for both the San Vittore del Lazio and Terni plants (from 51% and 47% in 2019 to approximately 42% for both plants in 2020 and 43% in 2021), partly attributable to a change in the composition of waste due to closures of businesses with a higher biodegradable fraction (restaurants and catering) due to the health emergency.

Greenhouse-gas emissions for **Scope 2** deriving from electricity consumption **decreased further** in 2021, primarily due to the various actions taken by Group Companies to increase efficiency, as illustrated in the section *Energy savings*[161].
Scope 3 emissions include those reported deriving from the sale of gas, from the sale of electricity, from consumption of electricity by suppliers from whom we purchase goods, services and labour, from employee commuting and from work travel (see Table no. 68).
In 2021 **emissions for commuting and business travel were further reduced** due to restrictions triggered by the Covid-19 pandemic as well as extension of remote working for the majority of employees and consequent **limitation of travel**.
Scope 3 emissions associated with the purchase of goods, services and labour are calculated using monitoring data for energy consumption outside the Group, requested from a **representative panel of suppliers** using a questionnaire (see the section *Energy consumption outside the Group)*. In particular, the data requested regards energy (primarily consumption of fuels, electricity and vehicle fuels) and data for refrigerant gases used at supplier premises, which contribute to **Scope 3** emissions.
To reduce emissions from the **sale of electricity** (values indicated in table both using location-based and market-based methodologies), **Acea Energia** has for several years proposed commercial offers to customers for green energy with GO (guarantee of origin) certification. **Since 2021**, **all new retail customers in the free market** will have green energy with GO certification, and this will be progressively extended to existing contracts. This sustainable offer also applies for gas, with compensation through purchase of VER (Verified Emission Reduction) certified carbon credits. See also the section *Customer care*, in the Chapter *Customers*. **Green energy sold** to free market customers in 2021 totalled approximately 2,300 GWh[162] (1,198 GWh in 2020), corresponding to 38% of total energy sold to free market customers (see also the *Environmental Accounts*). The **sale of electricity with GO certification** has therefore led to a **saving of approximately 724,000 t of CO_2 in the Scope 3 category**. For sales of gas in 2021, there has been compensation of **approximately 2.2 MSm^3** (1% of the total sold) corresponding to approximately **4,360 t of CO_2**.

INTENSITY INDICES FOR GREENHOUSE-GAS EMISSIONS

Scope 2 carbon dioxide emissions, **deriving from leaks on electricity distribution networks**, **relative to total electricity distributed**, is one of the intensity indices for greenhouse gas emissions monitored. This index has **improved further**, changing from 0.0112 t/MWh in 2019 to **0.0097 t/MWh** in 2021, in line with the **continuous decrease in relative leaks** on the network (technical leaks/issued electricity). The **index for Scope 1 emissions against energy produced has also improved**[163], due in particular to improved operating conditions at the waste-to-energy plants (see Table no. 68).

Table no. 68 – Environmental indicators: CO_2 emissions, greenhouse gas intensity indices and vehicle emissions (2019-2021)

CO_2 EMISSIONS				
SCOPE 1 EMISSIONS				
FROM ENERGY PRODUCTION PLANTS				
	u.m.	**2019**	**2020**	**2021**
CO_2 emissions from Acea Produzione thermoelectric power stations (*)	t	48,506	45,773	51,567
CO_2 emissions from the Ecogena plants	t	10,925	9,607	7,829
CO_2 emissions from Acea Ambiente waste-to-energy plants (*)	t	280,504	341,763	320,483
FROM WASTE MANAGEMENT, ENERGY DISTRIBUTION, HEATING PLANTS AND VEHICLE FLEET				
CO_2 emissions from waste-management plants (**)	t	1,507	1,582	1,895
CO_2 emissions from water-plant processes of the IWS (***)	t	6,893	6,979	7,486
CO_2 emissions from heating (***)	t	940	872	881
CO_2 emissions from vehicle fleet	t	**9,550**	**9,705**	**10,533**
CO_2 emissions from Areti plants (from SF_6) (****)	t	9,400	8,695	6,975
CO_2 emissions from refrigerants (HCFCs) (*****)	t	0	1	0
TOTAL SCOPE 1 EMISSIONS (******)	**t**	**368,225**	**424,977**	**407,649**

161 The other reason is associated with the energy conversion factor from consumption in MWh to tonnes of CO_2 emitted, which decreased in 2021 to 315 g/kWh from the 336 g/kWh in 2020.

162 Of which an estimated 1,896 GWh by Acea Energia, including internal consumption of the Group Companies (420 GWh) and an estimated 404 GWh by Acea Energy Management.

163 For calculation of the index, energy produced by thermoelectric power plants and waste-to-energy plants is considered.

SCOPE 2 EMISSIONS				
Location-based Scope 2 emissions (market based) (*******)	t	394,798 (273,937)	380,010 (278,452)	350,391 (262,649)
of which CO_2 emissions from network leaks	t	118,824	100,489	95,414
SCOPE 3 EMISSIONS				
CO_2 emissions deriving from the purchase of goods/services and works (********)	t	22,303	11,642	31,701
CO_2 emissions from commuting (*********)	t	7,060	1,937	1,651
CO_2 emissions from business travel	t	288	46	38
CO_2 emissions from volumes of gas sold	t	214,043	276,284	346,567
CO_2 emissions from the sale of electricity, location based (market based)	t	2,168,154 (2,382,384)	2,200,491 (2,382,384)	2,447,005 (2,507,585)

INTENSITY INDICES FOR GREENHOUSE-GAS EMISSIONS

intensity indices of the GHG emissions	**u.m.**	**2019**	**2020**	**2021**
CO_2 emissions (Scope 1 + Scope 2)/Acea Group added value	(t/k€)	626.2	594.3	519.8
Scope 1 CO_2 emissions/gross production (**********)	(g/kWh)	357.8	423.0	368.8
Scope 2 CO_2 emissions deriving from losses on the electrical energy distribution network/issued GWh	(t/MWh)	0.0112	0.0104	0.0097

NOTE: From 2021 the table has been updated for the whole three-year period, adding Scope 1 CO_2 emissions for all Ecogena plants and Scope 2 emissions for internal use by Areti, consumption of Ecogena the PV plants of Acea Produzione. In addition, 2019 and 2020 data have been adjusted to include the Bio Ecologia plant, and the plants of the companies Berg and Demap.

(*) The 2020 figures for the Tor di Valle and Terni Plants have been corrected after the ETS certification, while the 2021 figure is estimated pending certification by a third-party body.

(**) The figure includes the emissions of the ancillary services of the waste-to-energy plants, not strictly related to the production of electricity, of Acque Industriali, and non-biogenic emissions from the combustion of biogas produced on site.

(***) Data refers to uses of dryers and generators.

(****) These are the tonnes of equivalent CO_2 corresponding to the emissions of insulating SF_6 present in Areti's HV equipment (1 t of SF_6 equates to 23,500 t of CO_2, GHG Protocol-5th Assessment Report- AR5). The 2019 figure has been adjusted.

(*****) In the last three years, the replenishment of HCFC fluids in the Group's plants was so small that it did not lead to significant CO_2 emissions.

(******) Also including the companies Umbra Acque, AdF, Publiacqua and Acque (outside the NFS scope), only considering the stake owned by Acea, for the three-year period 2019-2021 Scope 1 CO_2 emissions are: 369,565 t, 426,304 t and 409,060 t.

(*******) The indirect emissions (*Scope 2*) include all the Companies within the NFS scope. As an emission factor per unit of electricity consumed (t CO_2/MWh), for the location-based calculation the value of 0.315 was used for 2021 (0.336 for 2020 and 0.360 for 2019), as per Terna's "International Comparisons" document (updated annually). For the calculation of *Scope 2* emissions using the market-based method, the residual mix coefficients are the following for 2019, 2020 and 2021, respectively: 0.487 t/MWh, 0.466 t/MWh and 0.459 (Source: AIB document "European Residual Mixes 2020"). Also including the companies Umbra Acque, AdF, Publiacqua and Acque (outside the NFS scope), only considering the stake owned by Acea, for the three-year period 2019-2021, location-based CO_2 emissions are 438,882 t, 419,377 t and 387,198 t respectively, whereas market-based emissions are 333,092 t, 332,714 t and 316,233 t. Emissions due to technical network losses in 2020 were calculated on the basis of the corresponding adjusted figure in 2021.

(********) This value, estimated, refers to suppliers of goods, services and works. The 2021 figure is broken down as follows: 26,205 tonnes of CO_2 for suppliers of services and works and 5,496 tonnes of CO_2 for suppliers of goods. The significant increase compared to 2020 is attributable to a change in the composition of the panel of suppliers included in the calculation (90% of suppliers of services and labour responded compared to only 41% in 2020 and 26% in 2019) as well as due to progressive phase-out of restrictions and shutdowns caused by the pandemic.

(*********) Since 2021, emissions from commuting have been calculated using a new methodology.

(**********) Scope 1 emissions included are those from power generation plants. The figure for this indicator was lower in 2021 due to reduced CO_2 emissions both from waste-to-energy plants and due to an increase in energy production, primarily at the Terni plant.

NOTE: Emission factors for Scope 1 emissions are taken from the standard parameters – ISPRA data 2020, DEFRA 2021 and GHG Protocol-5th Assessment Report-AR5.

WASTE

45% of waste recovered against total waste produced **(157,770/347,487 t)**

47% ash recovered against total produced in waste-to-energy plants **(43,425/92,765 t)**

67% of sludge recovered against total sludge produced by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa **(102,760/152,791 t)**

Following an update of Standard 306 on Waste by GRI[164], which occurred in 2020, a project was launched aimed at defining waste streams for the main Group Companies (in particular the Companies of the Water Segment, those of the Environment Segment, Acea Produzione and Areti).

For a greater level of detail, streams were defined for **process and non-process waste**. The latter category includes waste that does not derive from production activity in a strict sense, and generally represents a minimal part of total waste, also having a very variable composition determined by non-recurring events.

Table no. 69 – Total waste produced (2019-2021)

waste produced (t)	2019	2020	2021
total waste	**306,940**	**308,713**	**347,487**
hazardous	*78,388*	*70,763*	*67,627*
non-hazardous	*228,552*	*237,950*	*279,860*
detail by type of processing			
entirely recovered waste (*)	**112,479**	**111,474**	**157,770**
entirely disposed of waste (*)	**194,461**	**197,239**	**189,717**
waste-to-energy	*1,824*	*3,769*	*2,962*
incineration	*13,931*	*16,948*	*5,242*
landfill and other disposal operations	*178,706*	*176,522*	*181,513*

(*) Waste sent for recovery in 2021 was divided as follows: 109,759 t for preparation for reuse, 44,984 t for recycling 3,027 t for other recovery operations.

WASTE FROM THE INTEGRATED WATER SYSTEM

In the Water Segment, production of waste largely corresponds with the production of sludge from the treatment process, with a minimal portion from sand and screens used in the same process. The former is essentially composed of water, biomass and a portion of chemical substances used for conditioning during drying, which helps to reduce the volumes of waste outputs. Sand and screens derive from pre-treatment of wastewater and contain plastic, aggregates and paper materials. The remainder is composed of residual material from cleaning to maintain systems. This may include sludge from regeneration of cation-exchange resins. Chart no. 60 shows an example of waste streams for the water sector.

164 The previous version of the Standard, from 2016, grouped effluents and waste together.

Chart no. 60 – Waste streams for the Water Segment companies

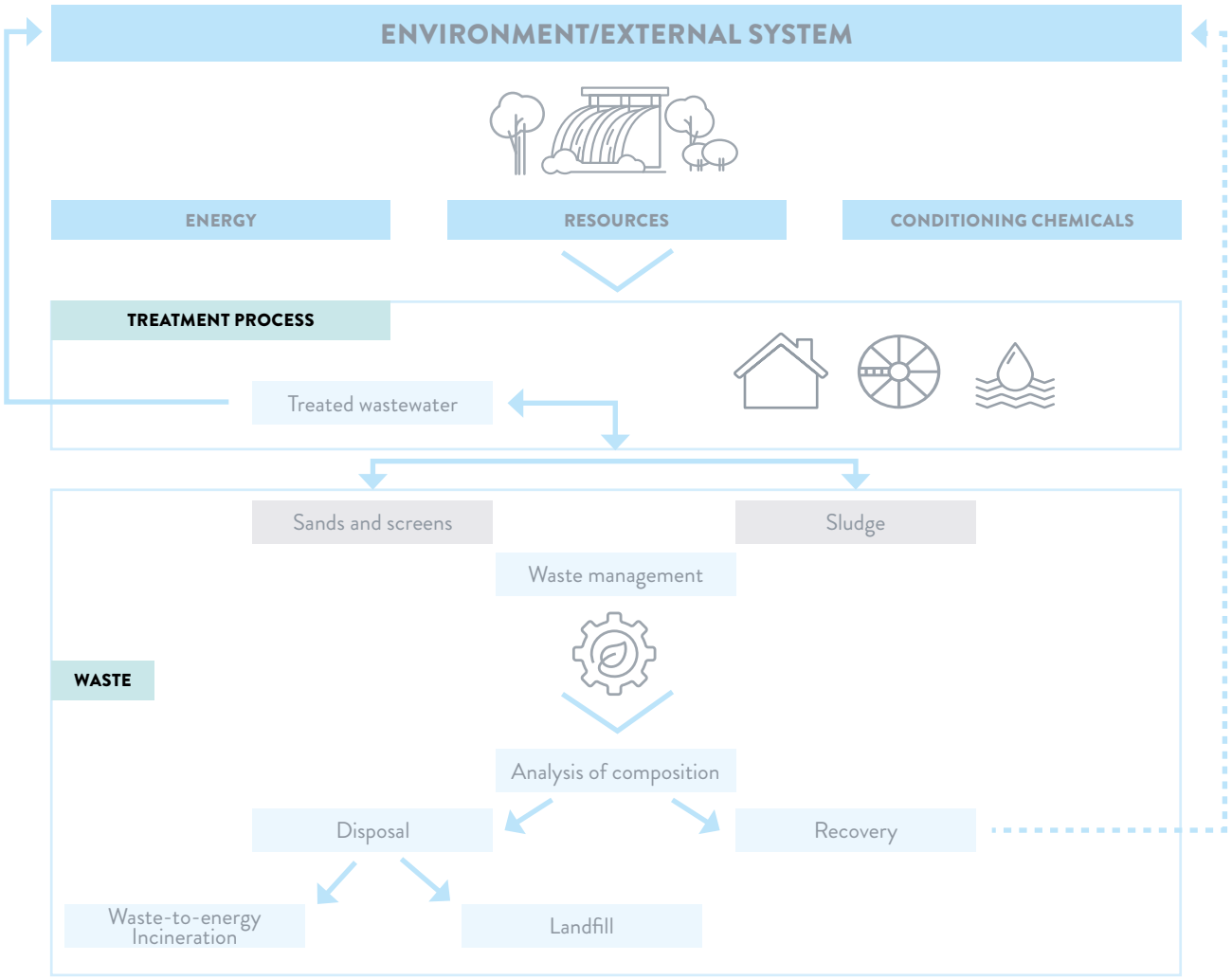


Table no. 70 – Waste produced by companies in the Water segment (2019-2021)

water segment waste (t)	2019	2020	2021
total waste	**153,465**	**152,285**	**176,438**
hazardous	*116*	*239*	*379*
non-hazardous	*153,349*	*152,046*	*176,059*
of which sludge, sand and screens	*143,316*	*138,756*	*166,969*
detail by type of processing			
entirely recovered waste	**54,992**	**63,570**	**110,019**
of which sludge, sand and screens for recovery (*)	*53,283*	*59,884*	*108,620*
entirely disposed of waste (*)	**98,473**	**88,715**	**66,419**
of which sludge, sand and screens for disposal (**)	*90,033*	*78,872*	*58,349*
waste-to-energy	*801*	*2,759*	*2,962*
incineration	*13,230*	*16,660*	*5,242*
landfill and other disposal operations	*84,442*	*69,296*	*58,215*

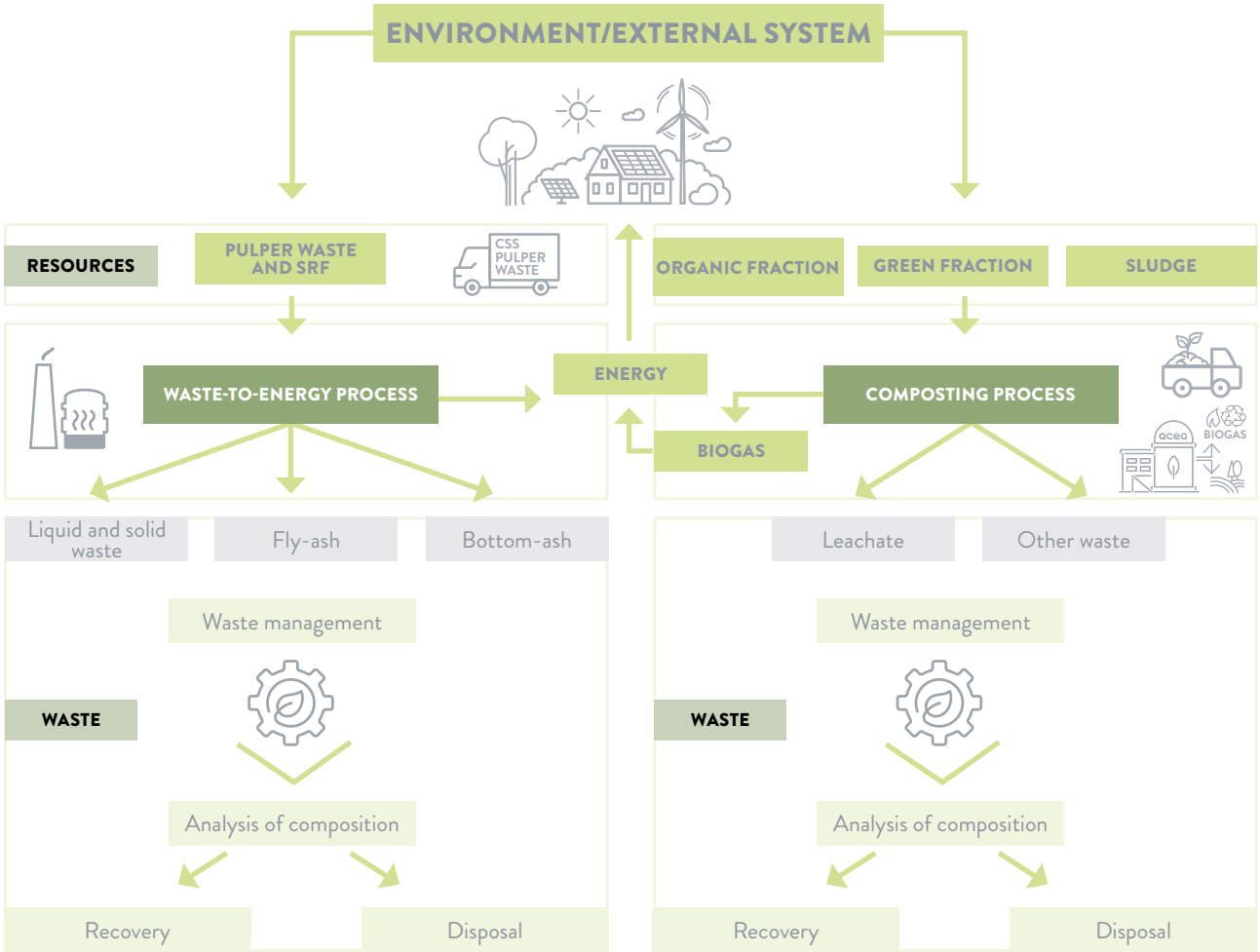
(*) In 2021, 102,760 t of sludge and 5,860 t of sand and screens were sent for recovery.
(**) In 2021, the following was sent for disposal: 50,031 t of sludge and 8,318 t of sand and screens.

Aquaser acts as a broker for certain Group water companies (Acea Ato 2, Acea Ato 5 and AdF), carrying out the pick-up, transport and recovery/disposal of waste (solid and liquid), with identification of final-destination sites for special waste with regard to solid materials, and providing logistical services (pick-up, transport and discharge) for liquid waste that is handed over to authorised plants.

WASTE FROM THE ENVIRONMENT SEGMENT

The streams for the Environment Segment are highly varied, due to the range of types of plants and the broad spectrum of services provided by the Companies. Activities can be grouped in the four macro categories: waste-to-energy, composting, treatment of liquid waste and brokerage/transport. Below are details for the first three, while transport and brokerage are handled under *Waste-to-energy, composting, disposal of liquid waste and related services* in the *Environment Segment* section. With the plants of San Vittore del Lazio and Terni, waste-to-energy activity produces the greatest quantity of waste, totalling 92,765 t in 2021. The majority of waste produced is fly-ash, bottom-ash and water from the buffer tank[165]. In 2021, 43,425 tonnes of ash were recovered (approximately 47% of the total). The Orvieto plant and the three composting plants (Aprilia, Monterotondo Marittimo and Sabaudia) produce leachate as their primary waste in terms of quantity, derived from stabilisation of waste and primarily sent for disposal (98%). As an example, streams of treatment, disposal and recovery for waste-to-energy and composting sites are illustrated in Chart no. 61. Finally, there are the treatment plants handling liquid waste of the Companies Acque Industriali, Berg and the plant of Bio Ecologia[166], merged into Acea Ambiente, which primarily produce sludge. The above plants also produce non-process waste, which only represents 1% of the total waste generated by the Environment Segment.

Chart no. 61 – Main waste streams in the Environment Segment (waste-to-energy and compost sites)



165 Water from buffer tanks or "water for technical purposes", refers to liquid solutions used as a buffer for acidic components that develop during combustion of waste.
166 The waste from the Bio Ecologia plant derive both from treatment of liquid waste and treatment of wastewater.

Table no. 71 – Waste produced by companies in the Environment Segment (2019-2021)

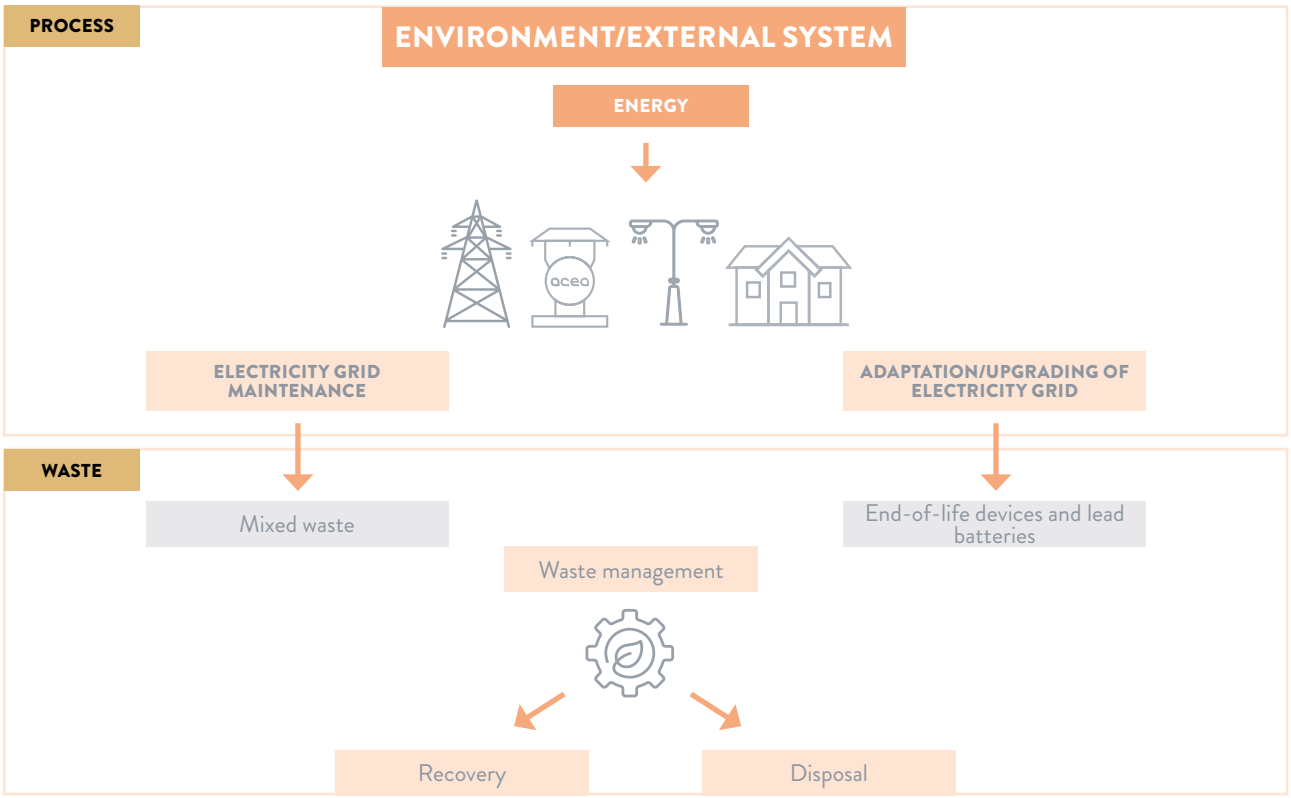
environment segment waste (t)	2019	2020	2021
total waste	**150,435**	**154,619**	**168,024**
hazardous	76,437	69,654	65,526
of which ash	68,092	59,509	59,142
non-hazardous	73,998	84,965	102,498
of which liquid waste (leachate and buffer water)	45,767	53,823	57,537
detail by type of processing			
entirely recovered waste	**55,589**	**46,503**	**46,032**
of which ash	52,608	42,629	43,425
entirely disposed of waste (*)	**94,846**	**108,116**	**121,992**
of which sent to landfill and subject to other disposal operations	93,123	106,818	121,992

WASTE FROM DISTRIBUTION OF ELECTRICITY

Areti, which manages the distribution of electricity, primarily produces waste derived from maintenance or replacement of infrastructure.

The Company does not generally produce non-process waste[167]. Special waste, produced during technical activity performed by contractors, is considered under the responsibility of the parties generating it during performance of their activity and its collection and management is also their responsibility[168]. Chart no. 62 illustrates the stream for waste generated by Areti activity.

Chart no. 62 – Waste streams for Areti



167 With the exception of 2019, in which 142 t of earth and rock containing hazardous substances was produced following special reclamation work.

168 This management occurs according to procedure (PRO00.11QAS "Waste Management") and the quantities produced are handed over for recovery or disposed of by authorised third parties.

Table no. 72 – Waste produced by the Areti Company (2019-2021)

Areti waste (t)	2019	2020	2021
total waste	**1,964**	**1,106**	**2,153**
hazardous	1,769	841	1,645
non-hazardous	195	265	508
detail by type of processing			
entirely recovered waste	**910**	**747**	**902**
entirely disposed of waste (*)	**1,054**	**359**	**1,251**
of which transformers and capacitors containing PCBs	*13*	*11*	*0*

MANAGEMENT AND MINIMISATION OF WASTE PRODUCED

All Group Companies contribute to an overall reduction in the quantity of waste, in line with circular-economy principles.
Acea Produzione produces a minimal quantity of waste (approximately 774 t in 2021), promoting recovery and recycling where possible.
The water companies have projects underway **aimed at reducing the volume of sludge**, for example by implementing new dryer lines, centrifuges and other specific systems. This approach represents a great impact in terms of the circular economy: a reduction in the percentage of water in sludge guarantees the opportunity for material and/or energy use or disposal with lower costs.
In 2021, in addition to taking over various regional plants, **GORI** changed supplier assigned to recovery and disposal and, for the first time, **65% of sludge produced was recovered and sent for composting** (in 2020 1% of sludge was recovered). At **AdF**, in order to reduce the quantity of sludge deriving from the water-treatment process, a new Newlisi section was installed at the San Giovanni treatment plant in Grosseto, with the goal of treating dewatered sludge produced in the other plants, reducing the overall quantity. Since 2017, **Acea Ato 2** has defined and implemented the "**Sludge Management Plan**". This contains structural and strategic actions with the dual objective of reducing volumes of treatment sludge produced and exploiting the solid components both as a material and for energy, through a range of different actions, rationalising the entire treatment segment and transforming large treatment plants into hubs for centralised sludge processing. In order to reduce the volumes of waste, **Acea Ato 5** is planning the **installation of a sludge drying system** at the Fiuggi - Colle delle Mele treatment plant. In 2021, the various design alternatives were assessed. Overall, 67% of sludge was recovered for the Water Segment, corresponding to 102,760 tonnes.

At the **Aprilia and Monterotondo Marittimo composting plants** a new plant configuration has been operational since 2019, which enables energy recovery through anaerobic digestion. At the Aprilia plant, with issue of the new EIA, obtained in January 2021, various actions will be implemented, including construction of a new line for production of SRF from plant waste.
Waste from the majority of Group Companies is sent to an external site[169]. Finally, for all Companies, waste is managed by companies outside the Group, with the exception of Acea Ato 2, Acea Ato 5 and AdF, which, as mentioned, handover their waste to Aquaser, in the role of broker with identification of final-destination sites[170]. The reliability of brokers in general is guaranteed by the mandatory **authorisation required by the specific regulations** for performance of activities and by periodic checks on documentation.
The data and information on waste for the main Companies is managed with dedicated management software[171].
Quantitative data on waste disposed of derives from direct measurements taken using weighing systems, which are periodically calibrated and certified. For the Companies of the Environment Segment, in almost all cases there is a difference between the outgoing weights and incoming weights, due to the scales used for approximation in the systems adopted, in any case documented using the forms applicable by law. In addition, for these Companies and for Acea Produzione, which are equipped with plants mainly certified in accordance with standard UNI EN ISO 14001, systematic checks are carried out on legislative compliance of compliance in terms of environmental factors.
In 2021, there were no significant releases of pollutants into the environment, such as mineral oils, fuels or chemical products[172].

169 The only exception is the Orvieto plant, which is classed as a plant hub and therefore has waste streams with internal final destinations.

170 Liquid waste from the plants of Acea Ato 2 are assigned to Aquaser solely for logistical services, being transported and discharged at plants authorised pursuant to art. 110 of Italian Legislative Decree 152/2006 managed by Acea Ato 2 itself.

171 With the exception of Gesesa and Areti, all companies have dedicated management software.

172 At the Area Nolana treatment plant (GORI) in 2021 there was a spillage of ferric chloride, used for conditioning of sludge, which was appropriately confined within sealed containment channels without affecting the environment.

WATER COMPANY DATA SHEETS AND OVERSEAS ACTIVITIES

This chapter illustrates the activities of some Group companies not included in the scope of the Consolidated Non-Financial Statement (see Disclosing sustainability: methodological note). In particular, data and information are provided relating to the main operating Companies for the water sector in Umbria and Tuscany, consolidated using the equity method in the statutory financial statements, and to the companies that are active abroad in the same sector.

Water activities in Umbria and Tuscany

UMBRA ACQUE

Umbra Acque SpA is a company with predominantly public capital, 40% owned by Acea SpA, which manages the Integrated Water Service in the area of Optimal Territorial Conference – Umbria 1 consisting of 38 Municipalities, of which 37 in the province of Perugia and 1 in the province of Terni, with a total population of around 494,000 inhabitants served.

MANAGEMENT SYSTEMS

Umbra Acqua has an **Integrated Quality, Environment and Safety Management System** (QAS), in compliance with the **UNI ISO 9001:2015, UNI ISO 14001:2015 e ISO 45001:2018 standards** and holds the **SOA certification** for the **OG6** (in class II) and **OS22** (in class III) categories and **qualification for design and construction** (up to the 8th classification). The analysis laboratory is accredited according to the UNI ISO/IEC 17025:2005 standard and for the purposes **of monitoring drinking water**, in line with the Ministerial Decree 14/06/2017.

QUALITY DELIVERED: MAIN INTERVENTIONS ON THE NETWORKS AND CONTROLS ON DRINKING WATER AND WASTE WATER

SIZE OF NETWORK, MAIN WORKS, METERS AND CHECKS ON DRINKING WATER AND NETWORKS (2021)

size of drinking-water network - *data in GIS*	**6,358 km** (**1,388** km of supply network, **4,970** km of distribution)
type of work	
interventions due to network failure/leak detection	**17,851 interventions** (17,645 due to faults, 206 leak detection)
meter installations (new installation and replacement)	**28,843 interventions** (5,939 new installation, 22,904 replacements)
network extension	**26 km** of expanded network
network reclamation	**50.3 km** of reclaimed network
drinking water quality control	**6,376 samples** collected and **116,891 tests** performed

SIZE OF NETWORK, WORKS AND CHECKS ON SEWERAGE WATER AND NETWORKS (2021)

size of sewerage network - *data in GIS*	**1,853** km
type of work	
interventions due to network failure	**1,109 interventions**
planned interventions	**96 interventions**
network extension	**39 km** of expanded network
network reclamation	**17 km** of network reclaimed following video inspection
quality control on wastewater for sewerage networks	**400 samples** collected and **6,012 tests** performed

HUMAN RESOURCES IN FIGURES

GENERAL DATA ON PERSONNEL (2020-2021)

	2020			2021		
(no.)	men	women	**total**	men	women	**total**
composition of the staff						
executives	4	0	**4**	5	0	**5**
managers	9	1	**10**	10	2	**12**
clerical workers	72	92	**164**	72	92	**164**
workers	211	0	**211**	209	0	**209**
total	**296**	**93**	**389**	**296**	**94**	**390**
contract type						
staff with permanent contract	274	77	**351**	280	89	**369**
(of which) part-time staff	0	7	**7**	0	7	**7**
permanent staff	18	14	**32**	12	4	**16**
staff under apprenticeship contracts	4	2	**6**	4	1	**5**
total	**296**	**93**	**389**	**296**	**94**	**390**
changes						
incoming staff	**20**	**14**	**34**	**9**	**3**	**12**
outgoing staff	**15**	**4**	**19**	**9**	**2**	**11**
turnover rate (%)	**11.8**	**19.4**	**13.6**	**6.1**	**5.3**	**5.9**
incoming rate (%)	6.8	15.1	**8.7**	3.0	3.2	**3.1**
outgoing rate (%)	5.1	4.3	**4.9**	3.0	2.1	**2.8**

INDUSTRIAL ACCIDENTS AND FREQUENCY AND SEVERITY INDICES (2020-2021)

	2020	2021 (*)
accidents (no.)	5	5
total days of absence	465	234
hours worked (*)	633,642	659,520
frequency index (FI) (number of accidents per 1,000,000/working hours) (*)	**7.89**	**7.58**
severity index (SI) (days of absence per 1,000/working hours) (*)	**0.73**	**0.35**

(*) The data is estimated.

TRAINING 2020-2021

course type, hours provided and costs

	courses (no.)		training (hours)		costs (€)	
course type	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**
advanced training	1	1	8	6	2,340	310
technical-specialised	57	77	4,096	7,842	56,779	82,211
legal	5	2	96	8	2,393	538
managerial	20	10	1,922	149	32,525	2,689
safety	17	20	3,419	1,780	30,022	16,716
total	**100**	**110**	**9,541**	**9,785**	**124,059**	**102,464**

employees trained

	2020			2021 (*)		
(no.)	men	women	**total**	men	women	**total**
	296	93	**389**	303	96	**399**
breakdown of training hours by qualification						
executives	161	0	**161**	219	0	**219**
managers	369	28	**397**	359	61	**420**
clerical workers	2,497	2,113	**4,610**	2,396	3,309	**5,705**
workers	4,373	0	**4,373**	3,441	0	**3,441**

(*) The figures are higher than the number of employees as they include employees who provided services only for a few months of the year.

Training provided during the year was held almost entirely via **e-learning** and involved **100% of personnel**. The **"smart workers" training course** with in-depth information on privacy, IT security and time management and the one on **corporate waste management** are among the topics most dealt with.

Employees of the commercial area received courses on **stress management**, and personnel on the operations side were involved in training courses on **new management software**. Finally, like every year, **safety** training continued in compliance with applicable laws.

ENVIRONMENTAL ACCOUNTS

PRODUCTS AND ANALYTICAL TESTS	u. m.	2019	2020	2021	Δ% 2021/2020
WATER BALANCE (*)					
drinking water from the environment	**Mm³**	**58.13**	**58.60**	**56.34**	**-3.9**
from the surface	*Mm³*	*0*	*0*	*0*	-
from wells	*Mm³*	*44.30*	*44.82*	*42.80*	*-4.5*
from springs	*Mm³*	*11.22*	*10.61*	*10.20*	*-3.9*
of which water from other aqueduct systems	*Mm³*	*2.61*	*3.17*	*3.34*	*-5.4*
total drinking water leaving the aqueduct system (c) = (a+b)	**Mm³**	**30.51**	**31.38**	**31.04**	**-1.1**
total drinking water dispensed and billed in the network (a)	**Mm³**	**29.50**	**28.73**	***28.61***	**-0.4**
measured volume of water delivered to users	*Mm³*	*29.50*	*28.73*	*28.61*	*-0.4*
volume consumed by users and not measured	*Mm³*	*0*	*0*	*0*	-
total drinking water authorised and not billed in the network (b)	**Mm³**	**1.01**	**2.65**	***2.43***	**-8.3**
measured unbilled authorised consumption	*Mm³*	*0.85*	*1.21*	*0.74*	*-38.8*
unmeasured unbilled authorised consumption	*Mm³*	*0.16*	*1.44*	*1.69*	*17.4*
LOSS ASSESSMENT ACCORDING TO ARERA RESOLUTION 917/17 R/IDR					
water leaks	Mm³	28.13	27.22	25.30	-7.1
water loss percentages	%	48.4	46.45	44.90	-3.2
TREATED WASTE WATER					
water treated in the main treatment plants	**Mm³**	**56.5**	**56.8**	**59.3**	4.4
ANALYTICAL TESTS ON DRINKING WATER AND WASTE WATER					
no. analytical tests on drinking water	**no.**	**135,500**	**107,257**	**116,891**	9.0
of which no. analytical tests on surface water	*no.*	*6,500*	*7,209*	*7,350*	*2.0*
no. analytical tests on wastewater (**)	**no.**	**38,481**	**35,610**	**42,404**	19.1

(*) The 2021 figures are estimated.
(**) The figure includes analyses carried out at treatment plants and industrial waste.

RESOURCES USED	u. m.	2019	2020	2021	Δ% 2021/2020
COLLECTION, SUPPLY AND DISTRIBUTION OF DRINKING AND NON-DRINKING WATER					
materials					
sodium hypochlorite	t	60.0	91.7	93.1	1.6
sodium chloride	t	200.0	213.6	221.6	3.7
hydrochloric acid	t	200.0	206.5	210.1	1.7
aluminium polychloride	t	12.0	11.5	11.1	-3.5
phosphoric acid (10%)	t	9.0	0	0	-
WASTE WATER TREATMENT					
materials					
polyelectrolyte emulsion	t	90.9	123.4	95.0	-23.0
ferric chloride (40%)	t	28.0	61.5	114.3	85.9
mineral oil and fats	t	1.40	0	0	-
OTHER CONSUMPTION					
drinking water (*)	**m^3**	**28,889**	**20,222**	**59,178**	**-**
drinking water consumed for non-industrial water uses (offices, outside showers etc.)	*m^3*	*2,282*	*1,597*	*10,416*	-
drinking water consumed for process water uses (washing machinery and bays, etc.)	*m^3*	*26,607*	*18,625*	*42,762*	-

(*) The figures for 2020 and 2021 are estimated considering the partial closure of offices and the different organisation of work following the health emergency.

ENERGY CONSUMPTION	u.m.	2019	2020	2021	Δ% 2021/2020
FUELS					
vehicle fuels					
diesel	l	422,430	410,000	456,600	11.4
petrol	l	7,497	7,000	5,800	-17.1
ELECTRICITY					
total electricity for drinking water	**GWh**	**72.82**	**69.13**	**69.45**	**0.5**
electricity for water pumping stations	*GWh*	*72.45*	*68.78*	*69.11*	*0.5*
electricity for offices	*GWh*	*0.37*	*0.35*	*0.34*	*-2.9*
total electricity for waste water	**GWh**	**22.56**	**22.78**	**23.22**	**1.9**
electricity for treatment	*GWh*	*17.70*	*17.86*	*17.94*	*0.4*
electricity for pumping stations	*GWh*	*4.74*	*4.81*	*5.17*	*7.5*
electricity for offices	*GWh*	*0.11*	*0.12*	*0.11*	*-8.3*

ENERGY EFFICIENCY (2019-2021)

action	energy savings achieved (kWh)		
	2019	2020	2021
extraordinary maintenance on plants	-	75,000	150,000

In 2021, extraordinary maintenance work was completed on the San Giovenale plant of the IWS, with adoption of **more efficient technology** that enabled an estimated energy saving of approximately 150 MWh.

WASTE	u. m.	2019	2020	2021	Δ% 2021/2020
SPECIFIC WASTE FROM TREATMENT OF WASTE WATER					
treatment sludge (*)	t	16,436	14,941	13,868	-7.2
sand and sediment from treatment	t	1,332	1,057	1,353	28.0
WASTE EXCLUDING SLUDGE AND SAND					
hazardous waste (**)	t	7.2	20.2	8.0	-60.4
non-hazardous waste (*)	t	5,931	4,940	3,767	-23.7

(*) The figure includes liquid sludge transported to other plants for the dewatering process, for a value of 5,269 t in 2019, 4,940 t in 2020 and 2,525 t in 2021.
(**) The increase in 2020 is due to the exceptional disposal of vehicles and company cars.

TOTAL COD IN INPUT AND OUTPUT (2019-2021)

(t/year)	2019	2020	2021
CODin	18,481.6	17,135.4	13,401.1
CODout	2,365.5	2,288.4	1,556.4

OUTPUT PARAMETERS FOR THE MAIN TREATMENT PLANTS (2019-2021)

parameter	average values (mg/l) 2019	average values (mg/l) 2020	average values (mg/l) 2021
BOD_5 (*)	20.1	18.6	12.3
COD	41.9	40.3	21.0
SST	25.5	30.8	12.0
NH_4^+	6.5	5.0	2.0
phosphorous	2.0	2.0	2.0

(*) The output BOD_5 value is expressed with the value of the limit of quantification (LOQ) equal to 12.3, resulting in all analytical calculations being lower than this value.

PURIFICATION EFFICIENCY OF THE MAIN TREATMENT PLANTS (2019-2021)

parameter	average values (%) 2019	average values (%) 2020	average values (%) 2021
100 x (CODin - CODout)/CODin	87.2	87.0	88.4
100 x (SSTin - SSTout)/SSTin	89.1	89.4	95.7
100 x (NH_4^+in - NH_4^+out)/NH_4^+in	83.5	86.4	93.8
100 x (P in - P out)/P in (*)	34.0	33.0	35.0

(*) Umbra Acque does not detect the phosphates leaving the treatment plants, as the standard does not fix the limit but the total phosphorus as required by tab. 2 of Annex 5 in part III of the Consolidated Environmental Law (TUA), with a closer monitoring of the nutrient discharged onto surface water bodies.

PUBLIACQUA

Publiacqua SpA is a mixed ownership Company with a majority public interest, owned by Acea through Acque Blu Fiorentine SpA, which manages the Integrated Water Service in the area of Optimal Territorial Conference no. 3 – Medio Valdarno, with a total population of approximately 1.2 million citizens served.

MANAGEMENT SYSTEMS

Publiacqua has an **Integrated Quality, Environment and Safety Management System** (QAS) in compliance with the **UNI EN ISO 9001:2015**, **14001:2015** and **45001:2018** standards for its main operations. The analysis laboratory is accredited according to the **UNI ISO/ IEC 17025:2005** standard. In 2021, the **UNI ISO 37001:2016** Corruption Prevention Management System was implemented, obtaining certification.

QUALITY DELIVERED: MAIN INTERVENTIONS ON THE NETWORKS AND CONTROLS ON DRINKING WATER AND WASTE WATER

SIZE OF NETWORK, MAIN WORKS, METERS AND CHECKS ON DRINKING WATER AND NETWORKS (2021)

size of drinking-water network - *data in GIS*	**6,825 km** (**1,389** km of supply network, **5,436** km of distribution)
TYPE OF WORK	
interventions due to network failure/leak detection	**4,105 interventions** (3,488 due to faults, 617 leak detection)
meter installations (new installation and replacement)	**7,448 interventions** (3,073 new installations and 4,375 replacements) and 38,625 mass replacements under contract
network extension	**1.7 km** of expanded network
network reclamation	**35 km** of reclaimed network
drinking water quality control	**10,334 samples** collected and **319,410 tests** performed

SIZE OF NETWORK, WORKS AND CHECKS ON SEWERAGE WATER AND NETWORKS (2021)

size of sewerage network - *data in GIS*	**3,736** km
TYPE OF WORK	
interventions due to network failure	**3,891 interventions**
planned interventions	**1,132 interventions**
network extension	**22.3 km** of expanded network
network reclamation	**10.2 km** of reclaimed network
quality control on wastewater for sewerage networks	**2,827 samples** collected and **43,841 tests** performed

HUMAN RESOURCES IN FIGURES

GENERAL DATA ON PERSONNEL (2020-2021) (*)

	2020			2021		
(no.)	men	women	**total**	men	women	**total**
composition of the staff						
executives	3	1	**4**	3	1	**4**
managers	14	8	**22**	15	7	**22**
clerical workers	185	143	**328**	187	142	**329**
workers	255	6	**261**	259	5	**264**
total	**457**	**158**	**615**	**464**	**155**	**619**
contract type						
staff with permanent contract	422	153	**575**	421	153	**574**
(of which) part-time staff	*3*	*9*	*12*	*3*	*7*	***10***
permanent staff	11	5	**16**	6	2	**8**
staff under apprenticeship contracts	24	0	**24**	37	0	**37**
total	**457**	**158**	**615**	**464**	**155**	**619**
changes						
incoming staff	**37**	**14**	**51**	**29**	**7**	**36**
outgoing staff	**22**	**4**	**26**	**22**	**10**	**32**
turnover rate (%)	**12.91**	**11.39**	**12.52**	**10.99**	**10.97**	**10.99**
incoming rate (%)	8.10	8.86	8.29	6.25	4.52	5.82
outgoing rate (%)	4.81	2.53	4.23	4.74	6.45	5.17

(*) The figures for 2020 have been modified after the consolidation.

INDUSTRIAL ACCIDENTS AND FREQUENCY AND SEVERITY INDICES (2020-2021)

	2020	2021
accidents (no.) (*)	16	9
total days of absence (**)	238	323
hours worked (***)	1,015,197	1,037,016
frequency index (FI) (number of accidents per 1,000,000/working hours)	**15.76**	**8.68**
severity index (SI) (days of absence per 1,000/working hours)	**0.23**	**0.31**

(*) Accidents with effects lasting for more than one day are considered.
(**) The value also excludes days of absence related to persistent or reopened injuries from previous years.
(***) This is the sum of ordinary and overtime hours.

TRAINING (2020-2021) (*)

course type, hours provided and costs

	courses (no.)		training (hours)		costs (€)	
course type	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**
advanced training (**)	5	2	78	182	5,906	2,641
IT	3	3	37	398	3,544	3,962
technical-specialised	42	44	3,061	4,298	49,610	58,104
managerial	7	5	1,281	809	8,268	6,603
administrative-managerial (***)	40	54	1,198	2,249	47,248	71,309
safety	43	46	2,679	4,102	50,792	60,745
total	**140**	**154**	**8,334**	**12,038**	**165,368**	**203,364**

employees trained

	2020			2021		
(no.)	men	women	**total**	men	women	**total**
	362	137	**499**	464	154	**618**
breakdown of training hours by qualification						
executives	67	36	**103**	44	10	**54**
managers	248	158	**406**	244	61	**305**
clerical workers	1,734	1,610	**3,343**	2,060	1,420	**3,480**
workers	4,460	21	**4,481**	6,608	52	**6,660**

(*) Some figures for 2020 have been restated after the final calculations.
(**) The advanced training courses provided to employees are managed by Acea SpA, which bears part of the costs.
(***) In 2021, the administrative-managerial item includes 1,143 hours of training on Anti-corruption issues.

In 2021, the provision of courses on **safety** and related to in-depth projects on **technology and systems** continued, with particular reference to updates on work equipment; the updating of skills relating to the regulations pertaining to Legislative Decree no. 231/01.

E-learning sessions were also held, such as the **managerial training** course **dedicated to the organisational climate**. The continuation of the emergency situation did not allow in-class teaching.

ENVIRONMENTAL ACCOUNTS

PRODUCTS AND ANALYTICAL TESTS	u. m.	2019	2020	2021	Δ% 2021/2020
WATER BALANCE (*)					
drinking water from the environment	**Mm³**	**157.7**	**148.6**	**146.8**	**-1.2**
from the surface	*Mm³*	*101.2*	*92.9*	*91.9*	*-1.1*
from wells	*Mm³*	*44.4*	*43.4*	*42.9*	*-1.2*
from springs	*Mm³*	*11.4*	*11.6*	*11.5*	*-0.9*
of which water from other aqueduct systems	*Mm³*	*0.7*	*0.7*	*0.5*	*-28.6*
total drinking water leaving the aqueduct system (e) = (a+b+c+d)	**Mm³**	**88.2**	**85.1**	**87.6**	**2.9**
total drinking water dispensed and billed in the network (a)	**Mm³**	**79.6**	**77.6**	**78.6**	**1.3**
measured volume of water delivered to users	*Mm³*	*79.6*	*77.1*	*78.1*	*1.3*
volume consumed by users and not measured	*Mm³*	*0*	*0.5*	*0.5*	-
total drinking water authorised and not billed in the network (b)	**Mm³**	**0.4**	**0.4**	**0.4**	**-**
measured unbilled authorised consumption	*Mm³*	*0*	*0*	*0*	-
unmeasured unbilled authorised consumption	*Mm³*	*0.4*	*0.4*	*0.4*	-
drinking water exported (sub-distributors) (c)	**Mm³**	**0.6**	**0.8**	**0.8**	**-**
measured process losses (d)	**Mm³**	**7.6**	**6.3**	**7.8**	**23.8**
LOSS ASSESSMENT ACCORDING TO ARERA RESOLUTION 917/17 R/IDR					
water leaks (**)	Mm³	69.5	63.5	59.2	-6.8
water loss percentages	%	44.1	42.7	40.3	-5.6
TREATED WASTE WATER					
water treated in the main treatment plants	**Mm³**	**105.1**	**97.5**	**98.2**	**0.7**
ANALYTICAL TESTS ON DRINKING WATER AND WASTE WATER					
no. analytical tests on drinking water	**no.**	**261,251**	**288,321**	**319,410**	**10.8**
of which no. analytical tests on surface water (***)	*no.*	*24,497*	*26,665*	*25,761*	*-3.4*
no. analytical tests on waste water	**no.**	**40,127**	**39,580**	**43,841**	**10.8**

(*) The figures for 2020 have been restated after the final calculations.
(**) The value of the water losses coincides with the "total lost volume (WLtot)" and includes the unmeasured treatment losses, the supply losses and the total distribution water losses.
(***) Analysis of crude surface water (untreated).

RESOURCES USED	u. m.	2019	2020	2021	Δ% 2021/2020
COLLECTION, SUPPLY AND DISTRIBUTION OF DRINKING AND NON-DRINKING WATER					
materials					
sodium hypochlorite	t	1,384	1,117	1,097	-1.8
sodium chloride	t	351	347	349	0.6
hydrochloric acid	t	378	403	402	-0.2
flocculant	t	5,818	5,055	5,028	-0.5
purate	t	353	349	414	18.6
sulphuric acid	t	565	523	608	16.3
oxygen	t	37	90	76	-15.6
acetic acid	t	126	113	112	-0.9
carbon dioxide (*excluding drinking fountains)	t	804	634	648	2.2
ferrous chloride	t	30	45	37	-17.8
phosphoric acid	t	16	13	18	38.5
WASTE WATER TREATMENT					
materials					
polyelectrolyte emulsion	t	378	289	307	6.2
sodium hypochlorite	t	70	61	64	4.9
peracetic acid, caustic soda, polyamine/anti-foaming agent	t	15	13	12	-7.7
polyaluminium chloride (PAC)	t	4,354	4,382	4,151	-5.3
lime	t	530	527	693	31.5
acetic acid 80%	t	524	712	684	-3.9
OTHER CONSUMPTION					
drinking water (*)	**m³**	**n/a**	**182,775**	**275,109**	**50.5**

(*) The figure has been estimated.

ENERGY CONSUMPTION	u.m.	2019	2020	2021	Δ% 2021/2020
FUELS					
process fuels - wastewater					
methane	Sm^3	64,541	84,214	90,109	7.0
biogas produced	m^3	668,720	609,120	593,478	-2.6
heating fuels					
methane	Sm^3	51,059	60,429	53,431	-11.6
diesel fuel	l	4,600	4,500	5,000	11.1
lpg	l	1,960	1,822	1,750	-4.0
vehicle fuels					
diesel	l	353,462	349,724	360,131	3.0
petrol	l	16,404	26,913	26,172	-2.8
ELECTRICITY (*)					
total electricity for drinking water	**GWh**	**76.9**	**72.6**	**71.2**	**-1.9**
electricity for water pumping stations	*GWh*	*75.4*	*71.4*	*69.6*	*-2.5*
electricity for offices	*GWh*	*1.5*	*1.2*	*1.6*	*33.3*
total electricity for waste water	**GWh**	**36.4**	**35.9**	**35.0**	**-2.5**
electricity for treatment	*GWh*	*32.5*	*31.5*	*30.5*	*-3.2*
electricity for pumping stations	*GWh*	*3.8*	*4.3*	*4.4*	*2.3*
electricity for offices	*GWh*	*0.1*	*0.1*	*0.1*	-

(*) The figures have been restated after final calculations, and varies from the figure published last year.

ENERGY EFFICIENCY (2019-2021)

	energy savings achieved (kWh)		
action	**2019**	**2020**	**2021**
network efficiency improvement	1,350,000	4,110,000	3,195,000
Osmannoro plant – new process blower	60,000	-	-
Villamagna 90 office - LED relamping	6,100	10,700	-
relamping offices	-	-	6,700

The greatest energy savings in 2021 can be traced back to the works on the water networks aimed at reducing losses, which allowed an estimated energy saving of 3,195 MWh. Also significant are the works for pumping of the Coverciano Aqueduct to reduce dissipation and dispersion and improve the quality of the power supply; the installation of a new pump and an impeller in the Anconella water purifier stations, for the more efficient management of intermediate flows and the minimisation of dissipative regulations when the required flow rates are lower (night-time hours). These interventions will create savings from 2022.

WASTE	u.m.	2019	2020	2021	Δ% 2021/2020
SPECIFIC WASTE FROM TREATMENT OF WASTE WATER					
treatment sludge	t	30,145	28,760	30,873	7.3
sand and sediment from treatment	t	1,274	1,328	1,284	-3.3
WASTE EXCLUDING SLUDGE AND SAND					
hazardous waste	t	54.4	32.6	83.6	156.4
non-hazardous waste	t	8,356	8,205 (*)	7,173	-12.6

(*) The figure was restated following actual recorded consumption.

TOTAL COD IN INPUT AND OUTPUT - SAN COLOMBANO TREATMENT PLANT (2019-2021)

(t/year)	2019	2020	2021
CODin	17,463	14,536	14,851
CODout	1,403	1,321	1,691

OUTPUT PARAMETERS - SAN COLOMBANO TREATMENT PLANT (2019-2021)(*)

parameter	average values (mg/l) 2019	average values (mg/l) 2020	average values (mg/l) 2021
BOD_5	1.5	2.2	2.1
COD	12.8	13.8	15.6
SST	4.1	4.8	4.9
NH_4^+	0.6	0.5	1.0
phosphorous	0.8	0.8	0.7

(*) It should be noted that the San Colombano waste water treatment plant (600,000 population equivalent) treats about half of Publiacqua's global waste water.

OUTPUT PARAMETERS FOR THE MAIN TREATMENT PLANTS (2019-2021) (*)

parameter	average values (mg/l) 2019	average values (mg/l) 2020	average values (mg/l) 2021
BOD_5	2.6	2.2	2.1
COD	18.2	14.3	17.1
SST	6.3	4.9	4.7
NH_4^+	2.9	0.7	1.1
phosphorous	1.6	0.9	0.8

(*) The figures include 38 treatment plants, including San Colombano, which treat a total of 98% of wastewater and 96% of the organic load (COD) of Publiacqua.

PURIFICATION EFFICIENCY OF THE MAIN TREATMENT PLANTS (2019-2021)

parameter	average values (%) 2019	average values (%) 2020	average values (%) 2021
100 x (CODin - CODout)/CODin	91.2	89.4	93.2
100 x (SSTin-SSTout)/SSTin	94.8	95.1	92.3
100 x (NH_4^+in - NH_4^+out)/NH_4^+in	98.0	97.9	95.8
100 x (PO_4^{-3}in -PO_4^{-3}out)/PO_4^{-3}in	74.8	74.0	72.7

PURIFICATION EFFICIENCY OF THE 38 MAJOR TREATMENT PLANTS (2019-2021) (*)

parameter	average values (%) 2019	average values (%) 2020	average values (%) 2021
100 x (CODin - CODout)/CODin	92.0	90.9	88.4
100 x (SSTin-SSTout)/SSTin	95.6	96.1	93.9
100 x (NH_4^+in - NH_4^+out)/NH_4^+in	96.7	97.4	95.8
100 x (PO_4^{-3}in -PO_4^{-3}out)/PO_4^{-3}in	72.0	73.3	73.0

(*) The figures include 38 treatment plants, including San Colombano, which treat a total of 98% of wastewater and 96% of the organic load (COD) of Publiacqua.

ACQUE

Acque SpA manages the Integrated Water Service in the area of Optimal Territorial Conference 2 Lower Valdarno on the basis of the concession agreement issued by the Autorità Idrica Toscana (AIT), consisting of 53 Municipalities in the provinces of Pisa, Lucca, Florence, Pistoia and Siena, with a total population of approximately 735,000 user accounts served.

MANAGEMENT SYSTEMS

Acque has implemented an **Integrated Management System based on quality, environment, safety, energy efficiency and social responsibility, road safety and the prevention of corruption.** In addition, the laboratory is accredited pursuant to the **UNI CEI EN ISO/IEC 17025:2018** standard and the Pagnana treatment plant in Empoli has **EMAS IV registration**.

QUALITY DELIVERED: MAIN INTERVENTIONS ON THE NETWORKS AND CONTROLS ON DRINKING WATER AND WASTE WATER

SIZE OF NETWORK, MAIN WORKS, METERS AND CHECKS ON DRINKING WATER AND NETWORKS (2021)

size of drinking-water network (*) - *data in GIS*	**6,024 km** (**815** km of supply network, **5,209** km of distribution)
TYPE OF WORK	
interventions due to network failure/leak detection	**18,677 interventions** (18,242 due to faults, 435 leak detection)
meter installations (new installation and replacement)	**20,991 interventions** (7,087 new installation, 13,904 replacements)
network extension	**0.4 km** of expanded network
network reclamation	**49 km** of reclaimed network
drinking water quality control	**9,301 samples** collected and **297,342 tests** performed

SIZE OF NETWORK, WORKS AND CHECKS ON SEWERAGE WATER AND NETWORKS (2021)	
size of sewerage network - *data in GIS*	**3,080** km
TYPE OF WORK	
interventions due to network failure	**3,243 interventions**
planned interventions	**1,532 interventions**
network extension	**0.6 km** of expanded network
network reclamation	**2.85 km** of reclaimed network
quality control on wastewater for sewerage networks	**7,829 samples** collected and **122,803 tests** performed

(*) The figures are estimated and coincide with the RQTI 2020 amounts sent to ARERA at the end of 2021.

HUMAN RESOURCES IN FIGURES

GENERAL DATA ON PERSONNEL (2020-2021)

	2020			2021		
(no.)	men	women	**total**	men	women	**total**
composition of the staff						
executives	2	2	**4**	2	2	**4**
managers	6	4	**10**	7	4	**11**
clerical workers	96	158	**254**	95	159	**254**
workers	149	0	**149**	150	0	**150**
total	**253**	**164**	**417**	**254**	**165**	**419**
contract type						
staff with permanent contract	247	161	**408**	249	163	**412**
(of which) part-time staff	*2*	*29*	***31***	*1*	*30*	***31***
permanent staff	6	3	**9**	0	2	**2**
staff under apprenticeship contracts	0	0	**0**	5	0	**5**
total	**253**	**164**	**417**	**254**	**165**	**419**
changes						
incoming staff	**10**	**5**	**15**	**11**	**2**	**13**
outgoing staff	**9**	**0**	**9**	**10**	**1**	**11**
turnover rate (%)	7.5	3.0	**5.8**	8.3	1.8	**5.8**
incoming rate (%)	4.0	3.0	**3.6**	4.3	1.2	**3.1**
outgoing rate (%)	3.6	-	**2.2**	3.9	0.6	**2.6**

INDUSTRIAL ACCIDENTS AND FREQUENCY AND SEVERITY INDICES (2020-2021)(*)

	2020	2021
accidents (no.)	3	7
total days of absence (**)	62	359
hours worked	667,740	654,851
frequency index (FI) (number of accidents per 1,000,000/working hours)	**4.49**	**10.69**
severity index (SI) (days of absence per 1,000/working hours)	**0.09**	**0.55**

(*) The increase in the number of accidents and the extent of severity compared to the previous year is linked to the full resumption of operations, which in 2020, had been reduced as a result of the lockdown period caused by the Covid-19 pandemic.
(**) The value also excludes days of absence related to persistent or reopened injuries from previous years.

TRAINING 2020-2021

course type, hours provided and costs (*)

	courses (no.)		training (hours)		costs (€)	
course type	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**
IT	4	2	282	403	4,302	0
new hires	0	1	0	1,001	0	0
technical-specialised	29	33	674	1,766	11,115	12,488
managerial	2	3	80	97	2,020	270
safety	26	36	1,610	4,105	17,670	9,891
environment	1	1	48	8	0	0
cross-cutting	9	4	851	148	12,661	0
training pursuant to Legislative Decree no. 231/01	2	1	228	250	3,488	0
e-learning training	1	7	27	386	404	0
total	**74**	**88**	**3,800**	**8,164**	**51,660**	**22,649**

employees trained (**)	2020			2021		
(no.)	men	women	total	men	women	total
	227	135	**362**	286	174	**460**
breakdown of training hours by qualification						
executives	18	10	**28**	116	32	**148**
managers	105	81	**186**	161	43	**204**
clerical workers	879	1,540	**2,419**	1,933	3,314	**5,247**
workers	1,167	0	**1,167**	2,565	0	**2,565**

(*) Emergency tests are excluded; by new hires, we mean the coaching of new staff by more experienced workers.
(**) The figures are higher than the number of employees, as they include employees of other companies, posted workers and workers who provided services only for a few months of the year.

ENVIRONMENTAL ACCOUNTS

PRODUCTS AND ANALYTICAL TESTS	u. m.	2019	2020	2021	Δ% 2021/2020
WATER BALANCE (*)					
drinking water from the environment	**Mm^3**	**76.94**	**74.74**	**74.74**	**-**
from the surface	*Mm^3*	*3.24*	*3.27*	*3.27*	-
from wells	*Mm^3*	*59.84*	*57.32*	*57.32*	-
from springs	*Mm^3*	*5.86*	*6.29*	*6.29*	-
of which water from other aqueduct systems	*Mm^3*	*7.99*	*7.86*	*7.86*	-
total drinking water leaving the aqueduct system (e) = (a+b+c+d)	**Mm^3**	**46.18**	**46.08**	**46.08**	**-**
total drinking water dispensed and billed in the network (a)	**Mm^3**	**43.97**	**43.63**	**43.63**	**-**
measured volume of water delivered to users	*Mm^3*	*43.97*	*43.63*	*43.63*	-
volume consumed by users and not measured	*Mm^3*	*0*	*0*	*0*	-
total drinking water authorised and not billed in the network (b)	**Mm^3**	**0.30**	**0.28**	**0.28**	**-**
measured unbilled authorised consumption	*Mm^3*	*0.08*	*0.07*	*0.07*	-
unmeasured unbilled authorised consumption	*Mm^3*	*0.22*	*0.21*	*0.21*	-
drinking water exported to other systems (c)	**Mm^3**	**1.04**	**0.96**	**0.96**	**-**
measured process losses (d)	**Mm^3**	**1.22**	**1.09**	**1.09**	**-**
LOSS ASSESSMENT ACCORDING TO ARERA RESOLUTION 917/17 R/IDR					
water leaks	Mm^3	30.8	28.7	28.7	-
water loss percentages	%	40.0	38.3	38.3	-
TREATED WASTE WATER					
water treated in the main treatment plants	**Mm^3**	**46.7**	**46.4**	**44.6**	**-3.9**
ANALYTICAL TESTS ON DRINKING WATER AND WASTE WATER					
no. analytical tests on drinking water (including analytical tests on surface water)	**no.**	**329,752**	**357,585**	**297,342**	**-16.8**
no. analytical tests on waste water	**no.**	**128,459**	**122,766**	**122,803**	**-**

(*) The figures for 2020 have been restated following consolidation and differ from those previously published. The 2021 figures are estimated to be equal to those for 2020.

RESOURCES USED	u. m.	2019	2020	2021	Δ% 2021/2020
COLLECTION, SUPPLY AND DISTRIBUTION OF DRINKING AND NON-DRINKING WATER					
materials					
laboratory reagents (chemical section and microbiological section)	t	2.03	2.31	1.86	-19.5
sodium hypochlorite	t	208.82	180.13	231.26	28.4
hydrochloric acid	t	351.09	477.99	339.45	-29.0
potassium permanganate	t	2.75	4.17	4.12	-1.2
aluminium polychloride	t	181.73	208.59	194.19	-6.9
DREWO 8155 PG powder	t	5.00	0	0	-
DREFLO 908 PG powder	t	3.98	0	0	-
salt in bags	t	7.20	1.00	1.00	-
sodium chloride	t	354.34	366.69	362.42	-1.2
caustic soda	t	0.55	2.37	0.75	-68.4
citric acid	t	1.23	2.55	0.85	-66.7
alifons L	t	0	0.13	0	-
aluminium polychlorosulphate	t	11.55	0	0	-

WASTE WATER TREATMENT					
materials					
polyelectrolyte emulsion	t	169.08	233.87	193.57	-17.2
aluminium polychloride	t	12.00	19.50	7.50	-61.5
ferric chloride for sludge dehydration	t	496.03	527.69	545.60	3.4
sodium hypochlorite for final disinfection	t	11.55	29.20	11.05	-61.9
acetic acid	t	0.10	0	0.05	5
sulphuric acid	t	1.25	0.99	0	-1
caustic soda (sodium hydroxide) - Solvay	t	1.15	2.02	1.35	-33.2
citric acid removed	t	0	0	0.05	-
biotek base L - biological reactivator	t	0.04	0.04	0	-
biotek clar – biological reactivator	t	0.25	0.25	0.30	20.0
desmell Bio L – odorogenic emissions treatment	t	0.08	0	0.10	-
nutrients	t	545.50	1,135.59	1,320.49	16.3
OTHER CONSUMPTION					
drinking water (*)	**m^3**	**297,077**	**284,305**	**284,305**	**-**
drinking water consumed for non-industrial water uses (offices, outside showers etc.)	*m^3*	*118,963*	*215,604*	*215,604*	-
drinking water consumed for process water uses (washing machinery and bays, etc.)	*m^3*	*178,114*	*68,701*	*68,701*	-

(*) The figures have been restated following consolidation and differ from those previously published. The 2021 figures are estimated to be equal to those for 2020.

In 2021, Aque used approximately **418,873 m^3 of recovered water** for washing the sheets of sludge dehydration equipment (belt presses) and for the backwashing of the Pollino water plant filters in Porcari (Lucca).

ENERGY CONSUMPTION	u.m.	2019	2020	2021	Δ% 2021/2020
FUELS					
process fuels - drinking water/non-drinking water					
diesel fuel	l	1,300	1,500	2,050	36.7
process fuels - wastewater					
diesel fuel	l	1,100	0	500	-
heating fuels					
methane	Sm^3	56,244	50,743	55,583	-9.5
lpg	l	17,781	15,419	17,847	-15.7
vehicle fuels					
diesel	l	202,128	228,802	240,882	5.3
petrol	l	33,962	15,373	26,950	75.3
methane	kg	52,084	23,884	15,308	-35.9
ELECTRICITY					
total electricity for drinking water	**GWh**	**53.80**	**51.09**	**50.99**	**-0.2**
electricity for water pumping stations	*GWh*	*53.34*	*50.72*	*50.33*	*-0.8*
electricity for offices	*GWh*	*0.46*	*0.37*	*0.66*	*78.4*
total electricity for waste water	**GWh**	**32.83**	**32.29**	**31.90**	**-1.2**
electricity for treatment	*GWh*	*25.70*	*24.66*	*24.49*	*-0.7*
electricity for pumping stations	*GWh*	*6.85*	*7.40*	*7.00*	*-5.4*
electricity for offices	*GWh*	*0.28*	*0.23*	*0.41*	*78.3*

ENERGY EFFICIENCY (2019-2021)

	energy savings achieved (kWh)		
action	**2019**	**2020**	**2021**
Pieve a Nievole (PT) inter-municipal treatment plant: implementation of microbubbles oxidative section Line 2	-	-	303,095
treatment plant via Hangar Pontedera (PI): implementation of microbubbles oxidative section	261,150	252,650	208,020
La Fontina (PI) treatment plant: replacement of air distribution plates lines 1 and 2	-	577,230	472,605

Acque has implemented energy efficiency improvements, such as the replacement of the oxygenation system on the Pieve a Nievole and Pontedera (PI) treatment plants, which led achieving, in 2021, energy savings indicated in the table equal to over 983 MWh.

WASTE	u.m.	2019	2020	2021	Δ% 2021/2020
SPECIFIC WASTE FROM TREATMENT OF WASTE WATER					
treatment sludge	t	21,953.18	19,879.80	20,246.84	1.8
sand and sediment from treatment	t	1,279.04	1,981.55	1,412.77	-28.7
WASTE SLUDGE AND SAND					
hazardous waste	t	42.93	24.96	16.80	-32.7
non-hazardous waste	t	61,408.12	72,919.75	63,778.23	-12.5

TOTAL COD IN INPUT AND OUTPUT (2019-2021)

(t/year)	2019	2020	2021
CODin	22,017	22,808	22,021
CODout	1,382	1,268	1,212

OUTPUT PARAMETERS FOR THE MAIN TREATMENT PLANTS (2019-2021) (*)

parameter	average values (mg/l) 2019	average values (mg/l) 2020	average values (mg/l) 2021
BOD_5	6.3	5.5	4.7
COD	27.9	25.5	24.3
SST	7.0	5.0	5.9
NH_4^+	3.5	3.0	3.3
phosphorous	2.3	2.0	2.2

(*) Installations with a treatment capacity greater than or equal to 10,000 population equivalent are considered.

PURIFICATION EFFICIENCY OF THE MAIN TREATMENT PLANTS (2019-2021)(*)

parameter	average values (%) 2019	average values (%) 2020	average values (%) 2021
100 x (CODin - CODout)/CODin	93.7	95.0	95.4
100 x (SSTin - SSTout)/SSTin	95.7	97.8	98.2
100 x (NH_4^+in - NH_4^+out)/NH_4^+in	90.6	92.7	92.7
100 x (PO_4^{-3}in - PO_4^{-3}out)/PO_4^{-3}in	68.8	73.0	68.3

(*) Installations with a treatment capacity greater than or equal to 10,000 population equivalent are considered.

Overseas activities

Acea operates abroad, in the water sector[173], with regards to **technical aspects or the commercial management of the service**, including through **staff training** and the **transfer of know-how** to local businesses. In particular, it is present in Honduras, Dominican Republic and Peru through companies created **in partnership with local and international stakeholders**, in an area inhabited by over 10 million people.

AGUAS DE SAN PEDRO

Aguas de San Pedro ASP is the holder of a 30-year contract for the management of the integrated water service in the city of San Pedro Sula in Honduras, and during the year it continued with the projects for the **expansion, treatment and improvement of the water service and sewerage network** in the city. The water network stretches approximately 2,170 km and the sewerage network approximately 1,270 km.

The Company has a **Quality Management System** certified according to the **UNI ISO 9001:2008** standard and the laboratories are accredited according to the **UNI ISO/IEC 17025:2005** standard: the process is underway to obtain the **Anti-Corruption Management** certificate according to the **UNI ISO 37001** standard.

AGUAS DE SAN PEDRO SA – MAIN COMPANY AND OPERATING DATA

country (area)	Honduras (San Pedro Sula)
users	122,308
inhabitants served	733,848
customer	municipal administration
duration of the contract	01.02.2001 – 01.02.2031
purpose of the project	concession of the integrated water service for the town of San Pedro de Sula
shareholders	Acea SpA 60.65%, Ireti SpA 39.35%
no. of employees	388
turnover (in € thousand)	37,210

173 Overseas activities have a limited incidence from an economic and financial viewpoint, in terms of consolidation percentage, but a brief description of them is given here because of their social importance.

The **pandemic emergency** slowed certain activities, such as establishment of new connections and other maintenance works, but operating teams have always been in the field guaranteeing service continuity. The Company **suspended service disconnection** for customers with unpaid bills, and payment periods were extended without applying interest expense and for customers without meters invoicing continued only of the administrative component for very low economic value.
From the start of the emergency, **biosecurity and personnel-protection measures** have been established, updated on the basis of the guidelines issued by the government and WHO protocols, including: preparation of the **biosecurity protocol** that reviewed working methods and the use of company tools to ensure social distancing and avoid contact, **provision of PPE** to limit the spread of the virus and specific **training** of personnel with clear and simple messages on how to take care, in order to protect each other, in the workplace and in the family, and the role of water during the pandemic to guarantee hygiene procedures. In addition, a Covid-19 **vaccination** programme was implemented for all employees.
Despite the difficulties, the Company continued activity to offer **technical assistance to rural communities** and implemented **initiatives for the protection of the environment**, in the context of the **programme for the conservation** of the El Merendón **natural reserve**, declared a protected area for the production of water in San Pedro Sula. The initiatives include:

- the "Un millon de Árboles para el Merendón" **reforestation** project, planting approximately 82 thousand fruit and wood trees, the reforestation of an area of 107 hectares for the benefit of 308 producers;
- **fire prevention**. In this regard, in recent years, the Company has contributed with construction of **surveillance towers** and is active with campaigns for protection of the territory and involvement of the fire-prevention team. In 2021, the team intervened to **put out 2 fires** in Merendón, which involved 11 hectares of forests and, thanks to the surveillance towers, they managed to prevent 160 fires from starting in the Rio Manchaguala basin;
- **advice on the 3 Sectoral Committees for Water Management,** including support in the preparation of reports and plans for the preservation of supply micro-basins;
- **social and technical assistance** for the rural communities of Merendón, with organisation of 25 laboratories in the micro-basin communities of Rio Manchaguala, Rio Frio and El Palmar, concerning maintenance of biofilters, hygiene and environmental care (for a total of 200 people involved from 25 communities); periodic supervision was carried out on the 2,200 drinking water biofilters installed in just as many homes in the Merendón communities, and training was provided to children belonging to the Infant Health Committees on the use and maintenance of biofilters, as well as on sanitation practices for the protection of health and the environment.

ACEA DOMINICANA SA

Acea Dominicana deals with the commercial management of the water service **in the northern and eastern areas of Santo Domingo** in the **Dominican Republic**. The activities include the management of customer relations, the billing cycle and cost estimates, the installation of new meters (21,800 meters installed in 2021), maintenance of existing meters and directing the works for new connections.
The Company implemented a **Quality Management System** certified according to the **UNI ISO 9001:2015 standard**, which covers all activities performed.

ACEA DOMINICANA SA – MAIN CORPORATE AND OPERATING DATA

country (area)	Dominican Republic (north and east Santo Domingo)
users served	188,371
customers	Corporación del Acueducto y Alcantarillado de Santo Domingo (CAASD) and Corporación de Acueducto y Alcantarillado de Boca Chica (CORAABO)
duration of the contract	01/10/2003 – 30/09/2023
purpose of the project	commercial management of the water service
shareholders	Acea SpA 100%
no. of employees	139
turnover (in € thousand)	4,175

Due to the pandemic emergency and its persistence, educational campaigns were suspended aimed at students of schools, issued in previous years to raise awareness on the correct use of water, along with campaigns on reforestation. For the former, an attempt was made to introduce the virtual mode, but due to the lack of vehicles and electric service in many public schools in East and North Santo Domingo, it was not possible to provide the service.
During the year, **employee training** on **occupational health** continued, and, in particular, on stress management, the quality management system and customer service and support, for a total of 642 hours of training. Regarding **health and safety**, in order to contain the spread of Covid-19, the Company adhered to regulations issued and implementing measures to protect its employees from infection.

OPERATING COMPANIES IN PERU

The operating Companies in Lima (Peru) manage part of the water services on behalf of the local publicly owned water company SEDAPAL (drinking water and sewerage Service in Lima) with projects defined in their calls for tenders. The Group companies active in 2021 were: Consorcio Agua Azul, Consorcio Servicio Sur, Consorcio Acea and Consorcio Acea Lima Sur.

MAIN CORPORATE AND OPERATING DATA

country (area)	Peru (Lima)
customer	Sedapal (Drinking water and sewerage service in Lima, state owned)
duration of the contracts	Consorcio Agua Azul: 07/04/2000 – 18/06/2027
	Consorcio Servicio Sur: 24/08/2018 – 24/08/2021
	Consorcio Acea: 5/12/2020 – 5/12/2023
	Consorcio Acea Lima Norte: 7/01/2021 – 7/01/2024
	Consorcio Acea Lima Sur: 18/12/2021 – 18/12/2024
shareholders	Consorcio Agua Azul: Acea SpA (44%), Marubeni Co. (29%), Inversiones Liquidas SAC (27%)
	Consorcio Servicio Sur: Acea International (50%), Acea Ato 2 (1%), Conhydra (29%), Valjo (14%), India (6%)
	Consorcio Acea: Acea Perù SAC (99%), Acea Ato 2 (1%)
	Consorcio Acea Lima Norte: Acea Perù SAC (99%), Acea Ato 2 (1%)
	Consorcio Acea Lima Sur: Acea Perù SAC (99%), Acea Ato 2 (1%)
no. of employees	Consorcio Agua Azul: 31
	Consorcio Servicio Sur: 41 (August 2021)
	Consorcio Acea: 949
	Consorcio Acea Lima Norte: 578
	Consorcio Acea Lima Sur: 95
turnover (in € thousand)	Consorcio Agua Azul: 12,608
	Consorcio Servicio Sur: 4,290
	Consorcio Acea: 7,202
	Consorcio Acea Lima Norte: 10,443
	Consorcio Acea Lima Sur: 21

Specifically:

- **Consorcio Agua Azul**, a subsidiary of Acea SpA, manages the treatment and supply of drinking water in the **northern area of Lima**; to this end, using the surface and underground waters of the Chillón river it built a water treatment plant capable of satisfying the drinking water needs of the area, which it will manage until 2027, when it will be transferred to the State;
- **Consorcio Servicio Sur** is a special purpose vehicle led by Acea International in partnership with Peruvian partners, which manages the corrective maintenance contract for the water and sewerage system in the **area south of Lima**. The contract, which began in August 2018 and finished in August 2021, was implemented **in the area of Surquillo** and involved the extraordinary maintenance works required for the maintenance of full functionality of the water and sewerage service, and of hygiene, sanitary and environmental conditions;
- **Consorcio Acea**, controlled by Acea Peru was awarded for the management and control of 253 pumping stations for drinking water serving the **Ate, Breña and San Juan de Lurigancho areas in the central area of Lima** at the end of 2020;
- the **Consorcio Acea Lima Norte**, attributable to Acea Peru, manages the maintenance of the drinking water and sewerage service for the **Comas and Callao areas in the northern area of Lima;**
- Since the end of 2021, the **Consorcio Acea Lima Sur**, a subsidiary of Acea Peru, has been carrying out maintenance activities on the drinking water and sewerage systems for the **Surquillo area in the southern area of Lima.**

Below is some significant information from the standpoint of sustainability relating to the various companies operating in Peru.
The **Consorcio Agua Azul** has adopted an **Integrated Quality and Environment System** according to **UNI ISO 9001:2015** and **UNI ISO 14001:2015** aimed at optimising production processes and reducing the environmental impact through energy efficiency and the limited use of materials.
During the year, the **programme of health and safety in the workplace and first-aid training** continued, which for reasons connected to the health emergency was only provided to employees. Continuous training on the issue enabled **maintenance of the result of zero accidents at work** in 2021. The Company adopted biosecurity and personal-protection measures, limiting the number of personnel in the office and altering the shift patterns of operational teams, in addition to issuing **rapid antigen tests** and **molecular tests** for personnel. The pandemic has also caused the suspension of consolidated activities, carried out in previous years and with a positive impact on the territory, including courses organised with the Asociación de Productores Ecológicos organisation of the Chillón valley, on the use of fertilisers, crop treatment and maintenance of organic certification for farmed crops, and the training courses at the Faculty of Engineering of the National University of Peru and curricular internships for students. However, in 2021, the Consorcio resumed distribution of **educational kits** to 7 local schools, with the aim of developing a link with local communities, and in particular, to promote school attendance. For the Christmas holidays, the **children of local schools and children of employees were delivered toys and Christmas packages**.

From the standpoint of the **sharing economy**, **Consorcio Servicio Sur** allowed employees to use **company cars** for **commuting** and to share them with other employees. Regarding **health and safety**, in order to contain the spread of Covid-19, the Company introduced measures to limit infections amongst employees, including working from home and performance of **regular testing**. In addition, training was provided to employees in the context of **health prevention** during the year.
Finally, the **Consorcio Acea** and the **Consorcio Acea Lima Norte** provided training to employees in 2021 regarding **health prevention** and aimed at making them aware of the vaccine in order to contain the spread of Covid-19.

GRI CONTENT INDEX: REPORTING PRINCIPLES, UNIVERSAL STANDARDS AND MATERIAL TOPIC-SPECIFIC STANDARDS

The Sustainability Report has been prepared **in accordance with the GRI Standards: Comprehensive option.** The GRI Content Index includes the Universal Standards (series 100) and the Material Topic-Specific Standards (series 200, 300 and 400).
Specifically, the index contains:

- reference to the **reporting principles** (GRI 101: Foundation 2016 (Reporting Principles));
- definition of the **56 standards of the general disclosure** (GRI 102: General Disclosures 2016) and of the **26 material topics** amongst the **Specific Standards** (Series GRI 200: Economic, GRI 300: Environmental, and GRI 400: Social) and **relative indicators**, with indication of the sections and pages of the document, where it is possible to consult them, or responses to indicators, and reporting of any omissions or inapplicability of certain indicators included in material topics. It should be noted that with reference to the 2021 financial year, the 2020 edition of the specific material standard "Waste" (GRI 306) has been adopted;
- the scope of each topic (amongst the Material Topic-Specific Standards), i.e. its significance within the organisation (Group or company associated with specific businesses) or outside of it (e.g. supply chain, collective significance).

Finally, the right column of the Content Index indicates the main correspondences with topics covered by Italian Legislative Decree no. 254/2016.

GRI CONTENT INDEX

GRI Standards	definition of GRI Standards notes (responses or reports of omissions or inapplicability) sections and reference pages	Alignment with Legislative Decree no. 254/2016
UNIVERSAL STANDARDS		
GRI 101: FOUNDATION 2016 (REPORTING PRINCIPLES)		
GRI 102: GENERAL DISCLOSURES 2016		
	ORGANIZATIONAL PROFILE	
GRI 102: General Disclosures 2016	**102-1 Name of the organization.** Acea SpA *Corporate identity* page 22.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-2 Activities, brands, products, and services. *Corporate identity* pages 22, 23, Chart no. 2.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-3 Location of headquarters. Piazzale Ostiense 2, 00154 Rome, Italy	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-4 Location of operations (number of countries where the organization operates and the names of countries where it has significant operations and/or that are relevant to the topics covered in the report). *Corporate Identity* page 22.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-5 Ownership and legal form. *Corporate Identity* page 32-33.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-6 Markets served (including: geographic locations, sectors served, types of customers and beneficiaries). *Corporate Identity* pages 22 f., 32; *Relations with stakeholders* pages 84-87 and Table no. 15, 104.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-7 Scale of the organization (including: number of employees; net sales - for private sector organizations – or net revenues – for public sector organizations; total capitalization broken down in terms of debt and equity; quantity of products or services provided). *Corporate identity* pages 22 Table no. 6, 32 Table no. 7; *Relations with stakeholders* pages 148 Table no. 38, 172.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-8 Information on employees and other workers (total number of employees by employment type and gender, employment contract by region etc.; whether a significant portion of the organization's activities are performed by workers who are not employees. If applicable, a description of the nature and scale of work performed). *Relations with stakeholders* pages 146-148, 149-150, 151 Table no. 39.	**Art. 3 paragraph, 2 letter d):** social aspects and aspects relating to staff management
	102-9 Description of the organization's supply chain. *Corporate Identity* pages 24-27; *Relations with stakeholders* pages 141 f.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model

	102-10 Significant changes to the organization's size, structure, ownership, or supply chain (including: changes in the location of, or changes in operations, including facility openings, closings, and expansions; changes in the share capital structure and other capital formation, maintenance, and alteration operations; changes in the location of suppliers, the structure of the supply chain, or relationships with suppliers etc.). *Corporate Identity* pages 32-33; *Relations with stakeholders* page 142.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-11 Precautionary Principle or approach (whether and how the organization applies the Precautionary Principle or approach). *Corporate Identity* pages 65-75, 76 Table no. 12; *Relations with stakeholders* pages 158, 160 f., 180; *Relations with the environment* pages 205, 223.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-12 External initiatives (a list of externally-developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes, or which it endorses). *Joining the United Nations Global Compact* pages 18-19; *Corporate Identity* pages 38, 40-41, 43, 76 Table no. 12; *Relations with stakeholders* pages 135, 141, 167, 178 ff; *Relations with the environment* pages 188 ff, 194 f.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-13 Membership of associations (the reporting should include memberships maintained at the organizational level in associations or organizations in which it holds a position on the governance body, participates in projects or committees, provides substantive funding beyond routine membership dues, or views its membership as strategic). *Relations with stakeholders* pages 178 f.; *Relations with the environment* pages 188 f.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	STRATEGY	
	102-14 Statement from senior decision-maker (such as CEO, Chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy for addressing sustainability. *Letter to the stakeholders* page 4; *Corporate Identity* pages 24-27, 38-43; *Relations with stakeholders* pages 130 f., 135, 179, 180 f.; *Relations with the environment* pages 188, 191.	**Art. 3 paragraph 7:** the responsibility to guarantee that the report is (...) compliant rests with the directors
	102-15 Description of key impacts, risks, and opportunities. *Corporate identity* pages 24-27, 32, 38-43, 64, 65-72 and Table no. 10, 74 f.; *Relations with stakeholders* pages 109, 176 f.; *Relations with the environment* pages 189 f., 211 ff.	**Art. 3 paragraph 1, letter c):** the main risks generated or suffered; **paragraph 2, letter c):** the impact (...) on the environment as well as on health and safety
	ETHICS AND INTEGRITY	
GRI 102: General Disclosures 2016	**102-16 Description of the organization's values, principles, standards, and norms of behavior.** *Corporate Identity* pages 40-41, 43, 62, 69, 81; *Relations with stakeholders* pages 140 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-17 Mechanisms for advice and concerns about ethics (description of internal and external mechanisms for seeking advice about ethical and lawful behavior, and organizational integrity; reporting concerns about unethical or unlawful behavior, and organizational integrity etc.). *Corporate Identity* pages 62 Chart no. 14, 69.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **paragraph 2, letter e)**: regarding human rights, the measures adopted to prevent breaches thereof and measures to avoid conduct and actions that are in any case discriminatory
	GOVERNANCE	
	102-18 Governance structure of the organization, including committees of the highest governance body. Committees responsible for decision-making on economic, environmental, and social topics. *Corporate Identity* pages 62 and Chart no. 14, 63 Table no. 8, 64.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-19 Process for delegating authority for economic, environmental, and social topics from the highest governance body to senior executives and other employees. The Board of Directors confers management powers to the Chief Executive Officer, who, in the context of the corporate macrostructure established by the same Board, confers powers and proxies to management, in accordance with the missions and responsibilities of the different structures. The standard practice for any type of assignment of powers, and therefore for economic, environmental and social areas, is based on analysis of the requirement/need for such assignment.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-20 Executive-level responsibility for economic, environmental, and social topics (whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental, and social topics; whether post holders report directly to the highest governance body). Within Acea, there are operational structures managing the individual topics, including the Administration, Finance and Control department, for economic data, environmental safeguards for the Operating Companies, and structures appointed to manage the main social topics, such as Human Resources, Procurement and Logistics, Customer Care etc. Regarding ESG areas as a whole, from the perspective of sustainability, the Parent Company has the the Investor Relations & Sustainability Department, both reporting to the Chief Executive Officer, which promote, coordinate and develop sustainability topics both at the level of the Holding Company and subsidiaries, supporting an integrated Group perspective.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-21 Processes for consultation between stakeholders and the highest governance body on economic, environmental, and social topics. If consultation is delegated, describe to whom it is delegated and how the resulting feedback is provided to the highest governance body. During the year, management has been sent to participate in meetings of the governance bodies, contributing its specific information and knowledge during the meetings. *Corporate Identity* pages 40-41, 62-64, 65; *Relations with stakeholders* page 172.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model

GRI 102: General Disclosures 2016	**102-22 Composition of the highest governance body and its committees (executive or non-executive, independence, gender, competencies relating to economic, environmental, and social topics etc.).** *Corporate Identity* pages 62 and Chart no. 14, 63 and Table no. 8.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-23 Chair of the highest governance body (the organization shall report whether the Chair is also an executive officer in the organization, his or her function within the organization's management and the reasons for this arrangement). *Corporate Identity* page 63 and Table no. 8.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-24 Nomination and selection processes for the highest governance body and its committees (criteria used for nominating and selecting highest governance body members, including whether and how diversity, independence, expertise and experience relating to economic, environmental, and social topics are considered, stakeholders, including shareholders, are involved). In the composition of corporate bodies, Acea ensures balanced representation of genders, as set out in Law no. 120/2011, adopted in its own By-laws, and guarantees the presence of Independent Directors, governed by the same By-laws and current regulations. Gender diversity of the Governance Body and the Committees is an important element, in tempering "single-mindedness" as well as for the different ways in which men and women exercise their leadership. Selection processes involve shareholders who, in accordance with the recommendations of the Governance Code, are guided in the choice of candidates to propose in the lists by the guidelines provided by the Board of Directors of Acea, having received the opinion of the Appointments Committee and taking into account the results of self-assessment, on the size and composition of the administrative body. *Corporate identity* pages 63 f.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-25 Processes for the highest governance body to ensure conflicts of interest are avoided and managed. The risk of conflicts of interest in Acea is monitored employing corporate governance systems and procedures (Management, Organisation and Control Model, Code of Ethics, Procedure for Related-Party Transactions, and Independent Directors). These tools act in different contexts where conflicts of interest could arise: in relations between controlling shareholders and minority shareholders, between Acea and Related Parties, and between Acea and the Public Administration. *Corporate identity* page 62.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-26 Highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental, and social topics. *Disclosing sustainability: methodological note* page 11; *Corporate Identity* pages 40-41, 43, 62-64, 75.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-27 Measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental, and social topics. *Disclosing sustainability: methodological note*page 11; *Corporate Identity* pages 40-41, 62 and Chart no. 14, 63-64.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-28 Processes for evaluating the highest governance body's performance with respect to governance of economic, environmental, and social topics. Non-executive Directors receive a fixed fee, set by the Shareholders' Meeting on the basis of the commitment requested of them. *Corporate Identity* pages 62 chart no. 14, 63-64, 76; Relations with stakeholders pages 167 f.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-29 Highest governance body's role in identifying and managing economic, environmental, and social topics and their impacts, risks, and opportunities – including its role in the implementation of due diligence processes. *Disclosing sustainability: methodological note* page 11; *Corporate Identity* pages 43, 44-61, 62-64, 65-74, 75.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-30 Highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental, and social topics. *Disclosing sustainability: methodological note*page 11; *Corporate Identity* pages 44-61, 62 and Chart no. 14, 63. 65-74.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-31 Frequency of the highest governance body's review of economic, environmental, and social topics and their impacts, risks, and opportunities. *Disclosing sustainability: methodological note* page 11; *Corporate Identity* pages 43, 44-61, 62 and Chart no. 14.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-32 The highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material topics are covered. *Disclosing sustainability: methodological note* page 11; *Corporate Identity* page 64.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-33 Process for communicating critical concerns to the highest governance body. The Board of Directors (BoD) receives constant information on potentially critical situations, primarily through the work performed by the Control and Risks Committee, to which the Internal Audit Function manager periodically reports, which interacts with the Board of Directors. The activities performed and results of activity of the Supervisory Body (pursuant to Italian Legislative Decree no. 231/01), which may identify the risk of liability for the Company, are subject to information flows to the BoD. The Chief Executive Officer, also in his role as Director in Charge of the Internal Control and Risk Management System, provides constant updates to the Board on developments in management and the existence of any potentially critical situations. *Corporate Identity* page 69-72 and Table no. 10, 76.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model

GRI 102: General Disclosures 2016	**102-34 Nature and total number of critical concerns that were communicated to the highest governance body; mechanism(s) used to address and resolve critical concerns.** *Corporate Identity* page 69-72 and Table no. 10, 76.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-35 Remuneration policies for the highest governance body and senior executives (fixed pay and variable pay, sign-on bonuses or recruitment incentive payments, termination payments, etc.). How performance criteria in the remuneration policies relate to the highest governance body's and senior executives' objectives for economic, environmental, and social topics. It is noted that within Acea, for the Top Management, Executives Holding Key Positions and for managerial roles with greater impact on Group business, the clawback clause applies, establishing the right to request return of the variable components of remuneration, both short-term and medium/long-term, in the event that these components have been paid on the basis of conduct of a malicious nature and/or due to serious misconduct. There are no agreements that set out fixed indemnities or clauses aimed at safeguarding the management of the Group in the event of termination of their employment, and reference should be made to the provisions established by the Collective Labour Agreement (CCNL) for Executives of Public Utility Service Companies and the "Executive Exodus Management" Policy in this regard. The "Executive Exodus Management" Policy refers to the Collective Labour Agreement (CCNL) considers the short and long-term fixed and variable components on a monthly basis. The Chief Executive Officer is entitled to receive the maximum amounts provided for by the policy. The long-term incentive system Long Term Incentive Plan (LTIP) and short-term annual (MBO) incentive system is linked, as well as to targets of an economic/financial nature, also to environmental targets and those with an impact on sustainability, through a composite sustainability indicator. *Corporate Identity* pages 62 f. and Chart no. 14, 65; *Relations with stakeholders* page 167.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-36 Process for determining remuneration; whether remuneration consultants are involved in determining remuneration and whether they are independent of management. In 2021, no external consulting companies were involved in processes for the determination of remuneration. *Corporate identity* pages 62 f., 65.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-37 Stakeholders' involvement in remuneration. *Corporate identity* page 65.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-38 Ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country. The relationship between the highest role and the median employee for 2021 is given by the remuneration multiple of 14.81, compared with a median value of 19.99 for peer companies. See also the *Report on the remuneration policy and on the fees paid - 2021*, available on the Acea Group website (www.gruppo.acea.it). *Corporate identity* page 65.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-39 Ratio of the percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country. Average gross annual remuneration, calculated on the basis of full-time employees, unlike other top roles, saw a stable trend, with a slight increase of approximately 1% between 2020 and 2021.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	STAKEHOLDER ENGAGEMENT	
	102-40 List of stakeholder groups engaged by the organization. *Disclosing sustainability: methodological note* pages 12-13; *Corporate Identity* pages 77-80; *Relations with stakeholders* pages 88-94, 97, 99, 105, 108-111, 118 f., 122, 129 ff., 134 f., 140, 144 ff., 148, 156 ff., 159 f., 161, 166, 170, 173 f., 177-181; *Relations with the environment* pages 189 f.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-41 Percentage of total employees covered by collective bargaining agreements. *Relations with stakeholders* page 156.	**Art. 3 paragraph, 2 letter d):** social aspects and aspects relating to staff management
	102-42 Basis for identifying and selecting stakeholders with whom to engage. *Disclosing sustainability: methodological note* pages 12-13; *Corporate Identity* pages 38, 77-80; *Relations with stakeholders* pages 88-94, 99 f., 109 f., 118 f., 122, 129 ff., 133 ff., 140, 144 ff., 148, 156 ff., 159, 161, 163, 166, 170, 173 f., 178 f., 180, 181.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-43 Approach to stakeholder engagement (including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process). *Disclosing sustainability: methodological note* pages 12-13; *Corporate Identity* pages 38-39, 43, 64, 77-80; *Relations with stakeholders* pages 88-94, 97, 99, 105 f., 109 f., 111, 119 f., 121, 122 ff., 125, 129-135, 140, 144 ff., 148, 156, 158 f., 161, 162, 163, 166 ff., 169-171, 173 f., 177 ff., 180 f.; *Relations with the environment* pages 188 f., 219.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model
	102-44 Key topics and concerns that have been raised through stakeholder engagement (including how the organization has responded to those key topics and concerns, including through its reporting, and the stakeholder groups etc.). *Disclosing sustainability: methodological note* pages 12-13; *Corporate Identity* pages 24-27, 38-43, 68, 77-80; *Relations with stakeholders* pages 88-94 and Tables nos 16 e 17, 99, 110 f., 118 f., 122, 135, 140, 144 ff., 148, 156 f., 158 f., 161, 166 ff., 170, 173 f., 178, 180 f.; *Relations with the environment* pages 188 f., 194 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model

	REPORTING PRACTICE	
GRI 102: General Disclosures 2016	**102-45 List of all entities included in the organization's consolidated financial statements. Specify whether any entity included in the organization's consolidated financial statements is not covered by the report.** In addition to the data requested, highlighted in the methodological note, sometimes the scope varies by default. This change, again reported in the text, is primarily correlated to the different business sectors (and companies that belong to them) reported, or, in residual cases, the centralised management of certain data, which, on the basis of the activities managed under service, does not cover the entire scope of reporting. *Disclosing sustainability: Methodological note*, page 15 and Table no. 2, and note 19; *Relations with stakeholders* pages 84, 145; *Relations with the environment* pages 199, 205, 208.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries
	102-46 Process for defining the report content and the topic Boundaries (including an explanation of how the organization has implemented the Reporting Principles for defining report content). *Disclosing sustainability: methodological note* pages 12-13, 14, 15, 17; *Corporate Identity* pages 24-27, 38-43; *GRI Content Index* pages 246-261.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model **Art. 4 paragraph 1:** to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	102-47 List of the material topics identified in the process for defining report content. *Disclosing sustainability: methodological note* pages 12-13, 14-15 and Table no. 1; *GRI Content Index* pages 246-261.	**Art. 4 paragraph 1:** to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	102-48 Effect of any restatements of information given in previous reports, and the reasons for such restatements (mergers or acquisitions, change of base years or periods, nature of business, measurement methods). Any recalculation or groupings that require changes to the data published in 2020 are appropriately flagged and justified in the report. *Disclosing sustainability: methodological note*, page 15; *Relations with stakeholders* page 88; *Relations with the environment* pages 225 f. Table no. 68.	**Art. 3 paragraph 3:** the information (...) is provided with a comparison with the information provided in previous years
	102-49 Significant changes from previous reporting periods in the list of material topics and topic Boundaries. *Disclosing sustainability: methodological note* pages 14 Table no. 1, 15, 16 Table no. 3; *Relations with stakeholders* page 124 and Chart no. 31; *Environmental accounts* pages 266, 269.	**Art. 3 paragraph 3:** the information (...) is provided with a comparison with the information provided in previous years
	102-50 Reporting period for the information provided (for example, the fiscal or calendar year). *Disclosing sustainability: methodological note* page 11.	**Art. 2 paragraph 1:** public interest bodies prepare a disclosure for each financial year **Art. 3 paragraph 3:** the information (...) is provided with a comparison with the information provided in previous years
	102-51 Date of the most recent previous report. *Disclosing sustainability: methodological note* page 10.	**N.A.**
	102-52 Reporting cycle (for example, annual or biennial). *Disclosing sustainability: methodological note* page 10.	**Art. 2 paragraph 1:** public interest bodies prepare a disclosure for each financial year
	102-53 Contact point for questions regarding the report or its contents. *Disclosing sustainability: methodological note* page 17.	**N.A.**
	102-54 Claims of reporting in accordance with the GRI Standards (either: i. "This report has been prepared in accordance with the GRI Standards: Core option", ii. "This report has been prepared in accordance with the GRI Standards: Comprehensive option"). *Disclosing sustainability: methodological note* page 11; *GRI Content Index* page 246.	**Art. 3 paragraph 3:** reporting standards used
	102-55 GRI content index, which specifies each of the GRI Standards used and lists all disclosures included in the report (for each disclosure, the content index shall include: the number of the disclosure, the page number(s) or URL(s) where the information can be found, if applicable, and where permitted, the reason(s) for omission when a required disclosure cannot be made, etc). *GRI Content Index* pages 246-261.	**Art. 3 paragraph 3:** reporting standards used
	102-56 External assurance (the reporting organization shall report a description of the organization's policy and current practice with regard to seeking external assurance for the report; a reference to the external assurance report; the relationship between the organization and the assurance provider; whether and how the highest governance body or senior executives are involved in seeking external assurance for the organization's sustainability report). *Disclosing sustainability: methodological note* page 11; *Opinion Letter* pages 299 ff.	**Art. 3 paragraph 10:** (...) verification of the non-financial statement

MATERIAL TOPIC-SPECIFIC STANDARDS		
GRI 200: ECONOMIC		
TOPIC	**ECONOMIC PERFORMANCE**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 32, 38-43, 67 Table no. 9, 70 ff. and Table no. 10. Topic Boundary: Acea Group	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 32, 38-43, 44-61, 67-72 and Tables nos 9 e 10.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the non-financial company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 32, 38-43, 67-72 and Tables nos 9 e 10.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 201: Economic Performance 2016	**201-1 Direct economic value generated and distributed (including revenues, operating costs, employee wages and benefits, payments to providers of capital, payments to government and community investments, economic value retained).** *Corporate Identity* pages 32 Table no. 7, 77-80, 81 f.; *Relations with stakeholders* pages 154, 172, 174.	**Art. 3 paragraph, 1 letter d):** social aspects and aspects relating to staff management
	201-2 Financial implications and other risks and opportunities due to climate change. *Corporate Identity* pages 24-27, 32, 43, 72; *Relations with the environment* pages 188 ff., 217, 219.	**Art. 3 paragraph 1, letter c):** the impact (...) on the environment
	201-3 Defined benefit plan obligations and other retirement plans. *Relations with stakeholders* page 154 f. and Table no. 42.	**Art. 3 paragraph, 1 letter d):** social aspects and aspects relating to staff management
	201-4 Financial assistance received from government. *Corporate identity* page 81 note 40.	**N.A.**
TOPIC	**INDIRECT ECONOMIC IMPACTS**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 39-41, 67-72 and Table no. 10, 77-80; *Relations with stakeholders* pages 94 ff., 140 ff. Topic Boundary: main Group companies, local community, suppliers.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 39-41, 44-61, 67-72 and Table no. 10, 77-80; *Relations with stakeholders* pages 94 ff., 106, 135 ff., 140 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the non-financial company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 39-41, 67-72 and Table no. 10, 77-80; *Relations with stakeholders* pages 94 ff., 106, 135 ff., 140 ff.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 203: Indirect Economic Impacts 2016	**203-1 Infrastructure investments and services supported (the organization shall report: the extent of development of significant infrastructure investments; current or expected impacts on communities, including positive and negative impacts where relevant; whether these investments and services are commercial, in-kind, or pro bono engagements, etc.).** *Corporate Identity* page 77-80; *Relations with stakeholders* pages 94 ff., 96 Table no. 18, 97 f., 100, 105 ff. and Table no. 25, 108, 110 f., 135 ff., 180 and Chart no. 48; *Relations with the environment* page 197.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment as well as on health and safety
	203-2 Significant indirect economic impacts (examples of significant identified indirect economic impacts of the organization, including positive and negative impacts, etc.). *Corporate Identity* page 77-80; *Relations with stakeholders* pages 85 f., 94 ff., 96 Table no. 18, 97 f., 100, 105, 108, 110 f., 131 f., 135 ff., 139, 140 ff., 143 Tables nos 36 e 37; *Relations with the environment page* 202.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment as well as on health and safety

TOPIC	PROCUREMENT PRACTICES	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 139 ff. Topic Boundary: main Group companies, suppliers	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 44-61, 67-72 and Table no. 10; *Relations with stakeholders* pages 139 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 139 ff.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 204: Procurement Practices 2016	**204-1 Proportion of spending on local suppliers.** There is no specific preferential strategy for local suppliers, although, particularly for sourcing of works, the prevalence of local suppliers arises naturally. *Relations with stakeholders* pages 142, 143 Table no. 37.	**Art. 3 paragraph 1, letter b):** fundamental indicators of non-financial performance
TOPIC	**ANTI-CORRUPTION**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 41-43, 67-72 and Table no. 10. Topic Boundary: Acea Group.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 41-43, 44-61, 67-72 and Tables nos 9 e 10, 76; *Relations with stakeholders* page 164.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Tables nos 9 e 10, 76; *Relations with stakeholders* page 164.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 205: Anti-corruption 2016	**205-1 Total number and percentage of operations assessed for risks related to corruption. Significant risks related to corruption identified through the risk assessment.** *Corporate Identity* page 69.	**Art. 3 paragraph 1, letter c):** the main risks generated or suffered **Art. 3 paragraph 2, letter f):** anti-corruption and bribery measures
	205-2 Communication and training about anti-corruption policies and procedures (total number and percentage of employees that the organization's anti-corruption policies and procedures have been communicated to, etc.). *Relations with stakeholders page* 164.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model: **paragraph 2, letter f):** fight against both active and passive corruption
	205-3 Confirmed incidents of corruption and actions taken (total number and nature of confirmed incidents of corruption, etc.). No instances of corruption were recorded.	**Art. 3 paragraph 2, letter f):** anti-corruption and bribery measures
TOPIC	**ANTI-COMPETITIVE BEHAVIOR**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 41-43, 65, 67-72 and Table no. 10; *Relations with stakeholders* pages 140 ff., 175. Topic Boundary: Acea Group	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 41-43, 44-61, 65, 67-72 and Tables nos 9 e 10; *Relations with stakeholders* pages 140 ff., 164, 175.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 65, 67-72 and Tables nos 9 e 10; *Relations with stakeholders* pages 140 ff., 164, 175.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 206: Anti-competitive Behavior 2016	**206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices (number of legal actions pending or completed including any decisions or judgments).** *Relations with stakeholders* pages 175 f.	**Art. 3 paragraph 1, letter b):** fundamental indicators of non-financial performance

GRI 300: ENVIRONMENTAL		
TOPIC	**MATERIALS**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 41-43, 67-72 and Table no. 10, 74; *Relations with the environment* pages 191, 217; *Environmental accounts page* 266. Topic Boundary: main Group companies	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 44-61, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with the environment* pages 191, 217; *Environmental accounts* page 266.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with the environment* pages 191, 217; *Environmental accounts* page 266.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 301: Materials 2016	**301-1 Materials used by weight or volume (materials that are used to produce and package the organization's primary products and services, by non-renewable and renewable materials used).** *Relations with the environment* pages 217 and Table no. 59, 222 Table no. 64; *Environmental accounts* pages 266, 275, 276, 277.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	301-2 Percentage of recycled input materials used to manufacture the organization's primary products and services. *Relations with the environment* pages 217 and Table no. 59.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	301-3 Percentage of reclaimed products and their packaging materials for each product category. Not applicable.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
TOPIC	**ENERGY**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 39-41, 43, 67-72 and Table no. 10, 74; *Relations with the environment* pages 188 ff., 191 ff., 199 ff., 206 f., 217 ff. Topic Boundary: main Group companies, suppliers	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 39-41, 43, 44-61, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with stakeholderspage* 164; *Relations with the environment* pages 188 ff., 191 ff., 199 ff., 206 f., 216, 217 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 39-41, 43, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with stakeholders* page 164; *Relations with the environment* pages 188 ff., 191 ff., 199 ff., 206 f., 216, 217 ff.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 302: Energy 2016	**302-1 Energy consumption within the organization.** *Relations with the environment* pages 206 f., 217 ff. and Tables nos 60 e 61.	**Art. 3 paragraph 2, letter a):** use of energy resources
	302-2 Energy consumption outside of the organization. *Relations with the environment* page 219.	**Art. 3 paragraph 2, letter a):** use of energy resources
	302-3 Energy intensity. *Relations with the environment* pages 217, 219.	**Art. 3 paragraph 2, letter a):** use of energy resources
	302-4 Reduction of energy consumption. *Relations with the environment* pages 203, 206 f., 219 f. and Table no. 63.	**Art. 3 paragraph 2, letter a):** use of energy resources
	302-5 Reductions in energy requirements of products and services. Not applicable: the Group does not sell products or services for which the indicator can be considered applicable.	**Art. 3 paragraph 2, letter a):** use of energy resources
TOPIC	**WATER**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 39-41, 43, 67-72 and Table no. 10, 74; *Relations with stakeholders* pages 105, 108 ff., 111; *Relations with the environment* pages 188 ff., 191 ff., 196 ff., 209, 211 ff., 213, 221 ff. Topic Boundary: main Group companies, suppliers, customers	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 39-41, 43, 44-61, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with stakeholders* pages 105 f., 108 ff., 111; *Relations with the environment* pages 188 ff., 191 ff., 196 ff., 209, 211 ff., 213, 221 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 39-41, 43, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with stakeholders* pages 105 f., 108 ff., 111; *Relations with the environment* pages 188 ff., 191 ff., 196 ff., 209, 211 ff., 213, 221 ff.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them

GRI 303: Water and effluents 2018	**303-1 Interactions with water as a shared resource.** *Relations with stakeholders* pages 105 f., 108 ff., 111, 130; *Relations with the environment* pages 188, 196 ff. and Table no. 47, 209, 211 ff., 214 and Table no. 57, 221 ff. and Table no. 64; *Environmental accounts* pages 271-274.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company **Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	303-2 Management of water discharge-related impacts. *Relations with stakeholders* pages 109 ff., 111; *Relations with the environment* pages 209-211, 213, 221 ff.; *Environmental accounts* pages 271-274.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	303-3 Water withdrawal. *Relations with the environment* pages 196 ff. and Table no. 47, 209, 221 ff. and Table no. 64; *Environmental accounts* pages 271-274, 275.	**Art. 3 paragraph 2, letter a):** use of water resources
	303-4 Water discharge. *Relations with stakeholders* pages 111; *Relations with the environment* page 209, 213 and Table no. 55, 214 and Table no. 57, 215, 221 ff.; *Environmental accounts* page 273.	**Art. 3 paragraph 2, letter a):** use of water resources; **letter c):** the impact (...) on the environment
	303-5 Water consumption. *Relations with the environment* pages 211 ff., 221 ff.; *Environmental accounts* pages 271-274.	**Art. 3 paragraph 2, letter a):** use of water resources
TOPIC	**BIODIVERSITY**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 41-43, 67-72 and Table no. 10, 74; *Relations with the environment* pages 191 ff. Topic Boundary: main Group companies	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with stakeholders* page 111; *Relations with the environment* pages 191 ff., 194 f., 213.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with stakeholders* page 111; *Relations with the environment* pages 191 ff., 194 f.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 304: Biodiversity 2016	**304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.** *Relations with the environment* pages 191 f., 193 and Chart no. 49, 196 ff.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	304-2 Significant impacts of activities, products, and services on biodiversity. *Relations with stakeholders* page 109 ff.; *Relations with the environment* pages 191 ff., 194 f., 196 ff., 203.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	304-3 Habitats protected or restored. During the reporting period, there were no cases of restoration (offsetting) of natural habitats. *Relations with the environment* pages 194 f., 196 ff.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk. *Relations with the environment* pages 191 f., 193 and Chart no. 50.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
TOPIC	**EMISSIONS**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 39-41, 43, 67-72 and Table no. 10, 74; *Relations with the environment* pages 188 ff., 191 ff., 206 f., 217 f., 223 ff. Topic Boundary: main Group companies, suppliers, customers	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 39-41, 43, 44-61, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with stakeholders* pages 106, 133; *Relations with the environment* pages 188 ff., 191 ff., 206 f., 217 f., 223 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 39-41, 43, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with stakeholders* pages 106, 133; *Relations with the environment* pages 188 ff., 191 ff., 206 f., 217 f., 223 ff.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 305: Emissions 2016	**305-1 Direct (Scope 1) GHG emissions.** Biogenic CO_2 was calculated for Environment Operations and Water Operations and in 2021 equalled 330,386 t. *Relations with the environment* pages 224, 225 f. and Table no. 68; *Environmental accounts* pages 277 f., 280.	**Art. 3 paragraph 2, letter b):** Greenhouse-gas emissions
	305-2 Energy indirect (Scope 2) GHG emissions. *Relations with the environment* pages 225 f. and Table no. 68; *Environmental accounts* pages 277 f.	**Art. 3 paragraph 2, letter b):** Greenhouse-gas emissions
	305-3 Other indirect (Scope 3) GHG emissions. *Relations with the environment* pages 225 f. and Table no. 68.	**Art. 3 paragraph 2, letter b):** Greenhouse-gas emissions

GRI 305: Emissions 2016	**305-4 GHG emissions intensity.** *Relations with the environment* pages 225 f. and Table no. 68.	**Art. 3 paragraph 2, letter b):** Greenhouse-gas emissions
	305-5 Reduction of GHG emissions as a direct result of reduction initiatives. *Relations with the environment* pages 203, 219 f. and Table no. 63, 225 f. and Table no. 68.	**Art. 3 paragraph 2, letter b):** Greenhouse-gas emissions
	305-6 Emissions of ozone-depleting substances (ODS). *Relations with the environment* page 224; *Environmental Accounts* pages 275, 276.	**Art. 3 paragraph 2, letter b):** Greenhouse-gas emissions
	305-7 Nitrogen oxides (NOx), sulphur oxides (SOx) and other significant air emissions. *Relations with the environment* page 223 Table no. 65; *Environmental Accounts* pages 277 f.	**Art. 3 paragraph 2, letter b):** polluting atmospheric emissions
TOPIC	**WASTE**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 39-41, 43, 67-72 and Table no. 10, 74; *Relations with stakeholders* pages 120 f.; *Relations with the environment* pages 188 ff., 191 ff., 205 ff., 208, 227-231; *Environmental accounts* page 266. Topic Boundary: main Group companies	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 39-41, 43, 44-61, 67-72 and Tables nos 9 e 10, 76 Table no. 12, 74; *Relations with stakeholders* pages 120 f.; *Relations with the environment* pages 188 ff., 191 ff., 205 ff., 208, 215, 227-231; *Environmental accounts* page 266.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 39-41, 43, 67-72 and Tables nos 9 e 10, 74, 76 Table no. 12; *Relations with stakeholders* pages 120 f.; *Relations with the environment* pages 188 ff., 191 ff., 205 ff., 208, 215, 227-231; *Environmental accounts* page 266.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 306: Waste 2020	**306-1 Waste generation and significant waste-related impacts** *Relations with the environment* pages 227-231;	**Art. 3 paragraph 2, letter a):** use of water resources
	306-2 Management of significant waste-related impacts. *Relations with the environment* pages 227-231; *Environmental accounts* pages 277-280.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	306-3 Waste generated. *Relations with the environment* pages 227 Table no. 69, 228 Table no. 70, 230 Table no. 71, 231 and Table no. 72.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	306-4 Waste diverted from disposal. *Relations with the environment* pages 207, 227 Table no. 69, 228 Table no. 70, 230 Table no. 71, 231 and Table no. 72.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
	306-5 Waste directed to disposal. *Relations with the environment* pages 227 Table no. 69, 228 Table no. 70, 230 Table no. 71, 231 and Table no. 72.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment
TOPIC	**ENVIRONMENTAL COMPLIANCE**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 224-27, 41-43, 67-72 and Table no. 10; *Relations with the environment* pages 191 f. Topic Boundary: main Group companies	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 44-61, 67-72 and Tables nos 9 e 10, 76 Table no. 12; *Relations with stakeholders* pages 164 f.; *Relations with the environment* pages 191 f.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Tables nos 9 e 10, 76 Table no. 12; *Relations with stakeholders* pages 157; *Relations with the environment* pages 164 f., *Relations with the environment* pages 191 f.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 307: Environmental Compliance 2016	**307-1 Non-compliance with environmental laws and regulations. Total monetary value of significant fines; total number of non-monetary sanctions, etc.** *Corporate Identity* page 69; *Relations with stakeholders* page 175 f.; *Relations with the environment* page 191.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
TOPIC	**SUPPLIER ENVIRONMENTAL ASSESSMENT**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 140 ff.; *Relations with the environment* pages 219, 225. Topic Boundary: main Group companies, suppliers.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 44-61, 67-72 and Table no. 10, 76 Table no. 12; *Relations with stakeholders* pages 140 ff., 144 f.; *Relations with the environment* pages 219, 225.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company

GRI 103: Management approach 2016	**103-3 Evaluation of the management approach.** *Corporate Identity* pages 41-43, 67-72 and Table no. 10, 76 Table no. 12; *Relations with stakeholders* pages 140 ff., 144 f.; *Relations with the environment* pages 219, 225.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 308: Supplier Environmental Assessment 2016	**308-1 Percentage of new suppliers that were screened using environmental criteria.** *Relations with stakeholders* pages 141 f., 144 f.; *Relations with the environment* page 219.	**Art. 3 paragraph 1, letter c):** the main risks generated or suffered (...) deriving from the business, its products, services or commercial relations, including, where relevant, supply and subcontracting chains
	308-2 Actual and potential negative environmental impacts in the supply chain and actions taken. *Relations with stakeholders* pages 144 f.; *Relations with the environment* pages 219, 225.	**Art. 3 paragraph 1, letter c):** the main risks generated or suffered (...) deriving from the business, its products, services or commercial relations, including, where relevant, supply and subcontracting chains; **paragraph 2, letter c):** the impact (...) on the environment
GRI 400: SOCIAL		
TOPIC	**EMPLOYMENT**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 149, 163 ff. Topic Boundary: main Group companies.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 44-61, 67-72 and Table no. 10; *Relations with stakeholders* pages 144 ff., 153 f., 161, 163 ff., 167, 171.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 149 ff., 153 f., 161, 167, 171.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 401: Employment 2016	**401-1 New employee hires and employee turnover. Total number and rate, by age group, gender and region.** *Relations with stakeholders* pages 149 ff., 152 Table no. 40.	**Art. 3 paragraph 2, letter d):** aspects relating to staff management
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees. *Relations with stakeholders* page 167.	**Art. 3 paragraph 2, letter d):** aspects relating to staff management
	401-3 Parental leave. Total number of employees that were entitled to parental leave, that took parental leave, that returned to work after parental leave ended, by gender, etc. Acea operates in accordance with the Consolidated Law on supporting maternity and paternity (Italian Legislative Decree 151/2001 as amended), which governs leave, rest days, days off for specific reasons and economic support for female and male workers connected with maternity, paternity of children, adopted children and fostered children. The law prohibits any discrimination for reasons related to gender, with particular reference to any less favourable treatment on the basis of being pregnant, maternity and paternity. It establishes mandatory maternity leave for a period of five months and guarantees the work post during this period, imposing a prohibition on dismissal. It also establishes the reintegration of the employee into the activities performed prior to the leave period or equivalent activities, with fines applicable for employers contravening these rules. Therefore, 100% of employees making use of this type of leave maintain their post and return to work. The employees who took leave for parenthood in 2021 numbered 301, of which 130 were men and 171 women. All of these, after the leave period, returned to work and are still employed.	**Art. 3 paragraph 2, letter d):** aspects relating to staff management; **letter e):** actions taken to prevent attitudes and conduct that are in any case discriminatory
TOPIC	**LABOUR-MANAGEMENT RELATIONS**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 156 ff. Topic Boundary: main Group companies.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 41-43, 44-61, 67-72 and Table no. 10; *Relations with stakeholders* pages 156 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 156 ff.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them

GRI 402: Labor/Management Relations 2016	**402-1 Minimum notice periods regarding operational changes (report whether the notice period and provisions for consultation and negotiation are specified in collective agreements).** *Relations with stakeholders* pages 156 f.	**Art. 3 paragraph 2, letter d):** methods of dialogue with trade unions
TOPIC	**OCCUPATIONAL HEALTH AND SAFETY**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 140 ff., 146 ff., 157 ff., 160. Topic Boundary: main Group companies, suppliers	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 44-61, 67-72 and Tables nos 9 e 10, 75, 76 Table no. 12; *Relations with stakeholders* pages 140 ff., 146 ff., 157 ff., 160, 164.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Tables nos 9 e 10, 75, 76 Table no. 12; *Relations with stakeholders* pages 140 ff., 144 f., 146 ff., 157 ff., 160, 164.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 403: Occupational Health and Safety 2018	**403-1 Occupational health and safety management system.** *Corporate Identity* page 75; *Relations with stakeholders* pages 146 ff., 156, 157 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	403-2 Hazard identification, risk assessment, and incident investigation. *Relations with stakeholders* pages 147, 157 ff., 160 Table no. 43.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company; **letter c):** the main risks generated or suffered (...) deriving from the business, its products, services or commercial relations, including, where relevant, supply and subcontracting chains; **Art. 3 paragraph 2, letter c):** the impact (...) on health and safety; **letter d):** aspects relating to staff management
	403-3 Occupational health services. *Relations with stakeholders* pages 157 ff., 160 f.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company; **Art. 3 paragraph 2, letter c):** the impact (...) on health and safety; **letter d):** aspects relating to staff management
	403-4 Worker participation, consultation, and communication on Occupational health and safety. Acea observes the indications of Italian Legislative Decree no. 81/2008 on health and safety in the workplace. 100% of workers are represented in formal health and safety commissions (composed of representatives from management and workers), through appointed figures. *Relations with stakeholders* pages 140 f., 147, 156 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company; **Art. 3 paragraph 2, letter c):** the impact (...) on health and safety; **letter d):** aspects relating to staff management (...) and the methods of dialogue with trade unions
	403-5 Worker training on occupational health and safety. *Relations with stakeholders* pages 146 ff., 159.	**Art. 3 paragraph 2, letter c):** the impact (...) on health and safety; **letter d):** aspects relating to staff management
	403-6 Promotion of worker health. *Relations with stakeholders* pages 156 ff., 170.	**Art. 3 paragraph 2, letter c):** the impact (...) on health and safety; **letter d):** aspects relating to staff management
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships. Not applicable	**Art. 3 paragraph 2, letter c):** the impact (...) on health and safety;
	403-8 Workers covered by an occupational health and safety management system. *Relations with stakeholders* page 157.	**Art. 3 paragraph 2, letter c):** the impact (...) on health and safety; **letter d):** aspects relating to staff management
	403-9 Work-related injuries. *Relations with stakeholders* pages 147, 157 f. and Chart no. 46.	**Art. 3 paragraph 2, letter c):** the impact (...) on health and safety; **letter d):** aspects relating to staff management
	403-10 Work-related ill health. *Relations with stakeholders* pages 147, 161.	**Art. 3 paragraph 2, letter c):** the impact (...) on health and safety; **letter d):** aspects relating to staff management

TOPIC		
	TRAINING AND EDUCATION	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 161 f., 163 ff. Topic Boundary: main Group companies.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 44-61, 67-72 and Table no. 10; *Relations with stakeholders* pages 161 f., 163 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 161 ff.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 404: Training and Education 2016	**404-1 Average hours of training per year per employee; by gender and employee category.** *Relations with stakeholders* pages 165 and Table no. 44.	**Art. 3 paragraph 2, letter d):** aspects relating to staff management
	404-2 Programs for upgrading employee skills and transition assistance programs. *Relations with stakeholders* pages 159, 161 ff., 167.	**Art. 3 paragraph 2, letter d):** aspects relating to staff management
	404-3 Percentage of employees receiving regular performance and career development reviews. In 2021, in the context of the Human Resources Management System in force, all personnel of Group Companies within the scope of reporting (100%) were subject to evaluation. *Relations with stakeholders* pages 167 f.	**Art. 3 paragraph 2, letter d):** aspects relating to staff management
TOPIC	**DIVERSITY AND EQUAL OPPORTUNITY**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27; 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 154 f., 169 ff. Topic Boundary: main Group companies.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 44-61, 67-72 and Table no. 10; *Relations with stakeholders* pages 154 f., 169 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 154 f., 169 ff.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 405: Diversity and Equal Opportunity 2016	**405-1 Diversity of governance bodies and employees. Percentage of individuals within the organization's governance bodies, by gender, age group and other indicators of diversity. Percentage of employees per employee category, by gender, age group and other indicators of diversity.** Regarding representation of the different age brackets for members of the governance bodies, considering these to include the BoD, Board of Statutory Auditors and SB, it is noted that 36% of members are in the 30-50 years bracket, and the remaining 64% are in the over-50 bracket. *Corporate Identity page* 63; *Relations with stakeholders* pages 150, 151 Table no. 39, 153. Table no. 41, 169 ff.	**Art. 3 paragraph 2, letter d):** aspects relating to staff management
	405-2 Ratio of basic salary and remuneration of women to men for each employee category, by significant locations of operation. *Relations with stakeholders* page 154.	**Art. 3 paragraph 2, letter d):** aspects relating to staff management
TOPIC	**NON DISCRIMINATION**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* page 169. Topic Boundary: main Group companies.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 41-43, 44-61, 67-72 and Tables nos 9 e 10; *Relations with stakeholders* page 169.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Tables nos 9 e 10; *Relations with stakeholders* page 169.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them

GRI 406: Non discrimination 2016	**406-1 Incidents of discrimination and corrective actions taken.** *Corporate Identity* page 69; *Relations with stakeholders* page 171.	**Art. 3 paragraph 2, letter d):** social aspects and aspects relating to staff management; **letter e):** actions taken to prevent attitudes and conduct that are in any case discriminatory
TOPIC	**LOCAL COMMUNITIES**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 41-43, 67-72 and Table no. 10, 77-80; *Relations with stakeholders* pages 88-94, 94 ff., 110 f., 129 f., 174 f., 176 f. Topic Boundary: main Group companies and various stakeholders.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 41-43, 44-61, 67-72 and Table no. 10, 76 Table no. 12, 77-80; *Relations with stakeholders* pages 88-94, 94 ff., 105, 108, 110 f., 129 f., 131, 174 f., 176 f.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10, 76 Table no. 12, 77-80; *Relations with stakeholders* pages 88-94, 94 ff., 105, 108, 129 f., 174 f., 176 f.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 413: Local Communities 2016	**413-1 Operations with local community engagement, impact assessments, and development programs.** 100% of the main Group Companies have initiatives in place for stakeholder engagement. *Disclosing sustainability: methodological note* pages 12-13; *Corporate Identity* pages 75 f. and Table no. 12, 77-80; *Relations with stakeholders* pages 88-94, 97, 105, 108, 110 f., 123, 129 ff., 131, 135, 139 ff., 144 f., 179; *Relations with the environment* page 189.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment as well as on health and safety
	413-2 Operations with significant actual and potential negative impacts on local communities. *Corporate Identity* page 77-80; *Relations with stakeholders* pages 131, 176; Relations with the environment page 191.	**Art. 3 paragraph 2, letter c):** the impact (...) on the environment as well as on health and safety
TOPIC	**SUPPLIER SOCIAL ASSESSMENT**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 140 ff. Topic Boundary: main Group companies, suppliers.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 44-61, 67-72 and Table no. 10; *Relations with stakeholders* pages 140 ff., 144 f., 146 f., 148.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 140 ff., 146 f., 148.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 414: Supplier social assessment 2016	**414-1 Percentage of new suppliers that were screened using social criteria.** *Relations with stakeholders* pages 141, 144 f., 146 f.	**Art. 3 paragraph 1, letter c):** the main risks generated or suffered (...) deriving from the business, its products, services or commercial relations, including, where relevant, supply and subcontracting chains; **paragraph 2, letter c):** the impact (...) on health and safety
	414-2 Negative social impacts in the supply chain and actions taken. *Relations with stakeholders* pages 144 f., 146 f.	**Art. 3 paragraph 2, letter c):** the impact (...) on health and safety
TOPIC	**PUBLIC POLICY**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 174 ff. Topic Boundary: Acea Group.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 41-43, 44-61, 67-72 and Table no. 10; *Relations with stakeholders* pages 174 ff.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 174 ff.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them

GRI 415: Public Policy 2016	**415-1 Political contributions. Total monetary value of financial and in-kind political contributions made directly and indirectly by the organization by country and recipient/beneficiary.** *Relations with stakeholders* page 175.	**Art. 3 paragraph 2, letter f):** anti-corruption and bribery measures
TOPIC	**CUSTOMER HEALTH AND SAFETY**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 111, 176 f.; *Relations with the environment* pages 209-211. Topic Boundary: main Group companies, customers, community	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 41-43, 44-61, 67-72 and Table no. 10, 75, 76 Table no. 12; *Relations with stakeholders* pages 109 ff., 111, 176 f.; *Relations with the environment* pages 209-211.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10, 75, 76 Table no. 12; *Relations with stakeholders* pages 111, 176 f.; *Relations with the environment* pages 209-211.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 416: Customer Health and Safety 2016	**416-1 Assessment of the health and safety impacts of product and service categories.** *Corporate Identity* pages 75 f. and Table no. 12; *Relations with stakeholders* pages 106 Table no. 26, 109, 111, 132; *Relations with the environment* pages 209-211.	**Art. 3 paragraph 2, letter c):** the impact (...) on health and safety
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services. *Relations with the environment* page 191.	**Art. 3 paragraph 2, letter c):** the impact (...) on health and safety
TOPIC	**MARKETING AND LABELING**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 24-27, 41-43, 67-72 and Table no. 10; *Relations with stakeholders* pages 88-94, 94 ff., 99, 101-104, 105, 118 f.,122 f., 125, 148, 175. Topic Boundary: main Group companies, customers	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 24-27, 41-43, 44-61, 67-72 and Table no. 10, 75, 76 Table no. 12; *Relations with stakeholders* pages 88-94, 94 ff., 99, 101-104 and Tables nos 22-24, 105, 111-117, 118 f., 121, 122 f., 125, 133, 148, 175.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 67-72 and Table no. 10, 75, 76 Table no. 12; *Relations with stakeholders* pages 88-94, 94 ff., 99, 101-104, 105, 118 f., 122 f., 125, 148, 175.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 417: Marketing and Labeling 2016	**417-1 Requirements for product and service information and labeling.** The GRI international indicator, on the basis of the reference to "services" in addition to products, is indicated, adapting it to the national situation and operations of a multiutility company, both in terms of the main parameters of quality of water distributed and in relation to performance of a commercial, contractual and technical nature for the services managed in the water and energy sector, which are subject to regulation by the national industry authority (ARERA). *Relations with stakeholders* pages 94 ff., 99 and Table no. 21, 101-104 and Tables nos 22-24, 105, 108 f. Table no. 27, 109 ff., 111-117 Tables nos 28-32, 117 f., 121, 122, 124, 125; *Relations with the environment* pages 209-211.	**Art. 3 paragraph 1, letter b):** fundamental indicators of non-financial performance
	417-2 Total number of incidents of non-compliance with regulations and/or voluntary codes concerning product and service information and labeling. *Relations with stakeholders* pages 94 ff., 99 and Table no. 21, 101-104 and Tables nos 22-24, 111-117 Tables nos 28-32, 119, 125, 175 f.	**Art. 3 paragraph 1, letter b):** fundamental indicators of non-financial performance
	417-3 Total number of incidents of non-compliance with regulations and/or voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship. *Relations with stakeholders* pages 148, 175 f.	**Art. 3 paragraph 1, letter b):** fundamental indicators of non-financial performance
TOPIC	**CUSTOMER PRIVACY**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 41-43, 65 f., 67-72 and Table no. 10; *Relations with stakeholders* page 122. Topic Boundary: main Group companies, customers	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated

GRI 103: Management approach 2016	**103-2 The management approach and its components.** *Corporate Identity* pages 41-43, 44-61, 65 f., 67-72 and Table no. 10; *Relations with stakeholders* pages 122, 164.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 65 f., 67-72 and Table no. 10; *Relations with stakeholders* pages 122, 164.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 418: Customer Privacy 2016	**418-1 Substantiated complaints (received from outside parties and/or received from regulatory bodies) concerning breaches of customer privacy and losses of customer.** During the year, there were 150 new requests regarding utilisation of rights pursuant to Arts 15-22 of Regulation (EU) 679/2016 - GDPR (requests for updating, erasure, modification and refusal of consent etc.), for which a dedicated procedure has been launched. 5 instances saw the involvement of the Antitrust Authority; for 1 the relative filing was communicated, 3 are pending and another resulted in an inspection carried out in December 2021 of a Group company and for which the procedure is in progress. The Group has not recorded any events involving the theft of information on customer data, nor has it received any news of violations of significant personal data.	**Art. 3 paragraph 1, letter b):** fundamental indicators of non-financial performance
TOPIC	**SOCIO ECONOMIC COMPLIANCE**	
GRI 103: Management approach 2016	**103-1 Explanation of the material topic and its boundary.** *Corporate Identity* pages 41-43, 65 f., 67-72 and Table no. 10; *Relations with stakeholders* pages 99, 101-104, 141, 175. Topic Boundary: main Group companies.	**Art. 4 paragraph 1:** the consolidated statements include the data of the parent company and its fully consolidated subsidiaries. (...) to the degree necessary to ensure the understanding of the group's business, its performance, results, and the impact it generated
	103-2 The management approach and its components. *Corporate Identity* pages 41-43, 44-61, 65 f., 67-72 and Table no. 10; *Relations with stakeholders* pages 99, 101-104, 111 ff., 119, 125, 134, 141, 175.	**Art. 3 paragraph 1, letter a):** the corporate management and organisation model; **letter b):** policies implemented by the company
	103-3 Evaluation of the management approach. *Corporate Identity* pages 41-43, 65 f., 67-72 and Table no. 10; *Relations with stakeholders* pages 99, 101-104, 111 ff., 125, 141, 175.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them
GRI 419: Socio Economic Compliance 2016	**419-1 Non-compliance with laws and regulations in the social and economic area (total monetary value of significant fines; total number of non-monetary sanctions etc.).** *Relations with stakeholders* pages 99 note 54, 119, 141, 175; *Relations with the environment* page 191.	**Art. 3 paragraph 1, letter b):** the policies implemented by the company (...) and the results achieved through them

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ENVIRONMENTAL ACCOUNTS

SCOPE

The scope of the *Environmental Accounts* is consistent with the reporting scope of the *Sustainability Report* (*Consolidated Non-Financial Statement* pursuant to Legislative Decree no. 254/2016), as defined in the *Methodological Note*.
The water Companies in which Acea has an investment: Acque, Publiacqua and Umbra Acque - consolidated in the Financial Statements with the equity method - are marginally included in the Environmental Accounts and only relative to the aspects which are specifically signalled in the text. Please see the chapter *Water Company data sheets and overseas activities* (outside the scope of the NFS). In 2021, Berg and Demap were included in the NFS scope. In this regard, the data for the three-year period have been updated to facilitate comparability[174].

The *Environmental Accounts*, integral part of the *Sustainability Report*, combines and presents systematically the information and environmental performance data of the principal Companies of the Group.
The data is divided into "product systems" pertaining to the energy, "environment" and "water fields", according to the Life Cycle Assessment approach (standard ISO Series 14040), which assesses the entire life cycle of the systems.
The report comprises **about 500 items and parameters monitored** which quantify the physical flows generated by the activities and some performance indicators.

The substances used by the Group - whether natural, like water or not natural, like *chemicals* - the "products", emissions, effluents and waste related to the activities managed, are reported for the three-year period and are attributable to **producing and distributing energy**, for **collecting and distributing drinking water**, for **purification** and for all the processes connected to **waste management**, including **waste-to-energy**. Every use of resources is reduced to a minimum in terms of quantity and every substance is selected carefully in terms of quality, safety and environmental sustainability.

For the three areas – Energy, Environment, and, Water – the **renewable and non-renewable** resources used are illustrated. In particular, among the renewable re- sources listed we highlight water and the biomasses used for the production of compost.
In the *Explanatory Notes*, we provide additional information regarding the **quality of the data presented**, in particular, whether it was **measured**, **estimated** or **calculated**, and the principal items of the *Environmental Accounts*, indicated in the tables and in the text by a number in brackets, including a brief description.

PRODUCT SYSTEMS

ENERGY SEGMENT

- ENERGY GENERATION (HYDROELECTRIC + THERMOELECTRIC + PHOTOVOLTAIC + FROM WASTE AND BIOGAS)
- DISTRIBUTION OF ELECTRICITY
- PRODUCTION AND DISTRIBUTION OF HEAT
- PUBLIC LIGHTING
- CONTROLS AND MEASUREMENTS

ENVIRONMENT SEGMENT

- SOLID AND LIQUID WASTE DISPOSED OF
- COMPOST PRODUCTION
- ANALYSIS AND MEASUREMENTS

WATER SEGMENT

- DRINKING WATER SUPPLY
- WATER DISTRIBUTION
- ADDUCTION/PURIFICATION WASTEWATER
- ANALYSIS AND MEASUREMENTS

The data are provided for the 2019-2021 three-year period and aggregated in three homogeneous categories:

- **the products supplied**,
- **the resources used**,
- **the waste produced.**

The service indicators and the principal environmental performance indicators are explained below for every area.

174 The Berg, Demap, Aquaser, Acea Innovation and Ecogena companies are present in the Environmental Accounts, and precisely in *Resources* (*fuel used by the main group companies for transport and heating*) and in *Emissions* (*the emissions of carbon dioxide from transport and packaging*). In fact, they cannot be present in the other product systems (according to ISO 14040) as they do not have a product cycle system that can be reported.

PRODUCTS – ENERGY SEGMENT

The financial statement data for the generation of electricity refer to Acea Produzione and Acea Ambiente – Waste-to-Energy (San Vittore del Lazio and Terni plants) and Biogas Production (the Orvieto, Aprilia and Monterotondo Marittimo plants).

ELECTRICITY – GENERATION (*)	u. m.	2019	2020	2021	Δ% 2021/2020
summary data					
total gross electricity produced (1) = (3+11+14+19)	**GWh**	**919.61**	**916.44**	**1,008.85**	**10.1**
total net electricity produced (2) = (10+13+18+21)	**GWh**	**854.85**	**846.56**	**931.20**	**10.0**
from fossil fuels (thermoelectric) (5 + 0.57x 15San Vittore del Lazio +0.57x 16 Terni)	GWh	*269.10 29.3% of (1)*	*291.27 31.8% of (1)*	*310.63 30.8% of (1)*	*6.6*
from renewable sources (hydroelectric, photovoltaic, biodegradable portion of waste and biogas) (4+11+0.43x15San Vittore del Lazio+0.43 x 16 Terni +19)	GWh	*650.50 70.7% of (1)*	*625.17 68.2% of (1)*	*698.22 69.2% of (1)*	*11.7*
Acea production – hydroelectric and thermoelectric					
total gross electricity produced (3) = (4+5)	**GWh**	**516.23**	**468.41**	**542.44**	**15.8**
total gross hydroelectric energy (4)	**GWh**	**425.95**	**376.25**	**434.70**	**15.5**
A. Volta Castel Madama	GWh	*26.17*	*22.45*	*28.99*	*29.1*
G. Ferraris Mandela	GWh	*0.00*	*5.02*	*18.42*	*267.0*
G. Marconi Orte	GWh	*57.06*	*53.72*	*70.31*	*30.9*
Sant'Angelo	GWh	*162.05*	*116.58*	*146.11*	*25.3*
Salisano	GWh	*178.42*	*176.84*	*167.62*	*-5.2*
Other minor	GWh	*2.24*	*1.65*	*3.26*	*97.3*
total gross thermoelectric energy (5)	**GWh**	**90.29**	**92.16**	**107.74**	**16.9**
from diesel *Montemartini power plant (**)*	GWh	1.36	1.49	1.65	10.9
from natural gas *Tor di Valle plan – CAR*	GWh	88.93	90.67	106.09	17.0
total losses of electricity (6) = (7+8+9)	**GWh**	**12.19**	**12.74**	**13.21**	**3.7**
self consumption hydro plants (7)	GWh	*2.40*	*2.43*	*2.19*	*-10.2*
self consumption thermo plants (Tor di Valle, Montemartini) (8)	GWh	*5.27*	*5.04*	*5.40*	*7.2*
first processing losses (9)	GWh	*4.52*	*5.27*	*5.63*	*6.7*
total net electricity produced by Acea Produzione (10) = (3-6)	**GWh**	**504.04**	**455.67**	**529.23**	**16.1**
Acea production – photovoltaic					
gross photovoltaic electrical energy (11)	**GWh**	**26.38**	**74.96**	**78.61**	**4.9**
total electricity losses including own consumption (12)	GWh	2.29	3.98	3.38	-15.1
net photovoltaic energy (13) = (11-12)	**GWh**	**24.09**	**70.98**	**75.23**	**6.0**
Acea Ambiente - waste-to-energy					
total gross electricity produced (14) = (15)+(16)	**GWh**	**357.20**	**346.15**	**356.41**	**3.0**
San Vittore del Lazio plant (15)	GWh	*276.27*	*269.38*	*267.74*	*-0.6*
Terni plant (16)	GWh	*80.93*	*76.77*	*88.67*	*15.5*
self consumption + losses from first processing (17)	**GWh**	**49.12**	**44.95**	**45.64**	**1.5**
San Vittore del Lazio plant	GWh	*41.12*	*37.30*	*36.83*	*-1.3*
Terni plant	GWh	*8.00*	*7.65*	*8.81*	*15.2*
total net electricity produced (18) = (14-17)	**GWh**	**308.08**	**301.20**	**310.77**	**3.2**
Acea Ambiente - Biogas					
total gross electricity produced from biogas (19)	**GWh**	**19.79**	**26.91**	**31.39**	**16.6**
Orvieto plant	GWh	*19.79*	*17.56*	*13.99*	*-20.3*
Aprilia plant	GWh	*0.0*	*4.84*	*12.32*	*154.6*
Monterotondo Marittimo plant	GWh	*0.0*	*4.51*	*5.07*	*12.4*
self consumption (20)	**GWh**	**1.16**	**8.20**	**15.43**	**88.2**
Orvieto plant	GWh	*1.16*	*1.09*	*0.89*	*-18.3*
Aprilia plant	GWh	*0.0*	*3.48*	*9.59*	*175.9*
Monterotondo Marittimo plant	GWh	*0.0*	*3.63*	*4.94*	*36.3*
total electricity transferred in network (21) = (19-20)	**GWh**	**18.63**	**18.71**	**15.96**	**-14.7**

(*) 2020 data has been rectified in as much as the figure for energy produced by hydroelectric plants was certified as definitive.
(**) The Montemartini power plant is maintained operational but in reserve mode.

THERMAL ENERGY – GENERATION, DISTRIBUTION AND SALES	u. m.	2019	2020	2021	Δ% 2021/2020
Acea Produzione					
gross thermal energy produced Tor di Valle power station (22)	**GWht**	**95.92**	**94.00**	**98.67**	**5.0**
total losses of thermal energy (23)	GWht	29.47	27.71	23.94	-13.6
distribution losses	GWht	*20.66*	*20.90*	*20.37*	*-2.6*
production losses	GWht	*8.80*	*6.81*	*3.57*	*-47.6*
net thermal energy sold (24) =(22-23)	**GWht**	**66.45**	**66.29**	**74.73**	**12.7**

ELECTRICITY – TRANSPORT AND SALE	u. m.	2019	2020	2021	Δ% 2021/2020
in Rome and Formello - summary data					
supply from Acea Group (25)	**GWh**	**2.65**	**2.29**	**3.47**	**51.5**
electricity from the market (26)	**GWh**	**10,606.69**	**9,667.68**	**9,826.70**	**1.6**
from Single Buyer	GWh	*2,537.45*	*2,509.36*	*2,230.42*	*-11.1*
from importation	GWh	*n/a*	*70.81*	*78.56*	*10.9*
from wholesalers + other producers	GWh	*8,069.24*	*7,087.51*	*7,517.72*	*6.1*
electricity requested by the network (27) =(25+26) = (28+29+30+31+32)	**GWh**	**10,609.35**	**9,669.97**	**9,830.17**	**1.7**
distribution, transport and commercial losses (28)	GWh	*741.14 7.0% of (27)*	*563.70 5.8% of (27)*	*593.35 6.0% of (27)*	*5.3*
uses for own transmission and distribution (29)	GWh	*39.47*	*35.80*	*30.71*	*-14.2*
net electricity transferred to third parties (30)	GWh	*16.45*	*94.87*	*102.19*	*7.7*
net electricity conveyed from Acea to clients of the open market (31)	**GWh**	**7,615.16**	**6,998.47**	**7,410.22**	**5.9**
net electricity sold by Acea Energia to clients of the open market on distribution company grid (Areti)	GWh	*6,119.50*	*5,594.36*	*5,909.37*	*5.6*
net electricity sold by other sellers to clients of the open market on distribution company grid (Areti)	GWh	*1,495.66*	*1,404.12*	*1,500.85*	*6.9*
net electricity sold to managed clients (32)	**GWh**	**2,197.13**	**1,977.12**	**1,693.70**	**-14.3**
sale in Italy - summary data					
net electricity sold by Acea Energia on the open market – including sale on Rome (33)	**GWh**	**3,825.82**	**4,571.96**	**6,074.57**	**32.9**
net electricity sold by Acea Energia in Italy (free market + greater protection) (34) = (32+33)	**GWh**	**6,022.95**	**6,549.08**	**7,768.27**	**18.6**

GAS - SALES	u. m.	2019	2020	2021	Δ% 2021/2020
gas sold by Acea Energia in Italy (35)	**MSm³**	**108.38**	**139.89**	**174.68**	**24.9**

PUBLIC LIGHTING	u. m.	2019	2020	2021	Δ% 2021/2020
luminous flux to Rome (36)	**Mlumen**	**2,002**	**2,010**	**2,021**	**0.5**

CONTROLS AND MEASUREMENTS	u. m.	2019	2020	2021	Δ% 2021/2020
measurement and control activity (37)	**no.**	**375**	**505**	**431**	**-14.7**
electro-magnetic field measurements	no.	*26*	*22*	*41*	*86.4*
noise measurements	no.	*20*	*21*	*34*	*61.9*
PCB chemical analyses	no.	*68*	*65*	*69*	*6.2*
waste classification	no.	*40*	*26*	*23*	*-11.5*
transformer diagnostics	no.	*200*	*356*	*253*	*-28.9*
other	no.	*21*	*15*	*11*	*-26.7*

PRODUCTS - ENVIRONMENT SEGMENT

The data refers to the plants of **Acea Ambiente, Acque Industriali** and, from 2021, **Berg.** For Acea Ambiente, these are the three composting plants (located in Aprilia, Monterotondo Marittimo and Sabaudia), the waste management centre of Orvieto and the chemical/physical and biological treatment plant for non-hazardous liquid waste and treatment of sewage waste at Chiusi, acquired by Acea Ambiente through the merger of the Bio Ecologia Company in May 2021. For Acque Industriali the data refers to the liquid waste disposal plants located in the Tuscan provinces of Pisa (Pontedera and Pisa-San Jacopo), Florence (Empoli-Pagnana) and Siena (Poggibonsi). Berg only has one facility where waste storage, disposal and treatment is carried out. The data relating to the Bio Ecologia and Berg plants[175], included for the first time in the Environment Accounts, are reported with a three-year outlook.
After the revamping work of recent years, **the Aprilia and Monterotondo Marittimo plants** have both implemented a new **anaerobic digestion section**; these are to be added to the one with the same name in Orvieto.
The Sabaudia plant has undergone revamping/maintenance since 2016, and operations were resumed in August 2018. Since 31.10.2019, they have been suspended again to allow other revamping works; the plant was shut down for the whole of 2021. **The Aprilia plant,** which suffered from the vicissitudes of a preventive seizure, since 2019 was able to operate continuously achieving conditions close to full operation and under the control of the judicial custodian as in the previous year. Thanks to the actions taken by the Company, and specifically the complete closure of biofilters and creation of 3 chimneys for atmospheric emissions, the plant was released on 18 March 2021.
In February 2020, **the San Jacopo plant** interrupted its activities; an application to renew the authorisation was presented and the first service conference was held; we are waiting to establish any subsequent interventions on the plant.

NON-HAZARDOUS WASTE DISPOSED AND RECOVERED – ORVIETO PLANT	u. m.	2019	2020	2021	Δ% 2021/2020
total incoming waste (38) = (39)+(40)	**t**	**99,910**	**106,477**	**108,361**	**1.8**
waste sent for treatment (39)	**t**	**65,674**	**73,216**	**67,155**	**-8.3**
waste sent to the anaerobic digester and aerobic treatment	*t*	*43,958*	*34,200*	*32,855*	*-3.9*
sent for aerobic treatment or just shredding	*t*	*21,716*	*39,016*	*34,299*	*-12.1*
waste sent directly to landfill (40)	**t**	**34,236**	**33,261**	**41,207**	**23.9**
waste sent to landfill after treatment (41)	**t**	**22,438**	**34,427**	**31,239**	**-9.3**
waste recovered (42)	**t**	**64**	**80**	**52**	**-35.1**
quality compost (43)	**t**	**5,240**	**4,618**	**3,559**	**-22.9**
reduction due to stabilisation (44) = (38) – (40 +41+42+43)	**t**	**37,933**	**34,091**	**32,304**	**-5.2**

COMPOST PRODUCTION	u. m.	2019	2020	2021	Δ% 2021/2020
total incoming organic waste (45) = (46+47+48)	**t**	**53,419.28**	**115,473.21**	**141,506.00**	**22.5**
incoming sludge (46)	**t**	**8,809.26**	**14,945.10**	**26,912.42**	**80.1**
Aprilia plant	*t*	*3,644.44*	*4,441.74*	*9,005.22*	*102.7*
Monterotondo Marittimo plant	*t*	*585.74*	*10,503.36*	*17,907.20*	*70.5*
Sabaudia plant	*t*	*4,579.08*	*0.00*	*0.00*	-
incoming green (47)	**t**	**10,459.84**	**25,317.15**	**26,184.14**	**3.4**
Aprilia plant	*t*	*5,287.70*	*12,926.64*	*14,529.62*	*12.4*
Monterotondo Marittimo plant	*t*	*1,839.96*	*12,390.51*	*11,654.52*	*-5.9*
Sabaudia plant	*t*	*3,332.18*	*0.00*	*0.00*	-
organic fraction of municipal solid waste and other agrifood waste (48)	**t**	**34,150.18**	**75,210.96**	**88,409.44**	**17.5**
Aprilia plant	*t*	*32,588.90*	*53,395.48*	*60,274.56*	*12.9*
Monterotondo Marittimo plant	*t*	*1,561.28*	*21,815.48*	*28,134.88*	*29.0*
quality compost (49) (*)	**t**	**9,330.36**	**13,869.00**	**24,185.00**	**74.4**
Aprilia plant	*t*	*6,756.00*	*9,340.00*	*12,500.00*	*33.8*
Monterotondo Marittimo plant	*t*	*0.00*	*4,529.00*	*11,685.00*	*158.0*
Sabaudia plant	*t*	*2,574.36*	*0.00*	*0.00*	-
non-compostable material for disposal (50)	**t**	**6,753.22**	**11,615.87**	**11,813.09**	**1.7**
Aprilia plant	*t*	*6,149.06*	*7,807.11*	*7,365.30*	*-5.7*
Monterotondo Marittimo and Sabaudia plants	*t*	*604.16*	*3,808.76*	*4,447.79*	*16.8*
reduction through stabilisation (51) = (46+47-49-50) (*)	**t**	**37,335.7**	**89,988.3**	**105,507.9**	**17.2**

(*) The quantities of compost produced in 2020 were adjusted, as they had estimated for the previous report, and consequently also the figures relating to the reduction due to stabilisation.

175 The Demap company, owner of a plant authorised to process 75,000 tonnes of plastics per year, also falls within the NFS 2021 reporting scope. Information on Demap is included in *"Relations with the environment"*.

LIQUID WASTE AND WASTE WATER DISPOSAL - BIO ECOLOGIA PLANT	u. m.	2019	2020	2021	Δ% 2021/2020
liquid waste (52)	**t**	**71,617**	**68,501**	**92,792**	**35.5**
waste water treated (53)	**m^3**	**280,118**	**284,826**	**148,862**	**-47.7**

ANALYTICAL DETERMINATIONS ON WASTE AND ON QUALITY COMPOST	u. m.	2019	2020	2021	Δ% 2021/2020
total analytical determinations (54) (*)	**no.**	**122**	**118**	**118**	**-**
analytical determinations on compost - Orvieto plant	*no.*	*13*	*11*	*10*	*-9.1*
analytical determinations on compost - Aprilia, Monterotondo Marittimo and Sabaudia plants	*no.*	*30*	*41*	*48*	*17.1*
analytical determinations on waste - Orvieto plant	*no.*	*79*	*59*	*67*	*13.6*

(*) The 2020 figure has been adjusted.

LIQUID WASTE DISPOSAL AND INDUSTRIAL WATER TREATMENT (*)	u. m.	2019	2020	2021	Δ% 2021/2020
total incoming waste (55) = (56+57+58+59)	**t**	**132,988.4**	**111,090.5**	**92,381.1**	**-16.8**
incoming sludge (56)	**t**	**48,765.8**	**34,827.7**	**24,520.8**	**-29.6**
Pagnana plant	*t*	*14,118.8*	*14,642.6*	*10,574.5*	*-27.8*
Pontedera plant	*t*	*9,351.2*	*5,915.6*	*8,896.1*	*50.4*
Poggibonsi plant	*t*	*14,984.3*	*13,262.3*	*5,050.3*	*-61.9*
San Jacopo plant	*t*	*10,311.5*	*1,007.2*	*0.0*	*-*
liquid waste (57)	**t**	**17,310.05**	**10,379.2**	**10,649.9**	**2.6**
Pagnana plant	*t*	*8,345.2*	*3,994.5*	*3,832.0*	*-4.1*
Pontedera plant	*t*	*8,964.9*	*6,384.7*	*6,817.9*	*6.8*
sewage waste and others (58)	**t**	**14,399.6**	**12,131.8**	**7,627.2**	**-37.1**
Pagnana plant	*t*	*9,778.6*	*8,700.0*	*1,331.0*	*-84.7*
Pontedera plant	*t*	*4,150.1*	*2,890.5*	*6,156.4*	*113.0*
Poggibonsi plant	*t*	*437.5*	*531.2*	*139.8*	*-73.7*
San Jacopo plant	*t*	*33.3*	*10.1*	*0.0*	*-*
leachate (59)	**t**	**52,513.0**	**53,751.8**	**49,583.2**	**-7.8**
Pagnana plant	*t*	*27,308.5*	*28,048.4*	*30,338.1*	*8.2*
Pontedera plant	*t*	*25,204.4*	*25,703.4*	*19,245.1*	*-25.1*
Poggibonsi plant	*t*	*0.0*	*0.0*	*353.7*	*-*
ammonium sulphate produced (60)	**kg**	**311,904**	**255,040**	**219,670.0**	**-13.9**
Pagnana plant	*kg*	*136,400*	*57,460*	*141,930.0*	*147.0*
Pontedera plant	*kg*	*175,504*	*197,580*	*77,740*	*-60.7*

TREATED AND DISCHARGED WATER - INDUSTRIAL WATER (*)	u. m.	2019	2020	2021	Δ% 2021/2020
treated and discharged water (61)	**m^3**	**139,398**	**117,789**	**93,916**	**-20.3**
Pagnana plant	*m^3*	*71,265*	*64,685*	*55,655*	*-14.0*
Pontedera plant	*m^3*	*37,884*	*34,576*	*30,483*	*-11.8*
Poggibonsi plant	*m^3*	*22,099*	*17,725*	*7,778*	*-56.1*
San Jacopo plant	*m^3*	*8,150*	*803*	*0*	*-*

(*) Some of the 2020 figures have been updated following consolidation.

LIQUID WASTE AND SOLIDS DISPOSAL - BERG (*)	u. m.	2019	2020	2021	Δ% 2021/2020
total incoming waste (62) = (63+64)	**t**	**139,171.28**	**141,865.41**	**133,090.69**	**-6.2**
solid waste (63)	**t**	**1,249.97**	**384.20**	**226.32**	**-41.1**
liquid waste (64)	**t**	**137,921.31**	**141,481.21**	**132,864.37**	**-6.1**

(*) The Berg plant, in addition to waste disposal, brokered approximately 10,500 t of waste in 2021.

PRODUCTS - WATER SEGMENT

The water data **summarized at national level** includes the principal water Companies of the Acea Group: Acea Ato 2 and Acea Ato 5 (Latium), Gesesa and GORI (Campania), Umbra Acque (Umbria), Acque, Publiacqua and AdF (Tuscany). The details of the water balances are presented only for the Companies in the reporting scope of the *Consolidated Non-Financial Statement* (NFS, pursuant to Legislative Decree No. 254/2016): Acea Ato 2, Acea Ato 5, GORI AdF and Gesesa.

Please see the chapter *Water Companies data sheets and overseas activities* for the water balance sheets of the other Companies of the Group not in the scope of the NFS.
The Loss Assessment was also carried out this year for the entire three-year period, according to Resolution ARERA 917/17 R/IDR. In particular, ARERA procedures establish that water losses are calculated on the entire scope of the aqueduct system (and not only on the distribution network) and include apparent losses.

SUMMARISED WATER DATA OF THE MAIN GROUP COMPANIES IN ITALY (*)	u. m.	2019	2020	2021	Δ% 2021/2020
total drinking water collected from the environment or from other systems and fed into the aqueduct systems (65)	**Mm³**	**1,372.6**	**1,355.8**	**1,317.8**	**-2.8**
total drinking water supplied and billed (66)	**Mm³**	**628.0**	**629.5**	**632.3**	**0.4**

(*) Some figures for the 2019-2020 two year period have been updated following consolidation. Some 2021 items were estimated and will be consolidated in the months following publication.

SUMMARY WATER DATA OF THE COMPANIES OPERATING IN THE NFS SCOPE: ACEA ATO 2, ACEA ATO 5, GORI, GESESA AND AdF (*)	u. m.	2019	2020	2021	Δ% 2021/2020
total drinking water collected from the environment or from other systems and fed into the aqueduct systems (67)	**Mm³**	**1,079.9**	**1,074.0**	**1,039.9**	**-3.2**
total drinking water supplied (68)	**Mm³**	**474.9**	**479.5**	**481.5**	**0.6**

(*) Some figures for the 2019-2020 two year period have been updated following consolidation. The 2021 figures are estimated and will be consolidated with the subsequent reporting.

WATER BALANCES OF THE COMPANIES OPERATING IN THE NFS SCOPE (*)	u. m.	2019	2020	2021	Δ% 2021/2020
Acea Ato 2 for Ato 2 – Lazio Centrale (Rome + municipalities acquired as at 31/12/2021)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (69)	**Mm³**	**691.0**	**691.1**	**667.8**	**-3.4**
surface (lakes and rivers)	*Mm³*	*0.0*	*0.0*	*0.0*	*-*
from wells	*Mm³*	*86.2*	*89.6*	*87.0*	*-2.9*
from springs	*Mm³*	*598.2*	*595.3*	*575.1*	*-3.4*
from other aqueduct systems	*Mm³*	*6.5*	*6.2*	*5.7*	*-8.1*
total drinking water leaving the aqueduct system (70) = (71+72+73+74)	**Mm³**	**382.4**	**398.1**	**401.8**	**0.9**
total drinking water supplied and billed in the ATO 2 network (71)	**Mm³**	**329.0**	**332.4**	**331.6**	**-0.2**
measured volume of water delivered to users	*Mm³*	*299.3*	*307.3*	*306.6*	*-0.2*
volume consumed by users and not measured	*Mm³*	*29.7*	*25.1*	*25.0*	*-0.4*
total drinking water authorised and not billed in the network (72)	**Mm³**	**12.2**	**18.2**	**22.4**	**23.1**
measured unbilled authorised consumption	*Mm³*	*0.0*	*0.4*	*0.5*	*25.0*
unmeasured unbilled authorised consumption	*Mm³*	*12.2*	*17.8*	*22.0*	*23.6*
drinking water exported to other systems (73)	**Mm³**	**41.3**	**46.8**	**46.4**	**-0.9**
measured drinking water losses (74)	**Mm³**	**0.0**	**0.7**	**1.4**	**100.0**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (75)-	**Mm³**	**308.5**	**293.0**	**266.0**	**-9.2**
water loss percentages (76)-	**%**	**44.7**	**42.4**	**39.8**	**-6.1**
Acea Ato 5 for Ato 5 – Southern Latium - Frosinone (86 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (77)	**Mm³**	**121.9**	**119.8**	**115.8**	**-3.3**
from wells	*Mm³*	*63.1*	*59.3*	*55.6*	*-6.2*
from springs	*Mm³*	*45.2*	*44.8*	*46.0*	*2.7*
from other aqueduct systems	*Mm³*	*13.6*	*15.7*	*14.2*	*-9.5*
total drinking water leaving the aqueduct system (78) =-(79+80+81)	**Mm³**	**29.1**	**37.9**	**38.8**	**2.4**
total drinking water dispensed and billed in the network (79)	**Mm³**	**21.6**	**24.6**	**26.5**	**7.7**
measured volume of water delivered to users	*Mm³*	*17.6*	*18.6*	*19.4*	*4.3*
volume consumed by users and not measured	*Mm³*	*4.0*	*6.0*	*7.1*	*18.3*
total drinking water authorised and not billed in the network (80)	**Mm³**	**0.6**	**6.8**	**6.9**	**1.5**

measured unbilled authorised consumption	*Mm³*	*0.0*	*0.0*	*0.0*	*-*
unmeasured unbilled authorised consumption	*Mm³*	*0.6*	*6.8*	*6.9*	**1.5**
drinking water exported to other systems (81)	**Mm³**	**6.8**	**6.6**	**5.4**	**-18.2**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (82)	**Mm³**	**92.8**	**81.9**	**77.1**	**-5.9**
water loss percentages (83)	**%**	**76.2**	**68.4**	**66.5**	**-2.8**
Gesesa – Ato Calore Irpino - Benevento (21 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (84)	**Mm³**	**17.6**	**19.0**	**19.4**	**2.3**
from wells	*Mm³*	*6.6*	*7.4*	*6.0*	*-18.7*
from springs	*Mm³*	*2.4*	*2.1*	*3.2*	*49.8*
drinking water collected from other aqueduct systems	*Mm³*	*8.7*	*9.5*	*10.2*	*7.0*
total drinking water leaving the aqueduct system (85) = (86+87+88)	**Mm³**	**7.6**	**7.7**	**8.2**	**5.9**
total drinking water dispensed and billed in the network (86)	**Mm³**	**7.6**	**7.6**	**8.0**	**5.6**
measured volume of water delivered to users	*Mm³*	*7.1*	*6.0*	*n/a*	*-*
volume consumed by users and not measured	*Mm³*	*0.5*	*1.6*	*n/a*	*-*
total drinking water authorised and not billed in the network (87)	**Mm³**	**0.0**	**0.0**	**0.0**	**-**
drinking water exported to other systems (88)	**Mm³**	**0.0**	**0.1**	**0.1**	**-**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (89)	**Mm³**	**10.0**	**11.3**	**11.2**	**-1.0**
water loss percentages (90)	**%**	**56.9**	**59.4**	**57.8**	**-2.7**
GORI – Sarnese-Vesuviano District (74 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (91)	**Mm³**	**189.7**	**184.0**	**176.0**	**-4.3**
from wells	*Mm³*	*60.7*	*59.6*	*50.4*	*-15.5*
from springs	*Mm³*	*2.5*	*2.4*	*2.0*	*-18.0*
drinking water collected from other aqueduct systems	*Mm³*	*126.5*	*121.9*	*123.6*	*1.4*
total drinking water leaving the aqueduct system (92) = (93+94)	**Mm³**	**88.8**	**87.6**	**88.7**	**1.3**
total drinking water dispensed and billed in the network (93)	**Mm³**	**88.0**	**86.9**	**87.2**	**0.3**
measured volume of water delivered to users	*Mm³*	*82.9*	*80.6*	*81.4*	*1.1*
volume consumed by users and not measured	*Mm³*	*5.1*	*6.3*	*5.7*	*-9.3*
total drinking water authorised and not billed in the network (94)	**Mm³**	**0.4**	**0.4**	**1.2**	**177.0**
measured unbilled authorised consumption	*Mm³*	*0.0*	*0.0*	*0.0*	*-*
unmeasured unbilled authorised consumption	*Mm³*	*0.4*	*0.4*	*1.2*	*177.0*
drinking water exported to other systems (95)	**Mm³**	**0.3**	**0.3**	**0.4**	**22.8**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (96)	**Mm³**	**101.0**	**96.3**	**87.3**	**-9.4**
water loss percentages (97)	**%**	**53.2**	**52.4**	**49.6**	**-5.3**
AdF - Optimal Territorial Conference 6 Ombrone (55 Municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (98)	**Mm³**	**59.7**	**60.0**	**60.9**	**1.5**
surface water (**)	*Mm³*	*1.1*	*1.0*	*1.1*	*7.7*
from wells	*Mm³*	*20.1*	*17.9*	*17.9*	*-*
from springs	*Mm³*	*37.7*	*40.5*	*41.3*	*2.0*
from other aqueduct systems	*Mm³*	*0.8*	*0.6*	*0.6*	*-*
total drinking water leaving the aqueduct system (99) = (100+101+102+103)	**Mm³**	**32.3**	**34.5**	**37.1**	**7.6**
total drinking water dispensed and billed in the network (100)		**28.7**	**28.1**	**28.2**	**0.3**
measured volume of water delivered to users	*Mm³*	*28.7*	*28.1*	*28.2*	*0.3*
volume consumed by users and not measured	*Mm³*	*0.0*	*0.0*	*0.0*	*-*
total drinking water authorised and not billed in the network (101)	**Mm³**	**0.1**	**2.7**	**4.9**	**78.5**
measured unbilled authorised consumption	*Mm³*	*0.0*	*0.0*	*0.00*	*-*
unmeasured unbilled authorised consumption	*Mm³*	*0.1*	*2.7*	*4.9*	*78.5*
drinking water exported to other systems (102)	**Mm³**	**1.6**	**1.6**	**1.5**	**-7.9**
measured drinking water losses (103)	**Mm³**	**1.9**	**2.1**	**2.6**	**24.7**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (104)	**Mm³**	**27.4**	**25.5**	**23.8**	**-6.8**
water loss percentages (105)	**%**	**45.8**	**42.5**	**39.0**	**-8.2**

(*) Some figures for the 2019-2020 two year period have been updated following consolidation. The 2021 figures are estimated and will be consolidated with the subsequent reporting.
(**) This is fresh water, apart from the 1.2% of the amount drawn from marine sources.

TOTAL WASTE WATER TREATED BY THE MAIN COMPANIES OF THE GROUP IN ITALY – SUMMARY DATA	u. m.	2019	2020	2021	Δ% 2021/2020
waste water treated in the main treatment plants of the main Group companies in Italy (*) (106)	Mm³	853.7	914.4	980.8	7.3

(*) Some Group company data for 2020 have been adjusted/consolidated.

TOTAL WASTE WATER TREATED BY THE COMPANIES OPERATING IN THE NFS SCOPE (ACEA ATO 2, ACEA ATO 5, GORI, AdF AND GESESA - SUMMARY DATA)	u. m.	2019	2020	2021	Δ% 2021/2020
waste water treated in the main treatment plants of Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa (*) (107)	Mm³	692.1	713.7	778.7	9.1

(*) Gesesa Company estimated the figure for the first time in 2020, having started to install the first flow meters during the same year.

WASTE WATER TREATED BY ACEA ATO 2	u. m.	2019	2020	2021	Δ% 2021/2020
waste water treated in the main treatment plants (108)	Mm³	514.1	512.2	516.4	0.8
Rome South	*Mm³*	*286.4*	*284.9*	*290.1*	*1.8*
Rome North	*Mm³*	*91.5*	*93.7*	*88.5*	*-5.6*
Rome East	*Mm³*	*90.9*	*92.8*	*97.2*	*4.8*
Rome Ostia	*Mm³*	*29.8*	*30.6*	*29.5*	*-3.4*
CoBIS	*Mm³*	*6.6*	*6.7*	*6.8*	*1.9*
Fregene	*Mm³*	*8.8*	*3.5*	*4.2*	*20.5*
other – Municipality of Rome	Mm³	9.7	8.7	9.2	6.5
other – outside the Municipality of Rome	Mm³	76.0	76.0	75.9	-0.1
total waste water treated by Acea Ato 2 (109)	Mm³	599.8	596.9	601.5	0.8
WASTE WATER TREATED BY ACEA ATO 5	**u. m.**	**2019**	**2020**	**2021**	**Δ% 2021/2020**
waste water treated in the main treatment plants (110)	Mm³	21.3	21.2	25.0	18.1
WASTE WATER TREATED BY GORI	**u. m.**	**2019**	**2020**	**2021**	**Δ% 2021/2020**
Total waste water treated (111)	Mm³	45.2	70.1	124.0	76.8
WASTE WATER TREATED BY AdF	**u. m.**	**2019**	**2020**	**2021**	**Δ% 2021/2020**
waste water treated in the main treatment plants (112)	Mm³	16.8	16.3	16.6	1.9
waste water treated in other plants	Mm³	9.0	7.0	9.3	33.4
total waste water treated by AdF (113)	Mm³	25.8	23.3	25.9	11.3
WASTE WATER TREATED BY GESESA	**u. m.**	**2019**	**2020**	**2021**	**Δ% 2021/2020**
waste water treated in the main treatment plants (114)	Mm³	n/a	2.2	2.3	3.7

ANALYTICAL DETERMINATIONS ON DRINKING WATER AND WASTE WATER OF THE MAIN GROUP COMPANIES IN ITALY – SUMMARY DATA (*)	u. m.	2019	2020	2021	Δ% 2021/2020
analytical determinations on total drinking water – main Group companies (115)	no.	1,456,316	1,523,028	1,472,131	-3.3
analytical determinations on total waste water - main Group companies (116)	no.	495,921	448,829	483,526	7.7

(*) Some Group company data for 2020 have been adjusted/consolidated.

ANALYTICAL DETERMINATIONS ON DRINKING WATER AND WASTE WATER OF THE COMPANIES OPERATING IN THE NFS SCOPE: ACEA ATO 2, ACEA ATO 5, GORI, AdF AND GESESA - SUMMARY DATA	u. m.	2019	2020	2021	Δ% 2021/2020
analytical determinations on drinking water of Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa (117)	no.	729,983	769,888	738,488	-4.1
analytical determinations on waste water of Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa (118)	no.	288,863	252,160	274,478	8.9
ANALYTICAL DETERMINATIONS ACEA ATO 2	**u. m.**	**2019**	**2020**	**2021**	**Δ% 2021/2020**
analytical determinations on Acea Ato 2 drinking water (119)	no.	365,728	365,633	346,164	-5.3
analytical determinations on Acea Ato 2 waste water (120)	no.	170,641	124,625	127,417	2.2
ANALYTICAL DETERMINATIONS ACEA ATO 5	**u. m.**	**2019**	**2020**	**2021**	**Δ% 2021/2020**
analytical determinations on Acea Ato 5 drinking water (121)	no.	123,790	116,327	105,430	-9.4
analytical determinations on Acea Ato 5 waste water (122)	no.	41,616	43,812	40,636	-7.2
GESESA ANALYTICAL DETERMINATIONS	**u. m.**	**2019**	**2020**	**2021**	**Δ% 2021/2020**
analytical determinations on Gesesa drinking water (123)	no.	8,428	9,372	11,955	27.6
analytical determinations on Gesesa waste water (124)	no.	5,514	5,736	11,448	99.6
GORI ANALYTICAL DETERMINATIONS	**u. m.**	**2019**	**2020**	**2021**	**Δ% 2021/2020**
analytical determinations on GORI drinking water (125)	no.	109,363	141,288	136,156	-3.6
analytical determinations on GORI waste water (126)	no.	21,027	25,499	43,270	69.7
AdF ANALYTICAL DETERMINATIONS	**u. m.**	**2019**	**2020**	**2021**	**Δ% 2021/2020**
analytical determinations on AdF drinking water (127)	no.	122,674	137,268	138,783	1.1
analytical determinations on AdF waste water (128)	no.	50,065	52,488	51,707	-1.5

RESOURCES USED - ENERGY SEGMENT

The data on the resources used refer to Acea Produzione, Acea Ambiente's waste-to-energy plants and Areti.

GENERATION, TRANSPORT AND SALE OF ELECTRICITY AND HEAT, PUBLIC LIGHTING (*)	u. m.	2019	2020	2021	Δ% 2021/2020
natural gas					
electricity and heat generation (129) = (130+131)	Nm³ x 1,000	25,828	25,148	28,033	11.5
thermoelectric and heat production (130)	Nm³ x 1,000	22,468	22,272	23,912	7.4
Tor di Valle – high-efficiency cogeneration (CAR)	*Nm³ x 1,000*	*22,468*	*22,272*	*23,912*	*7.4*
waste-to-energy (131)	Nm³ x 1,000	3,359	2,876	4,122	43.3
San Vittore del Lazio waste-to-energy plant	*Nm³ x 1,000*	*3,029*	*2,486*	*3,764*	*51.4*
Terni waste-to-energy plant	*Nm³ x 1,000*	*331*	*390*	*358*	*-8.4*
diesel for thermoelectric generation					
thermoelectric production (132)	l x 1,000	630	639	707	10.6
Montemartini power plant	*l x 1,000*	*574*	*587*	*647*	*10.2*
Terni and San Vittore del Lazio plants	*l x 1,000*	*56*	*52*	*60*	*15.3*
RDF (Refuse-Derived Fuel) processed					
San Vittore del Lazio waste-to-energy plant (133)	t x 1,000	340.531	319.122	307.391	-3.7
waste-to-energy paper mill pulper					
Terni waste-to-energy plant (134)	t x 1,000	94.092	90.215	99.730	10.5

biogas for the production of electricity					
composting and waste management plants (135)	**Nm³ x 1,000**	**11,491**	**17,153**	**18,166**	**5.9**
Orvieto plant	*Nm³ x 1,000*	*11,491*	*10,867*	*9,131*	*-16.0*
Aprilia plant	*Nm³ x 1,000*	*0*	*3,621*	*6,411*	*77.0*
Monterotondo Marittimo plant	*Nm³ x 1,000*	*0*	*2,665*	*2,623*	*-1.6*
water					
derivation from hydroelectric production (136)	**Mm³**	**3,458**	**2,926**	**3,894**	**33.1**
process water (137)	**Mm³**	**0.25**	**0.18**	**0.17**	**-8.3**
water for civilian/sanitary uses (138)	**Mm³**	**0.27**	**0.30**	**0.33**	**11.7**
miscellaneous materials					
dielectric mineral oil in operation (139)	**t**	**10,004**	**10,138**	**10,045**	**-0.9**
dielectric mineral oil - reintegrations	t	0.76	1.19	1.19	-
SF6 in operation (140)	**t**	**21.94**	**22.29**	**22.31**	**0.1**
SF6 - replenishment	t	0.40	0.37	0.30	-19.8
cooling fluids (HCFC type) in operation (141)	**t**	**1.49**	**1.68**	**1.78**	**5.7**
cooling fluids (HCFC type) - reintegrations	t	0.00007	0.00035	0.00000	-
miscellaneous chemicals (142)	**kg**	**9,944,328**	**9,788,481**	**10,895,640**	**11.3**
sodium chloride	*kg*	*13,000*	*9,000*	*9,000*	*0.0*
sodium hydroxide (caustic soda)	*kg*	*256,470*	*247,640*	*173,260*	*-30.0*
sodium bicarbonate	*kg*	*7,181,660*	*7,140,770*	*8,333,700*	*16.7*
hydrochloric acid	*kg*	*253,200*	*255,680*	*216,270*	*-15.4*
ammonia solution	*kg*	*560,340*	*598,950*	*526,850*	*-12.0*
activated carbon	*kg*	*511,520*	*468,160*	*673,040*	*43.8*
carbamine	*kg*	*631,040*	*228,820*	*190,220*	*-16.9*
other (for TLR e waste-to-energy)	*kg*	*537,098*	*839,461*	*773,300*	*-7.9*
miscellaneous oils and greases/lubricants (143)	**kg**	**34,387**	**37,844**	**28,433**	**-24.9**
electricity					
consumption for electrical distribution (144) = (28)	*GWh*	*741.14*	*563.70*	*593.35*	*5.3*
consumption for electricity production (145) = (1)-(2)	*GWh*	*64.76*	*69.87*	*77.66*	*11.1*
consumption for offices (50% of the electricity consumed by the Parent Company) (146)	*GWh*	*5.75*	*5.13*	*5.38*	*4.9*
other consumption (147)	*GWh*	*1.22*	*1.32*	*1.33*	*0.7*
other personal uses (148)	*GWh*	*39.47*	*35.80*	*30.71*	*-14.2*
total (149) = (144+145+146+147+148)	**GWh**	**852.33**	**675.82**	**708.43**	**4.8**
public lighting					
consumption for Public Lighting (150)	**GWh**	**70.08**	**66.96**	**67.33**	**0.5**

(*) Some figures for the 2020-2021 two-year period have been adjusted for consolidation.

RESOURCES USED - ENVIRONMENT SEGMENT

The data on the resources refers to the three composting plants of Acea Ambiente located in Aprilia, Monterotondo Marittimo and Sabaudia, the waste management plant of Orvieto, the Bio Ecologia, the Berg plant and four of Acque Industriali's plants in Pontedera, Pagnana, Poggibonsi and San Jacopo.

WASTE MANAGEMENT – ORVIETO PLANT	u. m.	2019	2020	2021	Δ% 2021/2020
miscellaneous chemicals (151)	**t**	**140.9**	**87.0**	**99.2**	**14.1**
electricity (152)	**GWh**	**4.722**	**4.398**	**4.476**	**1.8**
diesel (153)	**l**	**245,735**	**229,533**	**262,762**	**14.5**
process water (154)	**m³**	**5,574**	**4,792**	**6,041**	**26.1**
water for civilian/sanitary uses (155)	**m³**	**1,180**	**1,230**	**1,055**	**-14.2**

COMPOST PRODUCTION	u. m.	2019	2020	2021	Δ% 2021/2020
miscellaneous chemicals (posting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (156)	t	41.48	540.45	1,694.72	213.6
electricity (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (157)	GWh	3.942	4.039	2.266	-43.9
diesel (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (158)	l x 1,000	170.47	220.73	286.31	29.7
locally produced biogas (composting plants of Aprilia and Monterotondo Marittimo) (159)	Nm^3	176,614	6,286,431	9,034,615	43.7
process water (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (*) (160)	m^3	16,562	28,928	38,406	32.8
water for civil use (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (161)	m^3	1,480	2,330	2,650	13.7

(*) The 2020 figure was rectified following actual recorded consumption.

DISPOSAL OF INDUSTRIAL WASTE WATER (AI), BERG AND BIO ECOLOGIA PLANT (*)	u. m.	2019	2020	2021	Δ% 2021/2020
miscellaneous chemicals (AI plants - Pagnana, Pontedera and Poggibonsi, Berg and Bio Ecologia plant) (162)	t	2,487.9	2,728.8	2,184.1	-20.0
electricity (AI plants - Pagnana, Pontedera Poggibonsi, San Jacopo - Berg and Bio Ecologia plant) (163)	GWh	3.325	3.159	3.023	-4.3
methane (AI plants) (164)	Sm^3	30,307	25,079	38,315	52.8
diesel fuel (Berg and Bio Ecologia plant) (164 B)	l	10,515	8,436	6,775	-19.7
BTZ (Basso Tenore di Zolfo - Low Sulphur Content) combustible Oil (Pontedera plant) (165)	t	0.045	0.049	0.031	-36.7
LPG (Pontedera plant)	t	-	-	18.361	-
process water (AI plants - Pagnana, Pontedera Poggibonsi, San Jacopo - Berg and Bio Ecologia plant) (166)	m^3	53,523	50,183	48,576	-3.2
water for civil use (AI plants - Pagnana, Pontedera Poggibonsi, San Jacopo - Berg and Bio Ecologia plant) (167)	m^3	743	747	619	-17.1

(*) The figures for 2019-2020 have been restated to include those of Berg and of the Bio Ecologia plant.

RESOURCES USED - WATER SEGMENT

The data refers to the Water Companies of the Group included in the reporting scope of the *Consolidated Non-Financial Statement* (NFS, pursuant to Legislative Decree no. 254/2016): Acea Ato 2, Acea Ato 5, GORI AdF and Gesesa.

COLLECTION, SUPPLY AND DISTRIBUTION OF DRINKING AND NON-DRINKING WATER (*)	u. m.	2019	2020	2021	Δ% 2021/2020
reagents for purification and disinfection (168)	t	3,587.4	3,689.0	4,560.7	23.6
reagents for chemical analyses (169)	t	1.50	1.65	1.55	-6.1
gas for chemical analyses (170)	MNm^3	6.06	5.79	6.30	8.8
cooling fluids (HCFC type) in operation (171) = (141)	t	1.49	1.68	1.78	5.7
cooling fluids (HCFC type) - reintegrations	t	0.00007	0.00035	0.00000	-
total electricity consumed (172)	GWh	416.17	482.80	446.52	-7.5
water pumping plants (173)	*GWh*	*409.12*	*476.28*	*439.65*	*-7.7*
offices/personal use (50% of energy consumed by the Parent Company) (174) = (146)	*GWh*	*5.75*	*5.13*	*5.38*	*4.9*
chemical laboratory (175)	*GWh*	*1.29*	*1.40*	*1.49*	*6.8*
drinking water					
total drinking water consumed (176)	Mm^3	1.80	2.31	2.12	-8.2
civilian/sanitary uses	*Mm^3*	*1.63*	*2.14*	*1.92*	*-10.3*
offices (50% of the drinking water consumed by the Parent Company)	*Mm^3*	*0.17*	*0.17*	*0.20*	*18.0*
non-drinking water					
total non-drinking water consumed (176 A)	Mm^3	*n/a*	0.48	2.16	353.7
process uses	*Mm^3*	*n.a.*	*0.48*	*2.16*	*353.7*

(*) Some figures for the 2019-2020 two-year period have been adjusted following consolidation.

(**) It is water recovered from treatment plants.

WASTEWATER TREATMENT (*)	u. m.	2019	2020	2021	Δ% 2021/2020
miscellaneous materials and natural resources					
reagents for purification waste water (177)	**t**	**12,188**	**14,262**	**16,716**	**17.2**
polyelectrolyte for sludge dehydration	*t*	*2,305*	*2,507*	*2,472*	*-1.4*
sodium hypochlorite for final disinfection	*t*	*2,761*	*3,981*	*4,244*	*6.6*
ferric chloride for sludge dehydration	*t*	*497*	*462*	*1,008*	*118.2*
peracetic acid	*t*	*3,673*	*4,075*	*5,382*	*32.1*
other (anti-foaming etc.)	*t*	*2,412*	*3,153*	*3,478*	*10.3*
reagent kit for on-site controls (178)	**no.**	**53,856**	**113,136**	**100,461**	**-11.2**
oil and fat (179)	**t**	**13.6**	**9.3**	**16.1**	**72.3**
electricity					
sewerage and purification (180)	**GWh**	**251.3**	**250.7**	**270.2**	**7.7**
fuels					
methane for processes (dryers and other processes) (181)	**Nm³ x 1,000**	**2,868.8**	**3,058.8**	**3,485.2**	**13.9**
diesel for processes and generators (182)	**l x 1,000**	**111.8**	**226.5**	**69.0**	**-69.5**
petrol for processes and generators (183)	**l x 1,000**	**n/a**	**2.6**	**3.4**	**32.1**
biogas produced and consumed on site (184)	**Nm³ x 1,000**	**2,382.5**	**5,320.7**	**3,282.3**	**-38.3**

(*) Some figures for the 2019-2020 two-year period have been adjusted following consolidation

FUEL USED BY THE MAIN GROUP COMPANIES FOR TRANSPORT AND HEATING

The figures refer to all the Companies in the NFS reporting scope.

TYPE OF FUEL (*)	u. m.	2019	2020	2021	Δ% 2021/2020
transport (Group car fleet)					
petrol (185)	**l x 1,000**	**122.6**	**225.3**	**562.1**	**149.5**
diesel (186)	**l x 1,000**	**3,501.1**	**3,461.8**	**3,452.1**	**-0.3**
methane (186 B)	**Nm³ x 1,000**	**0.0**	**0.6**	**0.7**	**22.1**
LPG (187)	**l x 1,000**	**5.1**	**18.6**	**24.5**	**31.8**
heating					
diesel (188)	**l x 1,000**	**1.9**	**0.9**	**0.0**	**-**
methane (189)	**Nm³ x 1000**	**419.6**	**387.3**	**408.4**	**5.5**
LPG (190)	**l x 1,000**	**30.1**	**33.9**	**25.9**	**-23.5**

(*) Some figures for the 2019-2020 two-year period have been adjusted following consolidation and for the inclusion of new companies in the NFS scope.

EMISSIONS AND WASTE - ENERGY SEGMENT

The data on the emissions and waste refer to Acea Produzione, to the waste-to-energy plants of Acea Ambiente and Areti.

ATMOSPHERIC EMISSIONS	u. m.	2019	2020	2021	Δ% 2021/2020
CO_2 (191) = (192+193+194+195) (*)	**t**	**338,410**	**396,232**	**379,025**	**-4.3**
Acea Produzione (192)	*t*	*48,506*	*45,773*	*51,567*	*12.7*
Areti – SF6 replenishment (193)	*t*	*9,400*	*8,695*	*6,975*	*-19.8*
HCFC replenishment (194)	*t*	*0.0*	*0.7*	*0.0*	*-*
waste-to-energy (195)	*t*	*280,504*	*341,763*	*320,483*	*-6.2*
NOx (196) = (197+198)	**t**	**188.19**	**190.67**	**198.11**	**3.9**
Acea Produzione (197)	*t*	*17.44*	*20.83*	*26.05*	*25.1*
waste-to-energy (198)	*t*	*170.75*	*169.84*	*172.06*	*1.3*
CO (199) = (200+201)	**t**	**7.02**	**8.34**	**7.68**	**-8.0**
Acea Produzione (200)	*t*	*4.19*	*6.12*	*4.13*	*-32.5*
waste-to-energy (201)	*t*	*2.83*	*2.22*	*3.55*	*59.8*

SO_2 (202) = (203+204)	**t**	**0.33**	**0.90**	**1.60**	**78.3**
Acea Produzione (203)	*t*	*0.02*	*0.02*	*0.02*	*-*
waste-to-energy (204)	*t*	*0.31*	*0.88*	*1.57*	*79.7*
powders (205) = (206+207)	**t**	**0.60**	**0.60**	**0.74**	**23.6**
Acea Produzione (206)	*t*	*0.03*	*0.03*	*0.03*	*-*
waste-to-energy (207)	*t*	*0.57*	*0.57*	*0.71*	*24.4*
HCl (208)	**t**	**2.92**	**3.12**	**3.07**	**-1.4**
HF (209)	**t**	**0.12**	**0.06**	**0.08**	**23.4**
organic carbon (210)	**t**	**1.99**	**1.07**	**0.58**	**-45.5**

(*) Some figures from the previous two-year period have been adjusted after the final calculations, in particular, the ETS data after certification.

OTHER EMISSIONS AND WASTE	u. m.	2019	2020	2021	Δ% 2021/2020
wastewater treated (211)	**Mm^3**	**0.0300**	**0.0241**	**0.0200**	**-17.1**
electrical fields at 50 Hz	**kV**	**monitored** commitment to maintain the value below the legal limit			
magnetic fields at 50 Hz	**µT**	**monitored** commitment to maintain the value below the legal limit			
noise	**dB**	**monitored** commitment to maintain the value below the legal limit			
luminous flux dissipated	**Mlumen**	commitment to design the plants in order to limit to the utmost the emission value dissipated upwards			

WASTE (*)	u. m.	2019	2020	2021	Δ% 2021/2020
hazardous waste - excluding waste-to-energy area (212)	**t**	**1,268.9**	**854.0**	**1,705.0**	**99.6**
production energy own area	*t*	*1,268.1*	*853.4*	*1,704.4*	*99.7*
proportion for the activities performed by the Parent Company (**)	*t*	*0.8*	*0.6*	*0.6*	*-*
hazardous waste from waste-to-energy (213)	**t**	**73,202.0**	**64,885.4**	**64,672.5**	**-0.3**
non-hazardous waste – excluding waste-to-energy area (214)	**t**	**1,167.0**	**902.8**	**1,257.5**	**39.9**
production energy own area	*t*	*1,118.9*	*874.4*	*1,223.4*	*39.9*
proportion for the activities performed by the Parent Company (**)	*t*	*48.1*	*28.4*	*34.1*	*19.9*
non-hazardous waste from waste-to-energy (215)	**t**	**24,239.3**	**22,633.3**	**28,092.9**	**24.1**

(*) Some figures from the previous two-year period have been adjusted after the final calculations.

(*) The portion is equal to 50% of the waste produced by the Parent Company.

EMISSIONS AND WASTE - ENVIRONMENT SEGMENT

The data refers to the three composting plants of Acea Ambiente located in Aprilia, Monterotondo Marittimo and Sabaudia, the waste management plant of Orvieto, the Bio Ecologia plant, Berg and four of Acque Industriali's plants in Pontedera, Pagnana, Poggibonsi and San Jacopo.

ORVIETO WASTE, COMPOST PLANTS (*)	u. m.	2019	2020	2021	Δ% 2021/2020
hazardous waste - composting plants of Aprilia, Monterotondo Marittimo and Sabaudia including leachate (216)	**t**	**1.2**	**3,672.5**	**221.2**	**-94.0**
non-hazardous waste – composting plants of Aprilia, Monterotondo Marittimo and Sabaudia including leachate (217)	**t**	**14,821.2**	**24,762.1**	**40,469.1**	**63.4**
hazardous waste Orvieto plant (218)	**t**	**12.7**	**11.4**	**12.3**	**7.8**
non-hazardous waste Orvieto plant including leachate (219)	**t**	**21,635.0**	**20,237.1**	**23,608.1**	**16.7**

(*) Some of the 2020 figures have been updated after the final calculations.

BIO ECOLOGIA PLANT	u. m.	2019	2020	2021	Δ% 2021/2020
hazardous waste Bio Ecologia plant (220)	**t**	**3.3**	**6.7**	**5.7**	**-14.5**
non-hazardous waste Bio Ecologia plant (221)	**t**	**6,136.8**	**5,996.0**	**6,330.6**	**5.6**

ATMOSPHERIC EMISSIONS – ORVIETO AND COMPOST PLANTS	u.m.	2019	2020	2021	Δ% 2021/2020
CO_2 (222)	t	1,265	1,349	1,644	21.9
particles (223)	t	0.001	0.274	0.473	72.8
total organic compounds (TOC) (224)	t	0.011	0.927	1.049	13.1
ammonia (225)	t	0.001	3.711	3.933	6.0
volatile inorganic compounds (SIV) (226)	t	0.062	1.941	0.420	-78.3

ATMOSPHERIC EMISSIONS - BIO ECOLOGIA PLANT	u.m.	2019	2020	2021	Δ% 2021/2020
CO_2 (227)	t	2.1	1.8	2.3	27.8

INDUSTRIAL WASTE WATER	u.m.	2019	2020	2021	Δ% 2021/2020
hazardous waste Pagnana plant (228)	t	0.02	0.11	0.35	218.2
non-hazardous waste of Pagnana, Pontedera, Poggibonsi and San Jacopo (229)	t	3,124.5	2,516.8	1,470.5	-41.6

ATMOSPHERIC EMISSIONS – INDUSTRIAL WATER	u.m.	2019	2020	2021	Δ% 2021/2020
CO_2 (230)	t	201.5	204.2	229.6	12.4
Hydrogen Sulphide (231)	t	0.012	0.019	0.014	-27.8
ammonia (232)	t	0.019	0.038	0.011	-71.5

BERG'S WASTE	u.m.	2019	2020	2021	Δ% 2021/2020
hazardous waste (233)	t	2,930.5	1,077.7	613.7	-43.1
non-hazardous waste (234)	t	3,085.3	2,901.1	2,526.9	-12.9

ATMOSPHERIC EMISSIONS – BERG	u.m.	2019	2020	2021	Δ% 2021/2020
CO_2 (235)	t	26.1	20.0	16.0	-20.0
particles (236)	t	0.069	0.121	0.045	-63.0
organic carbon (237)	t	0.149	1.253	0.816	-34.8
hydrogen sulphide and mercaptans (238)	t	0.261	0.001	0.001	-
ammonia (239)	t	0.161	0.037	0.124	238.1

EMISSIONS AND WASTE - **WATER SEGMENT**

The data refers to the Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa water Companies. The figures have been partially reorganised to respond to the new version of the GRI 306 Waste 2020 Standard.

WASTE PRODUCED (*)	u. m.	2019	2020	2021	Δ% 2021/2020
specific process waste from treatment of waste water (**)					
total purification sludge (240) = (241+242+243+244+245)	t	132,190	125,850	152,791	21.4
Acea Ato 2 purification sludge (241)	*t*	*100,298*	*78,934*	*66,416*	*-15.9*
Acea Ato 5 purification sludge (242)	*t*	*11,352*	*9,408*	*13,803*	*46.7*
GORI purification sludge (243)	*t*	*10,586*	*29,246*	*65,635*	*124.4*
Gesesa purification sludge (244)	*t*	*979*	*969*	*699*	*-27.9*
AdF purification sludge (245)	*t*	*8,975*	*7,292*	*6,238*	*-14.5*

total sand and slabs from purification (246) = (247+248+249+250+251)	**t**	**11,126**	**12,907**	**14,178**	**9.9**
Acea Ato 2 sand and slabs (247)	*t*	*7,789*	*9,494*	*8,334*	*-12.2*
Acea Ato 5 sand and slabs (248)	*t*	*87*	*101*	*225*	*122.0*
GORI sand and slabs (249)	*t*	*2,289*	*2,515*	*4,597*	*82.8*
Gesesa sand and slabs (250)	*t*	*39*	*71*	*10*	*-85.7*
AdF sand and slabs (251)	*t*	*921*	*724*	*1,012*	*39.7*
other waste from treatment (252)					
other Acea Ato 2	*t*	*1,386*	*1,137*	*1,886*	*65.9*
other Acea Ato 5	*t*	*5,955*	*6,524*	*5,441*	*-16.6*
other GORI	*t*	*46*	*80*	*148*	*83.9*
other Gesesa	*t*	*0*	*0*	*0*	*-*
other AdF	*t*	*0*	*0*	*0*	*-*
extra process waste					
total hazardous waste (253) = (254+255+256+257+25+259)	**t**	**91.3**	**175.2**	**309.4**	**76.6**
Acea Elabori (254)	*t*	*19.7*	*15.9*	*16.6*	*4.4*
Acea Ato 2 (255)	*t*	*34.3*	*82.9*	*188.8*	*127.7*
Acea Ato 5 (256)	*t*	*2.0*	*0.9*	*0.4*	*-58.1*
GORI (257)	*t*	*16.2*	*33.7*	*51.0*	*51.6*
AdF (258)	*t*	*18.3*	*41.2*	*52.0*	*26.1*
Proportion for the activities performed by the Parent Company (259) (**)	*t*	*0.78*	*0.63*	*0.59*	*-7.3*
total non-hazardous waste (260) = (261+262+263+264+265+266)	**t**	**2,747**	**5,665**	**1,748**	**-69.1**
Acea Ato 2 and Elabori (261)	*t*	*1,022*	*2,363*	*1,059*	*-55.2*
Acea Ato 5 (262)	*t*	*34*	*43*	*26*	*-39.9*
GORI (263)	*t*	*1,227*	*213*	*129*	*-39.2*
Gesesa (264)	*t*	*0*	*0*	*0*	*-*
AdF (265)	*t*	*416*	*3,017*	*499*	*-83.5*
Proportion for the activities performed by the Parent Company (266) (***)	*t*	*48*	*28*	*34*	*19.9*
other emissions and waste					
CO_2 from dryers and generators (267)	**t**	**6,893**	**6,979**	**7,486**	**7.3**
CO_2 from HCFC replenishment (268)	**t**	**0.0**	**0.7**	**0.0**	**-**
noise	**dB**	**monitored** commitment to maintain the value below the legal limit			
Odours		**monitored** commitment to maintain the value below the limit of perception and in the areas adjacent to the treatment plants			

(*) Some of the 2019 and 2020 figures have been updated after the final calculations.
(**) All process waste is non-hazardous apart from 87 t of oil mixtures produced by GORI.
(***) The portion is equal to 50% of the waste produced by the Parent Company.

EMISSIONS OF CARBON DIOXIDE FROM TRANSPORT AND PACKAGING

The figures refer to all the Companies in the NFS reporting scope.

GROUP COMPANIES (*)	u. m.	2019	2020	2021	Δ% 2021/2020
transport					
CO_2 (269)	**t**	**9,550**	**9,705**	**10,533**	**8.5**
heating					
CO_2 (270)	**t**	**940**	**872**	**881**	**1.0**

(*) Some figures for the 2019-2020 two-year period have been adjusted following consolidation and for the inclusion of new companies in the NFS scope.

KEY ENVIRONMENTAL PERFORMANCE INDICATORS (KPI) – ENERGY SEGMENT

Environmental Key Performance Indicators.

INDICATOR	u. m.	2019	2020	2021
energy used for the processes (*)				
A consumption in the distribution of electricity	TJoule (GWh)	1,188.4 (330.1)	1,076.7 (299.1)	1,090.4 (302.9)
B consumption in the production of electricity (145)		233.1 (64.8)	251.5 (69.9)	279.6 (77.7)
C heat lost in the district heating network (23)		106.1 (29.5)	99.8 27.7	86.2 (23.9)
D consumption for Public Lighting (150)		252.3 (70.1)	241.1 (67.0)	242.4 (67.3)
E environment Segment consumption (152+157)		43.2 (12.0)	41.7 (11.6)	35.2 (9.8)
F water distribution (172-174)		1,477.5 (410.4)	1,719.6 (477.7)	1,588.1 (441.1)
G water purification (180)		904.8 (251.3)	902.7 (250.7)	972.5 (270.2)
H electricity for offices (Item 146+174)		41.4 (11.5)	36.9 (10.3)	38.7 (10.8)
I consumption for heating offices		16.2 (4.5)	15.1 (4.2)	15.6 (4.3)
L water area dryer consumption		106.7 (29.6)	113.8 (31.6)	129.7 (36.0)
M layoffs		126.5 (35.1)	128.3 (35.7)	142.6 (39.6)
total consumption = indirect consumption + consumption through mobility + heating		**4,496.2 (1,248.9)**	**4,627.2 (1,285.3)**	**4,621.0 (1,283.6)**
EMISSIONS, EFFLUENTS AND WASTE				
greenhouse-gas emissions (CO_2) (191+222+230+267+268+269+270)	t	357,432	415,356	399,811
emissions of SO_2, NOx and other significant gasses by type				
NOx (196)	t	188.19	190.67	198.11
CO (199)	t	7.02	8.34	7.68
SO_2 (171)	t	0.33	0.90	1.60
NOx /thermoelectric production	g/kWh	0.42	0.44	0.43
CO_2/thermoelectric production	g/kWh	735	884	802
CO_2/Acea Produzione thermoelectric production	g/kWh	537	497	479
CO_2/Acea Produzione total production	g/kWh	89	84	83
CO_2/gross total production	g/kWh	357.8	422.9	368.8
SO_2/thermoelectric production	g/kWh	0.0	0.0	0.0
PRODUCTS AND SERVICES: electricity				
performance of the electrical production process of Acea Produzione				
gross average performance thermoelectric production (calculation 1)	%	40.7	41.9	40.3
Tor di Valle power plant (electrical performance cogeneration only)		41.2	42.4	40.6
Montemartini power plant		24.3	26.1	26.3
gross average thermoelectric production out included thermal energy recovered (calculation 2)		69.6	70.2	70.1
gross average performance hydroelectric production (calculation 3)		79.2	83.5	82.4
gross average performance overall production (calculation 4)		72.5	76.1	75.3
gross average total production performance including thermal energy recovered (calculation 5)		77.5	81.1	80.1

performance of the electrical production process - waste-to-energy plants				
San Vittore del Lazio				
SRF produced/gross energy produced	kt/GWh	1.233	1.185	1.148
gross performance SRF conversion into electricity (calculation 6)	**kWh/kg SRF**	**0.81**	**0.84**	**0.87**
electrical output (calculation 7)	**%**	**19.2**	**19.2**	**20.2**
total waste produced/hours worked	t/h	3.36	3.18	3.28
Terni				
gross performance pulper conversion into electricity (calculation 8)	**kWh/kg pulper waste**	**0.86**	**0.85**	**0.89**
electrical output (calculation 9)	**%**	**11.1**	**10.5**	**11.9**
total waste produced/hours worked	t/h	1.7	1.7	1.7
performance of the electrical production process - photovoltaic energy				
average efficiency photovoltaic modules	**%**	**14.0**	**14.0**	**14.0**
other indicators (territory, public lighting, controls, losses)				
protection of the territory (total length of HV cable lines/(length of overhead HV lines + cable lines) x 100	**%**	**46.3**	**46.3**	**47.0**
public lighting illumination efficiency (36)/(150)	**Lumen/kWh**	**28.6**	**30.0**	**30.0**
average performance of installed lamps (36)/ (electrical power)	**Lumen/W**	**127.9** (15,653 kW)	**127.9** (15,716 kW)	**127.8** (15,809 kW)
specific consumption per lamp (150)/(No. lamps)	**kWh/ No. lamps**	**310.46** (225,730)	**295.46** (226,635)	**295.77** (227,635)
percentage of roads illuminated (**)	**% (km of roads illuminated/ total km of roads)**	**88.8** (6,316/7,110)	**89.1** (6,338/7,110)	**89.6** (6,368/7,110)
no. operating and laboratory checks /GWh net electricity sold (37)/(32)	**No./GWh**	**0.17**	**0.26**	**0.25**
reintegrations of SF6/km electricity distribution network	**kg/km**	**0.0128**	**0.0118**	**0.0094**
total loss of electrical energy (28)/(27) (***)	**% energy requested**	**7.0**	**5.8**	**6.0**

(*) The figures for the 2019-2020 two-year period have been updated to include the new companies in the 2021 NFS scope.

(**) Estimate.

(***) The total losses of electricity include: transformation losses, transport losses and commercial losses, these last due to fraud and incorrect readings.

KEY ENVIRONMENTAL PERFORMANCE INDICATORS (KPI) – WATER SEGMENT

Environmental Key Performance Indicators.

INDICATOR (*)	u. m.	2019	2020	2021
carbon footprint				
WATER SERVICE				
total CO_2/m^3 of water supplied (integrated water services) (**)	**$kgCO_2/m^3$**	**0.50**	**0.51**	**0.46**
CO_2/m^3 of water supplied (water distribution process)	**$kgCO_2/m^3$**	**0.31**	**0.33**	**0.29**
CO_2/m^3 of water treated (purification process)	**$kgCO_2/m^3$**	**0.13**	**0.12**	**0.11**
PRODUCT: DRINKING WATER				
Acea Ato 2 network				
specific electricity consumption per input in the water network (energy consumption of the Acea Ato 2 network)/(69)	**kWh/m^3**	**0.259**	**0.275**	**0.262**
intensity of the checks on drinking water distributed (119)/(70)	**$No./Mm^3$**	**956**	**918**	**861**
drinking water additive index (169 – Acea Ato 2 network)/(70)	**g/m^3**	**7.1**	**7.2**	**8.9**

Acea Ato 5 network				
specific electricity consumption per input in the water network (energy consumption of the Acea Ato 5 network)/(73)	kWh/m³	0.492	0.514	0.491
intensity of the checks on drinking water distributed (121)/(78)	No./Mm³	4,259	3,068	2,721
drinking water additive index (169 – Acea Ato 5 network)/(78)	g/m³	9.7	7.4	7.1
GORI network				
specific electricity consumption per input in the water network (energy consumption of GORI network)/(91)	kWh/m³	0.664	1.001	0.955
intensity of the checks on drinking water distributed (125)/(92)	No./Mm³	1,232	1,613	1,534
drinking water additive index (169 – GORI network)/(92)	g/m³	2.3	2.2	2.5
Gesesa network				
specific electricity consumption per input in the water network (energy consumption of Gesesa network)/(84)	kWh/m³	0.559	0.534	0.476
intensity of the checks on drinking water distributed (123)/(85)	No./Mm³	1,110	1,213	1,462
drinking water additive index (169 Gesesa network)/(85)	g/m³	8.3	7.3	4.4
AdF network				
specific electricity consumption per input in the water network (energy consumption of AdF network)/(98)	kWh/m³	0.547	0.485	0.476
intensity of the checks on drinking water distributed (127)/(99)	No./Mm³	3,797	3,975	3,736
drinking water additive index (169 – AdF network)/(98)	g/m³	10.2	9.0	11.7
SERVICE: WASTE WATER TREATMENT				
Acea Ato 2				
disposed of sludge (241)	t	100,298	78,934	66,416
sand and slabs removed (247)	t	7,789	9,494	8,334
COD input	t	207,914	173,392	143,568
COD removed	t	188,327	159,487	127,527
efficiency of COD removal	%	91	92	89
SST input	t	134,685	100,637	91,904
SST removed	t	124,417	93,172	84,461
efficiency of SST removal	%	92	93	92
efficiency of BOD removal	%	88	90	90
total N input (like NH4+NO2+NO3+ organic)	t	18,433	17,993	15,611
total N removed	t	14,333	13,925	11,649
efficiency of N removal	%	78	77	75
Acea Ato 2 waste water additivation index	g/m³	12.0	15.4	17.4
Acea Ato 2 specific consumption of electricity by purification process	kWh/m³	0.299	0.282	0.281
Acea Ato 5				
disposed of sludge (242)	t	11,352	9,408	13,803
sand and slabs removed (248)	t	87	101	225
COD input	t	13,506	19,341	11,382
COD removed	t	12,407	18,182	10,457
efficiency of COD removal	%	92	89	92
total N input	t	1,136	1,219	922
total N removed	t	757	827	610
efficiency of N removal ($NH4^+$)	%	67	69	66
SST input	t	8,364	10,349	6,167
SST removed	t	7,940	9,993	5,854
efficiency of SST removal	%	95	96	95
Acea Ato 5 additivation index	g/m³	33.2	33.6	28.8
Acea Ato 5 specific consumption of electricity by purification process	kWh/m³	0.830	0.755	0.682

GORI				
disposed of sludge (243)	t	10,586	29,246	65,635
sand and slabs removed (249)	t	2,289	2,515	4,597
COD input	t	7,579	25,650	44,206
COD removed	t	6,376	24,245	42,314
efficiency of COD removal	%	84	95	96
total N input	t	944	3,310	4,519
total N removed	t	714	3,159	4,303
efficiency of N removal (NH_4^+)	%	76%	95%	95%
SST input	t	3,438	6,967	17,118
SST removed	t	2,777	5,932	14,717
efficiency of SST removal	%	81	85	86
GORI additivation index	g/m³	54.6	36.9	34.7
GORI specific consumption of electricity by purification process	kWh/m³	0.634	0.584	0.464
Gesesa (***)				
disposed of sludge (244)	t	979.0	969.5	698.6
sand and slabs removed (250)	t	39.3	71.3	10.2
COD input	t	n/a	349	366
COD removed	t	n/a	307	341
efficiency of COD removal	%	n/a	88.1	93.3
total N input	t	n/a	30	13
total N removed	t	n/a	15	9
efficiency of N removal (NH_4^+)	%	n/a	48.2	71.9
SST input	t	n/a	76	28
SST removed	t	n/a	44	22
efficiency of SST removal	%	n/a	57.1	77.7
Gesesa additive index	g/m³	n/a	42.3	47.3
Gesesa specific consumption of electricity by purification process	kWh/m³	n/a	0.849	0.958
AdF				
disposed of sludge (245)	t	8,975	7,292	6,238
sand and slabs removed (251)	t	921	724	1,012
COD input	t	8,120	9,172	7,377
COD removed	t	7,516	8,587	6,792
efficiency of COD removal	%	92.6	93.6	92.1
total N input	t	852	866	889
total N removed	t	574	562	628
efficiency of N removal (NH_4^+)	%	81.1	79.7	81.7
SST input	t	2,656	4,008	3,303
SST removed	t	2,512	3,872	3,107
efficiency of SST removal	%	94.6	96.6	94.1
AdF additive index	g/m³	65.9	74.0	75.7
AdF specific consumption of electricity by purification process	kWh/m³	0.929	1.018	0.950

(*) Some figures for the 2019-2020 two-year period have been adjusted following consolidation.

(**) These are emissions defined as "Scope 2", in other words resulting from the consumption of electricity by the water Companies in question.

(***) Water purification efficiency data is estimated. Water purification indicators are available from 2020, when the company installed the first waste water flow meters at the main treatment plants.

KEY ENVIRONMENTAL PERFORMANCE INDICATORS (KPI) – ENVIRONMENT SEGMENT

Environmental Key Performance Indicators.

INDICATOR (*)	u. m.	2019	2020	2021
non-hazardous waste disposed in landfill/total incoming waste (40+41) / (38)	t/t	0.57	0.64	0.67
waste disposed of in landfill/energy consumed net of photovoltaic energy (40+41)/(152)	t/MWh	12.00	15.39	16.19
compost produced/incoming waste (43+ 49) / (38 + 45)	t/t	0.10	0.08	0.11
compost produced/consumed electrical energy (43+49)/(152+157)	kg/kWh	1.68	2.19	4.12
consumed electrical energy/incoming liquid waste in the Bio Ecologia plant	kg/kWh	0.02	0.02	0.01
consumed electrical energy/incoming waste in the Pagnana plant (163 – Pagnana's share)/(56+57+58+59 - Pagnana)	kWh/kg	0.004	0.004	0.005
consumed electrical energy/incoming waste in the Pontedera plant (163 - Pontedera's share)/ (56+57+58+59 - Pontedera)	kWh/kg	0.004	0.011	0.012
consumed electrical energy/incoming waste in the Poggibonsi plant (163 - Poggibonsi's share)/ (56+57+58+59 - Poggibonsi)	kWh/kg	0.003	0.003	0.009
consumed electrical energy/incoming waste in the Berg plant (163 Berg's share)/(62)	kWh/kg	0.009	0.009	0.009
chemicals consumed/incoming waste in the Bio Ecologia plant (162 – Bio Ecologia portion)/(52)	kg/t	5.57	6.26	3.71
chemicals used/incoming waste at the Pagnana plant (162 - Pagnana's share)/ (56+57+58+59 - Pagnana)	kg/t	7.59	5.13	7.04
chemicals used/incoming waste at the Pontedera plant (162 - Pontedera's share)/ (56+57+58+59 - Pagnana)	kg/t	11.65	15.33	11.19
chemicals used/incoming waste at the Poggibonsi plant (162 - Poggibonsi's share)/(56+57+58+59 - Poggibonsi)	kg/t	7.04	8.11	14.11
chemicals used/incoming waste at the Berg plant (162 - Berg's share)/(62)	kg/t	6.99	9.00	7.38

(*) Some figures for the 2019-2020 two-year period have been adjusted following consolidation.

ENVIRONMENTAL COMPLIANCE

INDICATOR	u. m.	2019	2020	2021
COMPLIANCE – MAIN GROUP COMPANIES				
penalties paid for non-conformities related to rules/agreements of an environmental nature	€	139,964	151,620	314,649
COMPLIANCE WITH COMPANY IN NFS SCOPE				
penalties paid for non-conformities related to rules/agreements of an environmental nature	€	121,150	49,523	249,562

DESCRIPTION OF THE CALCULATIONS USED TO DETERMINE THE ELECTRICAL GENERATION EFFICIENCY

CALCULATION 1

$$\text{Efficiency}_{thermoelectric} = \frac{\text{Energy}_{thermoelectric}\ (\text{kWh})}{\text{Energy}_{diesel}\ (\text{kWh}) + \text{Energy}_{methane}\ (\text{kWh})}$$

where:
$\text{Energy}_{thermoelectric}$ = gross electricity produced with the thermoelectric cycle

$$\text{Energy}_{diesel}\ (\text{kWh}) = \frac{\text{diesel (l)} \times 0.835 \times \text{LHV}_d \left(\frac{\text{kcal}}{\text{kg}}\right)}{860 \left(\frac{\text{kcal}}{\text{kWh}}\right)}$$

$$\text{Energy}_{methane}\ (\text{kWh}) = \frac{\text{methane (Nm}^3\text{)} \times \text{LHVm} \left(\frac{\text{kcal}}{\text{Nm}^3}\right)}{860 \left(\frac{\text{kcal}}{\text{kWh}}\right)}$$

LHV_g = about 10,000 kcal/kg (Lower Heating Value of diesel fuel)
LHV_m about 8,500 kcal/Nm^3 (Lower Heating Value of methane)
860 = energy conversion factor from kcal to kWh
0.835 = specific gravity of diesel fuel (kg/l)

NOTE: The calorific values used for Acea Production are the real values derived from measurements made by gas and diesel suppliers.

CALCULATION 2

$$\text{Efficiency (thermoelectric)} = \frac{\text{Energy}_{thermoelectric}\ (\text{kWh}) + \text{Energy}_{thermal}\ (\text{kWh})}{\text{Energy}_{diesel}\ (\text{kWh}) + \text{Energy}_{methane}\ (\text{kWh})}$$

$\text{Energy}_{thermal}$ = Gross thermal energy produced
$\text{Energy}_{thermoelectric}$ = = Gross thermoelectric energy produced

$$\text{Energy}_{diesel}\ (\text{kWh}) = \frac{\text{diesel (l)} \times 0.835 \times \text{LHV}_d \left(\frac{\text{kcal}}{\text{kg}}\right)}{860 \left(\frac{\text{kcal}}{\text{kWh}}\right)}$$

$$\text{Energy}_{methane}\ (\text{kWh}) = \frac{\text{methane (Nm}^3\text{)} \times \text{LHVm} \left(\frac{\text{kcal}}{\text{Nm}^3}\right)}{860 \left(\frac{\text{kcal}}{\text{kWh}}\right)}$$

LHV_g = Lower Heating Value of diesel fuel
LHV_m = Lower Heating Value of methane
860 = energy conversion factor from kcal to kWh
0.835 = specific gravity of diesel fuel (kg/l)

NOTE: The calorific values used for Acea Production are the real values derived from measurements made by gas and diesel suppliers.

CALCULATION 3

$$\text{Efficiency (hydroelectric)} = \frac{(\text{Hydroelectric Energy (MWh)} \times 3.6\text{x}10^{9}}{[\text{m (kg)} \times 9.8\ (\frac{\text{m}}{\text{s}^2}) \times \text{h (m)}]\ \text{(Joule)}}$$

where:
$3.6\ \text{x}10^{9}$ = conversion factor of hydropower from joules to MWh
m = derived water for hydroelectric production
9.8 = acceleration of gravity at sea level
h = height of water fall (exposed surface - turbine)
$\text{Energy}_{hydroelectric}$ = energy produced in the hydroelectric cycle

CALCULATION 4

$$\text{Efficiency (average)} = \frac{E_i}{(E_i+E_T)} \times \eta_i + \frac{E_T}{(E_i+E_T)} \times \eta_T$$

where:
E_i = total amount of hydroelectric energy produced
E_T = total amount of thermoelectric energy produced
η_i = hydroelectric efficiency
η_T = thermoelectric efficiency
efficiency (average) = average production efficiency

CALCULATION 5

$$\text{Efficiency (average)} = \frac{E_i}{(E_i+E_T)} \times \eta_i + \frac{E_T}{(E_i+E_T)} \times \eta_T$$

where:
E_i = total amount of hydroelectric energy produced
E_T = total amount of energy (thermoelectric and thermal) produced
η_i = hydroelectric efficiency
η_T = efficiency (thermoelectric + thermal)
efficiency (average) = average production efficiency

CALCULATION 6

$$\text{Recovery efficiency } (\frac{\text{kWh}}{\text{kg}}) = \frac{\text{Gross electricity produced (kWh)}}{\text{SRF (kg)}}$$

Gross electricity produced (kWh) = gross electricity produced in San Vittore

CALCULATION 7

$$\text{Electrical efficiency} = \frac{\text{Gross electricity produced (kWh)}}{\text{Internal SRF energy (kWh)} + \text{Internal methane energy (kWh)}}$$

where:

Electrical energy produced = electrical energy produced in San Vittore del Lazio

$$\text{Internal methane energy} = \frac{CH_4\ (Sm^3) \times PCI_m\ (\frac{kcal}{Sm^3})}{860\ (\frac{kcal}{kWh})}$$

LHV_m = average Lower Heating Value of methane

860 = energy conversion factor from kcal to kWh

$$\text{Internal SRF energy (kWh)} = \frac{SRF\ (kg) \times LHV_{SRF}\ (\frac{kcal}{kg})}{860\ (\frac{kcal}{kWh})}$$

LHV_{SRF} = average Lower Heating Value of the SRF

860 = energy conversion factor from kcal to kWh

CALCULATION 8

$$\text{Recovery efficiency}\ (\frac{kWh}{kg}) = \frac{\text{Gross electricity produced (kWh)}}{\text{paper mill pulp}}$$

Gross electricity (kWh) = electricity produced in Terni

CALCULATION 9

$$\text{Efficiency} = \frac{\text{Gross electricity produced (kWh)}}{\text{Internal paper mill pulp energy (kWh)+internal methane energy (kWh)}}$$

where:

Electricity produced = Electricity produced in Terni = (figure 16)

$$\text{Internal methane energy (kWh)} = \frac{CH_4\ (Sm^3) \times PCI_m\ (\frac{kcal}{Sm^3})}{860\ (\frac{kcal}{kWh})}$$

LHV_m = LHV methane = average Lower Heating Value of methane

860 = energy conversion factor from kcal to kWh

$$\text{Internal paper mill pulp energy (kWh)} = \frac{\text{Paper mill pulp} \times LHV_p\ (\frac{kcal}{kg})}{860\ (\frac{kcal}{kWh})}$$

LHV_p = LHV paper mill pulp - average Lower Heating Value of paper mill pulp

860 = energy conversion factor from kcal to kWh

EXPLANATORY NOTES TO THE ENVIRONMENTAL ACCOUNTS

The numerical data presented in the *Environmental Accounts* is produced and certified by the competent Functions and has been checked as follows:

1. comparison with historical data to highlight and justify possible large deviations;
2. at least two repetitions of the acquisition process;
3. feedback to the Departments responsible for the final validation of the data.

The numerical data have been divided into the three categories:

- estimated;
- calculated;
- measured.

In the event of data resulting from estimates, the utmost attention was paid to the verification of the reasonableness of the basic criteria used, with the objective of resorting as little as possible, in the future, to this type of measurement of the sizes of environmental significance.

When data was achieved through calculation, the algorithm used was briefly explained to permit full understanding of the mathematical result.

Lastly, when the data was measured, an uncertainty estimate to be associated with the number was provided.

ADDITIONAL INFORMATION ON THE NUMERICAL DATA PROVIDED IN THE ENVIRONMENTAL ACCOUNTS

PRODUCTS – ENERGY SEGMENT

item no.	explanation – comment
1	Gross total energy produced by Acea Ambiente and Acea Produzione. The figure is calculated.
2	Electricity produced net of the losses due to just the production phase. The figure is calculated.
3=4+5	Total electricity produced, inclusive of the losses, by the Acea Produzione power plants. Includes thermoelectric and hydroelectric energy. The figure is measured with an uncertainty of less than ± 0.5%.
6=7+8+9	Losses of electricity attributable to just the production phase of the Acea Produzione power plants. Includes: the self-consumption (thermal and hydro) and the losses of initial transformation. The figure is measured with an uncertainty of less than ± 0.5%.
10	Electricity produced by the Acea Produzione power plants net of the losses. The figure is calculated.
11	Gross energy produced by photovoltaic installations. The figure is measured with an uncertainty of less than ± 0.5%.
12	Total losses during photovoltaic generating phase, due in particular to joule effect (dissipation during heating) in the equipment. Estimated figure.
13	Net photovoltaic electricity made available by the generating installations. The figure is calculated.
14=15+16	Electricity produced by the Waste-to-Energy installations: waste-to-energy of San Vittore del Lazio and waste-to-energy of Terni of Acea Ambiente. We wish to specify that the fuel used in the two installations (SRF – solid recovered fuel – for San Vittore del Lazio and paper mill pulp for the Terni plant) is composed of both biodegradable organic material, neutral on the balance of the CO_2, and by non-biodegradable organic substance (plastic, resins, etc.). In 2021, the renewable share for the San Vittore del Lazio plant was equal to 43.0%, the Terni incinerator share to 43.4%.
17	Self-consumption of the two waste-to-energy plants of San Vittore del Lazio and Terni + initial transformation losses. The figure is measured with an uncertainty of less than ± 0.5%.
18	Electricity produced by the two waste-to-energy plants of San Vittore del Lazio and Terni, net of the self-consumption and initial transformation losses. The figure is calculated.
19	Electrical energy produced from biogas by the waste management plant in Orvieto and, from 2020, the two composting plants of Aprilia and Monterotondo Marittimo (Acea Ambiente). The figure is calculated.
20	Self-consumption of biogas production plants, including small dissipations. The figure is measured with an uncertainty of less than ± 5%.
21	Net electricity produced from biogas and transferred to the network. The figure is measured with an uncertainty of less than ± 5%.
22	Thermal energy produced in the cogeneration plant of Tor di Valle including losses. The figure is measured with an uncertainty of ± 2%, near the delivery piping of the generators.
23	Losses of thermal energy of the district heating systems, due to: thermal dissipation, losses on the network, technical releases for maintenance operations, thermal reintegrations of the heat accumulation systems. The figure is calculated as the difference between the thermal energy produced and that actually supplied to the clients (invoiced).
24	Net thermal energy supplied to final clients. The figure, calculated, is obtained from the consumption invoiced.
25	Electricity supplied to Acea Produzione to Acea Energy with inter-Group exchange. The figure is marginal as a result of the choice made by the Acea Group to sell the electricity produced in Borsa (Stock Exchange) or through bilateral agreements.

26	Electricity supplied by the Single Purchaser and Market, including the amount imported subject to recalculation in relation to the ARERA DCO 492/2019/R/eel. The figure is measured with an uncertainty of ± 0.5%.
27	Energy requested on the electrical distribution network of Rome and Formello by all the client connected (open market + managed service). The figure is estimated.
28	Losses of electricity that occur during the distribution and transmission phase. They are attributable to: losses of transformation and transport, fraud and incorrect measurements. The figure is estimated.
29	Personal use of electricity for the implementation of the distribution activities. The figure is estimated.
30	This is electricity sold to distribution companies. The increase is a consequence of two new closed distribution systems powered by Areti from July 2019. The figure is measured with an uncertainty of ± 0.5%.
31	Total net electricity conveyed to final clients of the open market connected to the electrical distribution network of Rome and Formello. Includes both the quota of electricity sold by Acea Energia, and that sold by other operators active on the open market. The figure is measured with an uncertainty of ± 5% according to Standard CEI 13-4.
32	Net electricity transferred to managed final clients. The decrease is the result of the progressive passage of managed service clients to the open market. In other words, it is a direct consequence of the deregulation process of the electricity market in effect in Italy since 1999 (Italian Legislative Decree no. 79/99). The figure is estimated based on the consumption invoiced.
33	Net electricity sold by Acea ENERGIA on the open market nationally. The figure is estimated.
34	Net electricity sold by Acea nationally on the open market and the standard service. The figure is calculated.
35	Natural gas sold by Acea on the national market. The figure is calculated.
36	Luminous flux supplied by the Public Lighting system in Rome. The figure, calculated, is the product of the number of lamps installed and the relative value of "rated" luminous flux.
37	Total number of measurements/controls performed in favour of the energy segment, in particular, of Acea Produzione and Areti. The figure is calculated as the sum of the individual determinations carried out by the competent laboratories.

PRODUCTS – ENVIRONMENT SEGMENT

item no.	explanation – comment
38	Total incoming waste. They are the quantities arriving at the Orvieto plant which include: unsorted municipal solid waste, organic fraction, green, non-hazardous industrial waste. The figure is calculated.
39	Waste partly sent for shredding only, partly just for aerobic treatment, partly both to the anaerobic digester and the aerobic treatment. The figure is calculated.
40	Waste disposed directly in landfill. The figure is measured with an uncertainty of ± 1%.
41	Waste disposed of in landfill after treatment. The figure is measured with an uncertainty of ± 1%.
42	Waste recovered and not sent to landfill. It is glass, paper and cardboard, iron and plastic. The figure is calculated.
43	Compost produced at the Orvieto plant. Thanks to the combination of the anaerobic and aerobic processes, the product is Quality Compost. The figure is measured with an uncertainty of ± 1%.
44	Reduction due to stabilisation. This represents the loss of mass due to the natural transformations of the material and the loss of water through evaporation. The figure is calculated.
45	Total incoming organic waste. They are the amounts arriving at the plants of Aprilia, Monterotondo Marittimo and Sabaudia, which include: sludge, green and organic fraction. The Monterotondo Marittimo plant, which had suspended deliveries in 2018, was restarted in 2019 after work on the construction of a new anaerobic digestion section, the Aprilia plant, placed under preventive seizure in 2017 by the Latina Public Prosecutor's Office for aspects related to odorous emissions, thanks to the activities taken and, in particular, to the complete closure of the biofilters and creation of the 3 chimneys for atmospheric emissions, was released on 18 March 2021.
46	Incoming sludge. It is the quantity of sludge entering the composting plants of Aprilia, Monterotondo Marittimo and Sabaudia. The trend of increasing amounts depends on the resumption, after revamping, of the contributions at the Monterotondo Marittimo plant. The figure is measured with an uncertainty of ± 1%.
47	Incoming green. It is the quantity of green matter coming from the parks, woods or other areas arriving at the plants of Aprilia, Monterotondo Marittimo and Sabaudia. The figure is measured with an uncertainty of ± 1%.
48	Organic fraction of municipal solid waste (OFMSW) entering the composting plant of Aprilia and OFMSW and other agrifood waste arriving at the Monterotondo Marittimo plant. The figure is calculated.
49	Quality Compost. It is the quantity of quality compost produced at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The compost estimate is made based on the quantities transported daily for maturation or to the final storage areas. Due to process losses, at the time of sale the compost may be less than estimated. Compost at Sabaudia is zero because the plant is at a standstill awaiting authorisation for revamping.

50	Non-compostable material for disposal. It is the non-biodegradable material (for example plastics) which is separated from the compostable material sent for disposal. The figure is measured with an uncertainty of ± 1%.
51	Reduction due to stabilisation. This represents the loss of mass due to the natural transformations of the material and the loss of water through evaporation. The figure is calculated.
52	Liquid waste. Represents the quantity of liquid waste coming into the Bio Ecologia plant. The figure is measured with an uncertainty of ± 1%.
53	Total waste water treated in the Bio Ecologia treatment plant. The figure is measured with an uncertainty of ± 1%.
54	Total analytical determinations. They represent the total of analytical determinations made at the following plants: Orvieto, Aprilia, Monterotondo Marittimo and Sabaudia. The figure is calculated.
55	Total incoming waste. These are the amounts arriving at Acque Industriali's plants at Pagnana, Pontedera, Poggibonsi and San Jacopo. The figure is calculated.
56	Incoming sludge. Represents the quantity of incoming sludge at Acque Industriali's plants at Pagnana, Pontedera, Poggibonsi and San Jacopo. The figure is measured with an uncertainty of ± 1%.
57	Liquid waste. Represents the quantity of liquid waste coming into the Pagnana and Pontedera plants. The figure is calculated.
58	Sewage and other waste. Represents the quantity of sewage and other non-hazardous waste. The figure is calculated.
59	Leachate Represents the quantity of leachate coming into the Pagnana and Pontedera plants. The figure is measured with an uncertainty of ± 1%.
60	Ammonium Sulphate produced. Represents the quantity of quality of Ammonium Sulphate produced at the Pagnana and Pontedera plants. The figure is estimated.
61	Water treated before discharging at the Pontedera, Pagnana, Poggibonsi and San Jacopo plants. Some of these also include water that is consumed for industrial and/or civil use inasmuch as distinct flow meters before discharge are not always present. At San Jacopo, the water that is produced is input into the biological treatment plant of Acque SpA.
62	Total incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.
63	Solid incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.
64	Liquid incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.

PRODUCTS – WATER SEGMENT

item no.	explanation – comment
65	Total drinking water collected from the environment or from other systems and fed into the aqueduct systems. This is the total amount of water collected from the following Group Companies: Acea Ato 2, Acea Ato 5, Gesesa, GORI, AdF, Acque, Publiacqua, Umbra Acque. The figure is calculated.
66	Total drinking water supplied and invoiced to the respective clients by the Companies listed under line number 60. The figure is estimated.
67	Total drinking water collected from the environment or from other systems and fed into the aqueduct systems. This is the sum of the water taken from the Companies Acea Ato 2, Acea Ato 5, GORI, Gesesa, AdF. The figure is calculated.
68	Total drinking water supplied and invoiced to the respective clients by the Companies listed under line number 62. The figure is estimated.
69	Total drinking water collected from the environment or other systems by Acea Ato 2 and released into the aqueduct system of the "Ambito Territoriale Ottimale 2" of Lazio Centrale. The figure is measured with an uncertainty of ± 3%.
70	Total amount of drinking water leaving the Acea Ato 2 aqueduct system. This is the sum of drinking water supplied and billed, drinking water authorised and not billed, water exported to other systems and measured drinking water losses. The figure is calculated.
71	Total drinking water supplied and billed (in other words measured at the meters, where present) to the customers connected to the Acea Ato 2 network.
72	Total drinking water authorised and not billed in the Acea Ato 2 network. The figure is estimated.
73	Total amount of drinking water exported to other aqueduct systems by Acea Ato 2. The 2020 figure is estimated and may undergo consolidation after publication.
74	Total Acea Ato 2 drinking water losses. The figure is measured with an uncertainty of ± 3%
75	Water losses - Acea Ato 2 network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
76	Acea Ato 2 water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
77, 78, 79, 80, 81	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by Acea Ato 5.

82	Water losses - Acea Ato 5 network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
83	Acea Ato 5 water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
84, 85, 86, 87, 88	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by Gesesa.
89	Water leaks - Gesesa network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
90	Gesesa water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
91, 92, 93, 94, 95	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by GORI.
96	Water leaks - GORI network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
97	GORI water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
98, 99, 100, 101, 102	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by AdF.
103	Total AdF drinking water losses. The figure is measured with an uncertainty of ± 3%
104	Water losses - Acea AdF network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
105	AdF water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
106	Total treated waste water in the main treatment plants of the following water Companies of the Group: Acea Ato 2, Acea Ato 5, Gesesa, GORI, AdF, Umbra Acque, Publiacqua, Acque. The figure is calculated.
107	Total amount of waste water treated in the main treatment plants of the water companies in the NFS scope: Acea Ato 2, Acea Ato 5, GORI AdF and Gesesa.
108	Total waste water sent to the principal treatment plants of Acea Ato 2 and treated. The total figure is calculated.
109	Total waste water send to the treatment plants and treated by Acea Ato 2, including the quantities treated in the small plants of the municipalities of Rome and in those outside the municipalities of Rome. The total figure is calculated.
110	Total waste water sent to the main treatment plants and treated by Acea Ato 5. The figure is calculated.
111	Total amount of waste water sent to the main treatment plants of GORI and treated. The substantial increase in the quantities treated in the last few years is linked to the management transfer of several treatment plants from the Campania region. In particular, two large treatment plants were transferred in 2021. The total figure is calculated.
112	Total amount of waste water sent to the main treatment plants and treated by AdF. For 2019, this is water treated in treatment plants for a PE >20,000; for 2020-2021 it is the water treated in treatment plants for a PE > 10,000. The figure is calculated.
113	Total amount of waste water used in treatment plants and treated by AdF, including the quantities treated in minor plants.
114	Estimated amount of waste water, for the first time in 2020, used and treated in the main treatment plants of Gesesa and treated. The estimate is based on the value of invoicing in 2020; in 2020 the first flow meters were installed.
115	Number of analytical determinations conducted overall on the drinking water by the main Companies of the Acea Group. The figure is calculated.
116	Number of analytical determinations conducted overall on the waste water by the main Companies of the Acea Group. The figure is calculated.
117	Number of analytical determinations conducted overall on the drinking water by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa.
118	Number of analytical determinations conducted overall on the waste water by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa.
119	Number of analytical determinations conducted overall on the drinking water by Acea Ato 2.
120	Number of analytical determinations conducted overall on the waste water by Acea Ato 2.
121	Number of analytical determinations conducted overall on the drinking water by Acea Ato 5.

122	Number of analytical determinations conducted overall on the waste water by Acea Ato 5.
123	Number of analytical determinations conducted overall on the drinking water by Gesesa.
124	Number of analytical determinations conducted overall on the waste water by Gesesa.
125	Number of analytical determinations conducted overall on the drinking water by GORI.
126	Number of analytical determinations conducted overall on the waste water by GORI.
127	Number of analytical determinations conducted overall on drinking water by Gesesa.
128	Number of analytical determinations conducted overall on waste water by Gesesa.

RESOURCES USED – ENERGY SEGMENT

item no.	explanation – comment
129 = 130 + 131	Total quantity of natural gas used to generate the electricity and heat at the Acea Produzione plants and at the waste-to-energy plants of Acea Ambiente. The figures expressed in normal cubic metres (volume at 0°C and 1 Atm), is measured with an uncertainty of ± 0.5%. Estimated figure.
130	Total quantity of natural gas used in the Tor di Valle power plant.
131	Total quantity of natural gas used by waste-to-energy plants. The figure is measured with an uncertainty of about 2%.
132	Total quantity of diesel used to generate electricity at the Montemartini power plant (turbogas) and for operations at the waste-to-energy plants of Terni and, for a small part, of San Vittore del Lazio. The consumption of the Montemartini power plant is significant during those years when the power plant produces more electricity in order to fulfil the normal scheduled periodic tests, and to conduct extraordinary maintenance. The figure is measured with an uncertainty of ± 2%.
133	Quantity of RDF (Refuse-Derived Fuel) sent for waste-to-energy processing in the San Vittore del Lazio plant. The figure is measured with an uncertainty of ± 1%.
134	Quantity of paper mill pulp sent to waste-to-energy in the Terni plant. The figure is measured with an uncertainty of ± 1%.
135	Amount of biogas produced for the purpose of producing electrical energy. A minimal part is not used and burned in a flame. The figure is measured with an uncertainty of ± 1%.
136	Total water derived from surface resources and aqueducts (as in the case of the hydroelectric power plant of Salisano) for the production of hydroelectric energy. The figure is calculated.
137	Total quantity of water used in the industrial processes. The various contributions are due to: reintegration for losses in the district heating network; various uses in the waste-to-energy plants of San Vittore del Lazio and Terni (of water from aqueducts, wells and recovery of first and second rain recovery). The figure is calculated as the sum of the various contributions.
138	Quantity of aqueduct water used by the Companies included in the energy segment, for civilian/sanitary uses. It is consumption of Acea Produzione and Areti of the waste-to-energy plants and 50% of the consumption of the Holding Company. The figure, calculated, refers to the consumption invoiced.
139	It represents the total quantity of dielectric mineral oil present in the primary and secondary substations. The figure also includes the amount of oil present in the Petersen coils installed in certain primary substations. The data related to the reintegrations is estimated. The total quantity of new dielectric mineral oil released into the production circuit (transformers, capacitors, storage deposits etc.) includes both the Areti and the Acea Produzione data. The figure is estimated.
140	It represents the total quantity of gaseous insulation (SF_6) in the Areti plants. The figure is estimated. The figure referred to the reintegrations, also estimated, represents the total quantity of SF_6 released ex-novo into the production circuit during the year.
141	It represents the total quantity of cooling fluids in operation. The reintegrations represent the quantity of cooling fluids used for the maintenance of the air-conditioning equipment, during which the gas in operation is recovered and replaced with the new one. The data refer to the previous year compared to the year as they are based on ISPRA annual statements following the publication of the *Sustainability Report*. Both figures are calculated by attributing all the gas supplied overall by the Parent Company to the energy segment and the water segment in equal parts (50%).
142	Total chemical substances used in the electrical and thermal generating process in the Acea Produzione power plants and the waste-to-energy plants of Acea Ambiente. The figure is calculated.
143	Quantity of lubricating oils and fats used by Acea Produzione. The figure is measured with an uncertainty of ± 0.5%.
144	The figure matches Item 28.
145	Matches the difference between Items 1 and 2.
146	Electricity consumed by the processes not directly connected to the production phase (offices). The figure is calculated at 50% of the electricity consumed overall by the parent company. The remaining 50% is attributed as consumption to the water area.
147	Consumption of electricity at other sites and plants, including the consumption of the waste-to-energy plants (Terni and San Vittore del Lazio). The figure is estimated.

148	Other uses of the electricity in the energy segment. The figure is calculated.
149	Total electricity consumer by the product systems included in the energy area. The figure is calculated.
150	Total electricity consumed for public lighting in the municipality of Rome. The figure is calculated based on the consistencies of the installations in operation during the year.

RESOURCES USED – ENVIRONMENT SEGMENT

item no.	explanation – comment
Orvieto plant	
151	Total chemical substances used at the Orvieto plant. The figure is calculated.
152	Electricity consumed in the Orvieto plant. The figure is measured with an uncertainty of ± 1%.
153	Total quantity of diesel consumed at the Orvieto plant. The figure is measured with an uncertainty of ± 2%.
154	Quantity of water consumed at the Orvieto plant. It is specified that this resource comes partly from roofs (rainwater) and partly from the riverbed (river water). The figure is estimated.
155	Quantity of water used for civilian purposes in the plant region of Orvieto. It is supplied by tanker trucks since the plant is not connected to the aqueduct. The figure is estimated.
Compost production	
156	Total chemical substances used at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The figure is calculated.
157	Electricity consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The figure is measured with an uncertainty of ± 1%.
158	Total quantity of diesel fuel consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The figure is measured with an uncertainty of ± 2%.
159	Quantity of biogas produced at the new Aprilia and Monterotondo plants. The final objective is to produce electricity. From 2020 production at Monterotondo and Aprilia has practically reached capacity. The figure is measured with an uncertainty of ± 1%.
160	Quantity of water consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The quantities of water recycled are included. The figure is estimated.
161	Quantity of water used for civil purposes in the composting plants of Aprilia, Monterotondo Marittimo and Sabaudia. The value is partially estimated.
Liquid waste disposal and industrial water treatment at Berg and the Bio Ecologia plant	
162	Total chemical substances used at Acque Industriali's plants in Pagnana, Pontedera and Poggibonsi, and at Berg and the Bio Ecologia plant. Any fluctuations that may be evident in the figure from one year to the next depend on the chemical composition of incoming waste. Greater chemical complexity can require a greater consumption of chemicals for treatment prior to disposal. The figure is calculated.
163	Electricity consumed at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Bio Ecologia plant. The figure is measured with an uncertainty of ± 1%.
164	Quantity of methane consumed at the Pagnana plant. The figure is measured with an uncertainty of ± 1%.
165	Amount of BTZ (Basso Tenore di Zolfo - Low Sulphur Content) combustible Oil at the Pontedera plant. The figure is measured with an uncertainty of ± 2%.
166	Amount of water consumed at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Bio Ecologia plant.
167	Amount of water used for civil purposes at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Bio Ecologia plant.

RESOURCES USED – WATER SEGMENT

item no.	explanation – comment
168	The figure represents the sum of the consumption of reagents for the purification and disinfection of water for Acea Ato 2, Acea Ato 5, GORI and Gesesa. In particular, they are sodium hypochlorite, used as disinfectant at the request of the Health Authorities, aluminium polychloride, caustic soda and ozone. The figure is calculated.
169	Total quantity of chemical reagents used by the Company Acea Elabori *to carry out the official duties, namely the analytical checks for the Companies of the Acea Group*. The figure is measured.
170	Total volume of pure gases for analysis, used by Acea Elabori. The figure is measured.
171	It represents the total quantity of cooling fluids in operation. The reintegrations indicate the quantity of cooling fluids used for the maintenance of the air-conditioning equipment, during which the gas in operation is recovered and replaced with the new one. The data refer to the previous year compared to the year as they are based on ISPRA annual statements following the publication of the *Sustainability Report*. Both figures are calculated by attributing all the gas supplied overall by the Parent Company to the energy segment and the water segment in equal parts (50%).

172	Total energy consumed in the water area. The figure is calculated.
173	Electricity used for the drinking water and non-potable water pumping stations. The figure is measured with an uncertainty of ± 1%.
174	Electricity consumed by the processes not directly connected to the production phase (offices). The figure is calculated at 50% of the electricity consumed overall by the parent company.
175	Electricity used by Acea Elabori. It includes all the energy related to the various fields of activity of the Company, not only the analytical laboratory activities. The figure is calculated.
176	This is the amount of drinking water for civil/sanitary uses at the offices of Acea S.p.A. (calculated at 50% of the water consumed overall by the Parent Company) and for Acea Ato 2, Acea Ato 5, GORI and Gesesa. The figure is calculated.
176 A	Quantity of water for process uses in Acea Ato 2 and Acea Ato 5. From 2021, only 1.4% of the quantity produced by Acea Ato 5 is drinking water; the remaining amount is water recovered from treatment plants. The figure is calculated.
177	Total quantity of *chemicals* used in the purification process of waste water including: polyelectrolytes, sodium hypochlorite, iron chloride, lime. The figure is calculated.
178	Total number of reagent kits purchased from the Acea Ato 2 waste water treatment plants for additional controls beyond analytical testing. The use of the kits responds to the need of the laboratories connected to the treatment plants to be able to carry out complex analyses in a simple, fast manner. Acea Ato 2 uses photometers and rapid analysis systems for all the parameters of interest and to perform reliable monitoring of waste water legal limits.
179	Total quantity of lubricating oil and fat used for the equipment of the water area (pumps, centrifuges, motors etc.). The figure is calculated.
180	Electricity used to run the waste water treatment plants and to operate the sewerage network. The figure is measured with an uncertainty of ± 1%.
181	Amount of methane used in the treatment processes (for example in the dryers of Acea Ato 2 and GORI and for the treatment of sludge through thermochemical hydrolysis in the treatment plants of AdF). The figure is measured with an uncertainty of ± 2%.
182	Amount of diesel used in the purification and other (for example in the Ostia desiccator of Acea Ato 2 processes and for water, sewage and purification generators). The figure is measured with an uncertainty of ± 2%.
183	Quantity of petrol used in purification processes and generators. The figure is measured with an uncertainty of ± 2%.
184	Quantity of biogas produced and consumed on site. The figure is measured with an uncertainty of ± 2%.

FUELS USED BY THE GROUP (TRANSPORT AND HEATING)

item no.	explanation – comment
185	Total amount of petrol used for the main Companies of the Acea Group car fleet. Since 2019 the data comes from the calculations of the Group's Energy managers. In 2020, the increase is mainly due to the increase of the number of petrol powered vehicles in GORI and to the increase in consumption in Acea Ato 2. For the conversions from the unit of volume (litres) to that of mass (kg) a density value of 0.73 kg/l was used (source: Defra, conversion factors 2020).
186	Total amount of diesel used for the main Companies of the Acea Group car fleet. Since 2019 the data comes from the calculations of the Group's Energy managers. For the conversions from the unit of volume (litres) to that of mass (kg) a density value of 0.84 kg/l was used (source: Defra, conversion factors 2020). The figure includes the fuel consumed by Aquaser's vehicles.
186 B	Total amount of methane used for the main Companies of the Acea Group car fleet. The data comes from the calculations of the Group's Energy managers.
187	Total amount of LPG (Liquefied Petroleum Gas) used for the main Companies of the Acea Group car fleet. For the conversions from the unit of volume (litres) to that of mass (kg) a density value of 0.55 kg/l was used.
188	Total quantity of diesel used for heating work areas and for the supply of the generators. The figure is measured with an uncertainty of ± 0.5%.
189	Total quantity of natural gas used for heating the work spaces. The figure is measured with an uncertainty of ± 0.5%.
190	Total quantity of LPG (Liquefied Petroleum Gas) used to heat the work spaces. The figure is measured with an uncertainty of ± 0.5%.

EMISSIONS AND WASTE – ENERGY SEGMENT

item no.	explanation – comment
191	Total quantity of carbon dioxide released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and from the waste-to-energy process of SRF and pulper. Includes the equivalent CO_2 estimated on the basis of the replenishment of SF_6 and HCFC refrigerants. Estimated figure.
192	Quantity of carbon dioxide released into the atmosphere by the Acea Produzione power plants. The figure for the year preceding reporting is corrected in the year of publication, after ETS certification. The figure is calculated in accordance with current legislation.

193	Quantity of equivalent CO_2 estimated based on the of SF_6, replenishment, considering that 1 t of this gas has a heating power 23,500 times that of the CO_2 (source: GHG Protocol - IPCC Fifth Assessment Report).
194	Quantity of equivalent CO_2 estimated on the basis of refrigerant fluid replenishments (HCFCs), considering that 1 t of gas has a heating capacity of about 700-2,500 times that of CO_2. The value depends on the specific type of gas (source: GHG Protocol - IPCC Fifth Assessment Report; for gas mixtures the factor is calculated on the primary source). Half of the emissions are allocated to the energy segment and half to the water segment, as is the case for the quantities of refrigerant fluids (HCFCs). The figure coincides with item No. 249. For 2021, the figure is zero as there were no reintegrations in the year.
195	Quantity of carbon dioxide released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure for 2020 was recorded following the issue of the ETS certificate. The figure is measured.
196	Total quantity of nitrogen oxides (NO + NO_2) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels, and from SRF and waste-to-energy processes. Their presence in traces of the emissions is due to undesired secondary reactions which occur at high temperature between the nitrogen and the oxygen of the air. The figure is calculated.
197	Total quantity of nitrogen oxides (NO + NO_2) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
198	Quantity of nitrogen oxides (NO + NO_2) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
199	Total quantity of carbon oxide (CO) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and the waste-to-energy process. The existence of the pollutant in the emissions is due to incomplete fuel reaction and represents a symptom of deterioration in the performance of the combustion reaction. The figure is calculated.
200	Total quantity of carbon oxide (CO) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
201	Quantity of carbon oxide (CO) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
202	Total quantity of sulphur dioxide (SO_2) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and from the waste-to-energy process of SRF and paper mill pulp. The use of methane and diesel with low sulphur con- tent in the power plants enables this type of emission to be contained. The figure is calculated.
203	Quantity of sulphur oxide (SO_2) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
204	Quantity of sulphur dioxide (SO_2) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
205	Total quantity of powders (microscopic particles with average aerodynamic diameter equal or less than 10 thousand of a millimetre) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and from the SRF and pulper waste-to-energy processes. Basically, it is amorphous unburned carbon, with traces of other compounds of various composition, obtained as sub-product of the combustion when it achieved completely. The figure is calculated.
206	Quantity of powders released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
207	Quantity of powders released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
208	Quantity of hydrochloric acid (HCl) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
209	Quantity of hydrofluoric acid (HF) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
210	Quantity of organic carbon released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
211	Total quantity of waste water, treated, resulting from the thermoelectric energy production activities. The figure is measured with an uncertainty of ± 2%.
212	Total quantity of hazardous waste (pursuant to Italian Legislative Decree no. 152/06) disposed of by the main Companies of the Group excluding the waste-to-energy area. The 2020 figure decreased due to the Covid-19 pandemic and in particular because no HV/MV transformers were changed. The figure is measured with an uncertainty of ± 2%.
213	Hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the waste-to-energy area. It is essentially light ashes and slag resulting from the incineration processes. The figure is measured with an uncertainty of ± 2%.
214	Total quantity of non-hazardous waste (pursuant to Italian Legislative Decree no. 152/06) disposed of by the main Companies of the Group excluding the waste-to-energy area. The figure is measured with an uncertainty of ± 2%.
215	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the waste-to-energy area. It is essentially heavy ashes and slag resulting from the incineration processes. The figure is measured with an uncertainty of ± 2%.

EMISSIONS AND WASTE – ENVIRONMENT SEGMENT

item no.	explanation – comment
216	Hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Aprilia, Monterotondo Marittimo and Sabaudia plants. The increase is due to the almost fully operational restart of the Monterotondo Marittimo and Aprilia plants. The figure is calculated.
217	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Aprilia, Monterotondo Marittimo and Sabaudia plants. The increase is due to the almost fully operational restart of the Monterotondo Marittimo and Aprilia plants. The figure is calculated.
218	Hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Orvieto plant. The figure is measured with an uncertainty of ± 2%.
219	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Orvieto plant. The figure is measured with an uncertainty of ± 2%.
220	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Bio Ecologia plant. The figure is measured with an uncertainty of ± 2%.
221	Non-hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Bio Ecologia plant. The figure is measured with an uncertainty of ± 2%.
222	CO_2 emissions from the composting plants and Orvieto and related to the ancillary services of the waste-to-energy plants, not strictly related to the production of electricity. They also include non-biogenic emissions from the combustion of biogas produced on site. The figure is measured with an uncertainty of ± 2%.
223, 224, 225, 226	They are powders, Total Organic Compounds (COT), ammonia and volatile inorganic substances (SIV) issued at the Monterotondo Marittimo plant. The other plants provide only concentration values, with no regulatory obligation to calculate absolute values. The values in mg/l of all plants are well below official limits. The increase of the data is due to the almost fully operational restart of the Monterotondo Marittimo plant. The data is calculated starting from the measurement of the concentrations.
227	CO_2 emissions from the Bio Ecologia plant. The figure is calculated.
228	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Pagnana plant. The figure is calculated.
229	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Pagnana, Pontedera, Poggibonsi and San Jacopo plants. The figure is calculated.
230	Emissions of CO_2 of the Pagnana and Pontedera plants relate to the consumption of fuels. The figure is calculated.
231	Hydrogen Sulphide emissions from the Pagnana and Pontedera plants. The Pagnana figure is measured. The Pontedera figure is estimated taking into account the maximum value that can be recorded in the plant.
232	Ammonia emissions at the Pagnana and Pontedera Plants. The Pagnana figure is measured. The Pontedera figure is estimated taking into account the maximum value that can be recorded in the plant.
233	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Berg plant. The figure is measured with an uncertainty of ± 2%.
234	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Berg plant. The figure is measured with an uncertainty of ± 2%.
235	Emissioni di CO_2 emissions related to the Berg plant. The figure is calculated.
236	Dust emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
237	Organic carbon emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
238	Hydrogen sulphide and mercaptans emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
239	Ammonia emissions from the Berg plant. The data is calculated starting from the measurement of the concentrations.

EMISSIONS AND WASTE – WATER SEGMENT

item no.	explanation – comment
240	Total quantity of purification sludge disposed of by Acea Ato 2, Acea Ato 5, GORI, Gesesa and AdF. Non-hazardous waste. The figure is measured with an uncertainty of ± 2%.
241	Total quantity of purification sludge disposed of by Acea Ato 2. The figure is measured with an uncertainty of ± 2%.
242	Total quantity of purification sludge disposed of by Acea Ato 5. The figure is measured with an uncertainty of ± 2%.
243	Total quantity of purification sludge disposed of by GORI. The strong increase in the quantities produced since 2019 is due to the progressive transfer to GORI of the management of treatment plants previously managed by the Campania Region. The figure is measured with an uncertainty of ± 2%.
244	Total quantity of purification sludge disposed of by Gesesa. The figure is measured with an uncertainty of ± 2%.

245	Total quantity of purification sludge disposed of by AdF. The figure is measured with an uncertainty of ± 2%.
246	Total quantity of sand and slabs disposed of by Acea Ato 2, Acea Ato 5, GORI, Gesesa and AdF. The figure is measured with an uncertainty of ± 2%.
247	Total quantity of sand and slabs disposed of by Acea Ato 2. The figure is measured with an uncertainty of ± 2%.
248	Total quantity of sand and slabs disposed of by Acea Ato 5. The figure is measured with an uncertainty of ± 2%.
249	Total quantity of sand and slabs disposed of by GORI. The increase in the quantities produced is due to the progressive transfer to GORI of the management of treatment plants previously managed by the Campania Region. The figure is measured with an uncertainty of ± 2%.
250	Total quantity of sand and slabs disposed of by Gesesa. The figure is measured with an uncertainty of ± 2%.
251	Total quantity of sand and slabs disposed of by AdF. The figure is calculated.
252	Amount of other process waste, excluding sludge, sand and slabs. The figure is measured with an uncertainty of ± 2%.
253	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) including that disposed of by Acea Ato 2, Acea Elabori, Acea Ato 5, and a portion of waste produced by the Parent Company (attributed in equal parts to the energy and water segments). The figure is calculated.
254	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Elabori. The figure is measured with an uncertainty of ± 2%.
255	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 2. The figure is measured with an uncertainty of ± 2%.
256	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 5. The figure is measured with an uncertainty of ± 2%.
257	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by GORI. The figure is measured with an uncertainty of ± 2%.
258	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by AdF. The figure is measured with an uncertainty of ± 2%.
259	Proportion of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the Parent Company and attributed to the water segment. The same proportion was attributed to the energy segment.
260	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) including that disposed of by Acea Ato 2, Acea Ato 5, GORI Gesesa and AdF, and a portion of waste produced by the Parent Company (attributed in equal parts to the energy and water segments). The figure is calculated.
261	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 2 and Acea Elabori. The increase in the quantities in 2020 is mainly due to the launching of filters at the drinking water plant of Pescarella. The figure is calculated.
262	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 5. The figure is estimated.
263	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by GORI. The figure is estimated.
264	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Gesesa. The figure is estimated.
265	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by AdF. The figure is estimated.
266	Proportion of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the Parent Company and attributed to the water segment. The same proportion was attributed to the energy segment.
267	Total amount of carbon dioxide emitted by dryers and generators. The figures are calculated using the consumption of fuel and the emission coefficients (ISPRA data).
268	Quantity of equivalent CO_2 estimated on the basis of refrigerant fluid replenishments (HCFCs), considering that 1 t of gas has a heating capacity of about 700-2,500 times that of CO_2. The value depends on the specific type of gas (source: GHG Protocol - IPCC Fifth Assessment Report; for gas mixtures the factor is calculated on the primary source). Half of the emissions are allocated to the energy segment and half to the water segment, as is the case for the quantities of refrigerant fluids (HCFCs). The figure coincides with item No. 194. For 2021, the figure is zero as there were no reintegrations in the year.

CO_2 EMISSIONS FROM TRANSPORT AND HEATING

item no.	explanation – comment
269	Total quantity of carbon dioxide issued by the motor pool of the Acea Group. The three-year figure is calculated using the consumption of fuel and the emission coefficients (ISPRA 2021). The figure is calculated.
270	Total quantity of carbon dioxide emitted by the systems used to air-condition the work spaces. The figure is calculated.

OPINION LETTER OF THE INDEPENDENT AUDITOR

Independent auditor's report on the consolidated non-financial statement

pursuant to article 3, paragraph 10, of Legislative Decree no. 254/2016 and article 5 of CONSOB regulation no. 20267

To the Board of Directors of Acea SpA

Pursuant to article 3, paragraph 10, of Legislative Decree No. 254 of 30 December 2016 (the "Decree") and article 5 of CONSOB Regulation No. 20267/2018, we have undertaken a limited assurance engagement on the consolidated non-financial statement of Acea SpA and its subsidiaries (the "Group") for the year ended 31 December 2021 prepared in accordance with article 4 of the Decree and approved by the Board of Directors on 14 March 2022 (the "NFS").

Our review does not extend to the information set out in the paragraph: Information required by the European Taxonomy of the NFS, required by article 8 of European Regulation 2020/852.

Responsibilities of the Directors and the Board of Statutory Auditors for the NFS

The Directors are responsible for the preparation of the NFS in accordance with articles 3 and 4 of the Decree and with the "Global Reporting Initiative Sustainability Reporting Standards" defined in 2016 and updated to 2020, by the GRI - Global Reporting Initiative (the "GRI Standards"), identified by them as the reporting standard.

The Directors are also responsible, in the terms prescribed by law, for such internal control as they determine is necessary to enable the preparation of a NFS that is free from material misstatement, whether due to fraud or error.

Moreover, the Directors are responsible for identifying the content of the NFS, within the matters mentioned in article 3, paragraph 1, of the Decree, considering the activities and characteristics of the Group and to the extent necessary to ensure an understanding of the Group's activities, its performance, its results and related impacts.

Finally, the Directors are responsible for defining the business and organisational model of the Group and, with reference to the matters identified and reported in the NFS, for the policies adopted by the Group and for the identification and management of risks generated and/or faced by the Group.

The Board of Statutory Auditors is responsible for overseeing, in the terms prescribed by law, compliance with the Decree.

PricewaterhouseCoopers SpA

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Auditor's Independence and Quality Control

We are independent in accordance with the principles of ethics and independence set out in the Code of Ethics for Professional Accountants published by the International Ethics Standards Board for Accountants, which are based on the fundamental principles of integrity, objectivity, competence and professional diligence, confidentiality and professional behaviour. Our audit firm adopts International Standard on Quality Control 1 (ISQC Italia 1) and, accordingly, maintains an overall quality control system which includes processes and procedures for compliance with ethical and professional principles and with applicable laws and regulations.

Auditor's responsibilities

We are responsible for expressing a conclusion, on the basis of the work performed, regarding the compliance of the NFS with the Decree and the GRI Standards. We conducted our work in accordance with International Standard on Assurance Engagements 3000 (Revised) – Assurance Engagements Other than Audits or Reviews of Historical Financial Information ("ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. The standard requires that we plan and apply procedures in order to obtain limited assurance that the NFS is free of material misstatement. The procedures performed in a limited assurance engagement are less in scope than those performed in a reasonable assurance engagement in accordance with ISAE 3000 Revised, and, therefore, do not provide us with a sufficient level of assurance that we have become aware of all significant facts and circumstances that might be identified in a reasonable assurance engagement.

The procedures performed on the NFS were based on our professional judgement and consisted in interviews, primarily of company personnel responsible for the preparation of the information presented in the NFS, analyses of documents, recalculations and other procedures designed to obtain evidence considered useful.

In detail, we performed the following procedures*:*

1. analysis of the relevant matters reported in the NFS relating to the activities and characteristics of the Group, in order to assess the reasonableness of the selection process used, in accordance with article 3 of the Decree and with the reporting standard adopted;
2. analysis and assessment of the criteria used to identify the consolidation area, in order to assess their compliance with the Decree;
3. comparison of the financial information reported in the NFS with the information reported in the Group's consolidated financial statements*;*
4. understanding of the following matters:
   a. business and organisational model of the Group with reference to the management of the matters specified by article 3 of the Decree;
   b. policies adopted by the Group with reference to the matters specified in article 3 of the Decree, actual results and related key performance indicators;
   c. key risks generated and/or faced by the Group with reference to the matters specified in article 3 of the Decree.

   With reference to those matters, we compared the information obtained with the information presented in the NFS and carried out the procedures described under point 5 a) below;
5. understanding of the processes underlying the preparation, collection and management of the significant qualitative and quantitative information included in the NFS.

In detail, we held meetings and interviews with the management of Acea SpA and we performed limited analyses of documentary evidence, to gather information about the processes and procedures for the collection, consolidation, processing and submission of the non-financial information to the function responsible for the preparation of the NFS.

Moreover, for material information, considering the activities and characteristics of the Group:

- at a group level,
  a) with reference to the qualitative information included in the NFS, and in particular to the business model, the policies adopted and the main risks, we carried out interviews and acquired supporting documentation to verify its consistency with available evidence;
  b) with reference to quantitative information, we performed analytical procedures as well as limited tests, in order to assess, on a sample basis, the accuracy of consolidation of the information.
- for the following companies, Acea Spa and Acquedotto del Fiora SpA, which were selected on the basis of their activities, their contribution to the performance indicators at a consolidated level and their location, we carried out remote visits during which we met local management and gathered supporting documentation regarding the correct application of the procedures and calculation methods used for the key performance indicators.

Conclusions

Based on the work performed, nothing has come to our attention that causes us to believe that the NFS of Acea Group for the year ended 31 December 2021 is not prepared, in all material respects, in accordance with articles 3 and 4 of the Decree and with the GRI Standards.

Our conclusions on the NFS of Acea Group do not extend to the information set out in the paragraph: Information required by the European Taxonomy of the NSF, required by article 8 of European Regulation 2020/852.

Rome, 6 April 2022

PricewaterhouseCoopers SpA

Signed by

Luigi Necci
(Partner)

Paolo Bersani
(Authorized signatory)

This report has been translated from the Italian original solely for the convenience of international readers. We have not performed any controls on the NFS 2021 translation

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The Acea Group places sustainability at the centre of all its activities and its development strategy.
For that reason, this publication was produced on Fedrigoni Freelife Cento paper.
A small act that is part of the many choices the Group makes to protect the environment.

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