2015

SUSTAINABILITY REPORT

ACEA GROUP

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INDEX

LETTER TO THE STAKEHOLDERS

The Acea Group 2015 *Sustainability Report*, which is the 18th annual report of its kind to be published, provides stakeholders with an overview of the company, its activities and the results obtained in terms of the sustainable creation of shared value. The Report was drawn up on the basis of *Global Reporting Initiative Guidelines* (GRI-G4), with the highest level of compliance. The document focuses on the most relevant themes for the company and stakeholders, established in an analysis on "*materiality*" and by setting up *multistakeholder* focus groups.

The main purpose of the *Sustainability Report* is to provide as many stakeholders with as much information as possible. Corporate assets, stakeholder relations, environmental, social and governance performance are described and quantified. This information goes to supplement the economic-financial framework of the *Statutory financial statements*.

The *Sustainability Plan*, currently being updated, specifies the company's commitments and represents an incentive for continuous improvement. The analysis of the results obtained and the review phase in fact, highlight areas in which we can improve, and the good practices to valorise.

This year at an international level, there were three key elements of sustainability: the UN *Sustainable Development Goals*, COP21 and the *Laudato si'* Encyclical Letter of the Holy Father Francis. These documents, regardless of their origin, represent a common commitment to sustainable development. They highlight the responsibilities and above all, the opportunities those favouring a proactive approach should seize. Acea has chosen this approach. The Group has already implemented a process of evolutionary development called *Acea2.0*. It's a *business transformation* project that focuses on corporate culture and management models, with the aim of promoting innovation and creating value for stakeholders. Acea in fact, while operating in regulated sectors where there is a partial monopoly, intends to pursue goals based on a logic of competitiveness and reward.

This year's sustainability report can be interpreted in terms of the ongoing change, which has an impact on relations with all stakeholders. Acea is investing in personal involvement and initiatives for transversal engagement as an alternative to the traditional hierarchy. The *Workforce management* project, in which everyone in the company is involved, aims to increase the efficiency of operations throughout the

territory. Customer service orientation is another cornerstone of the programme, with the evolution of the *Customer Relationship Management* (CRM) system and the challenging goals of performance in terms of quality of services provided. In the supply chain, Acea is establishing long-term and strategic relations with its business partners, guaranteeing the collaboration of well-organized and reliable operators. Thanks to this input, last year the first Single Procurement Contracts were drawn up for the maintenance of waterworks and electricity networks.

The benefits of technological innovation and sustainable business management, continuing in the direction we started in recent years, have also been acknowledged at an international level. Acea was awarded the RSE prize for the "Technology, research and innovation category", at the fourth edition of the Top Utility Award. The Carbon Disclosure Project gave the company a score of 99 B (out of a maximum possible score of 100 A), appraising Acea's CO_2 emission reduction policy.

Furthermore, Acea welcomes the opportunities represented by the development of Smart Cities, where the interconnection of service networks can lead to product and process innovation. For 2015, the Italian Authority for Electricity, Gas and Water (AEEGSI) granted an extension to the smart grid pilot project experimentation and the RoMA (*Resilience enhancement of Metropolitan Area*) project, jointly financed by the MIUR as part of the actions to support *Smart Cities and Communities*, in consideration of the results obtained.
Acea has implemented numerous territorial initiatives including *"Acea per Roma"* (Acea for Rome) and the "Water Houses" public drinking water dispenser installation plan, as part of a corporate citizenship and stakeholder engagement strategy. In the first "Acea per Roma" initiative, Acea asked citizens to propose urban renewal and inclusion project ideas of their own. The response was impressive: around 800 proposals were received, with numerous citizens from the suburban districts of Rome participating, with a resulting 55 projects authorized for funding. The second initiative pursues social, environmental and economic goals for the benefit of the entire community. The new high-tech long-spouted fountains, nick-named "nasoni" (big noses) providing citizens with refrigerated (natural or fizzy) water, are installed in busy places where people tend to gather. Throughout the year, 12 Water Houses in Rome and another 12 in the province of Rome supplied 2.8 million litres of drinking water, the equivalent of 71 tons of plastic bottles less to be disposed of and approximately 100 tons less of CO_2 discharged into the atmosphere. The plan continues.

In short, there have been several changes in the scenario of reference in which the company operates that could have an impact on Acea's lines of development. These include the provisions of the Italian Stability Law on the consolidation of companies providing local public services, the approval of the Green Economy annex and the publication of the new 2015-2019 Strategic Framework for regulated water, electricity and gas sectors. There are aspects that refer to sustainable development in each of these elements, and it is important for companies operating in these sectors to contribute to the same.

On the same theme, EU Directive 95/2014, currently being implemented, will soon make the reporting of extra-financial information in corporate documents obligatory. The *Corporate Governance Code of Listed Companies*, updated in July 2015, as part of the rules of good corporate governance, introduced sustainability risk assessment by the Board of Directors.

Last but not least, Acea as a Founding Promotor, adhered voluntarily to the Global Compact Network Italy, the body established to contribute to the development of the UN Global Compact initiative in Italy. This is proof of our commitment to the universal principles of human rights, work, the environment and the fight against corruption, letting the company identify the elements that correspond to an *advanced* level of *Communication on Progress* in its operations, as required by the "Global Pact".

The Chief Executive Officer
Alberto Irace

The Chairman
Catia Tomasetti

HIGHLIGHTS

RELATIONS WITH STAKEHOLDERS

CUSTOMERS AND COMMUNITY

18,700
PERSONS
FEEDBACK FROM CUSTOMER SATISFACTION SURVEYS

6,553
LED LIGHTING POINTS
INSTALLED IN ROME

25
"WATER HOUSES"
13 IN ROME AND **12** IN PROVINCE OF ROME **2.8 MILLION** LITRES SUPPLIED

SUPPLIERS

906
MILLION EUROS
VALUE OF 2015 CONTRACTS

OVER 3,000
CONTRACTS DRAWN UP
WITH 1,450 SUPPLIERS

1,052
REQUESTS APPROVED
REGISTRATION WITH ROLLS/QUALIFICATION SYSTEM
689 QUALIFIED **OPERATORS**

SHAREHOLDERS AND LENDERS

106.5
MILLION EUROS
OF DIVIDENDS

170
INVESTORS
MET BY INVESTOR RELATIONS

111.3
MILLION EUROS
FINANCIAL COSTS

262,467
CUSTOMERS RECEIVED

AT THE COUNTERS
OF THE HEAD OFFICE

ACEA PER ROMA
FEEDBACK CAMPAIGN

800 PROPOSALS RECEIVED
55 PROJECTS FUNDED

HUMAN RESOURCES

36.4 HOURS
OF TRAINING PER PERSON

FOR EMPLOYEES

99.5%
EMPLOYEES

WITH OPEN-ENDED CONTRACTS

24.2%
PERCENTAGE OF WOMEN

IN CORPORATE
GOVERNANCE BODIES

THE COMPANY AND INSTITUTIONS

ABOUT 64 MILLION
EUROS IN INNOVATION

AND **20 RESEARCH PROJECTS**
UNDERWAY

ABOUT 429 MILLION
EUROS IN INVESTMENTS

+34% COMPARED TO 2014

29
AGREEMENTS

WITH RESEARCH CENTRES,
TRAINING ORGANISATIONS
AND TRADE ASSOCIATIONS

HIGHLIGHTS

ENVIRONMENTAL RELATIONS

WATER

Water Area

1,317 Mm³

DRINKING WATER VOLUMES FED INTO NETWORK (GROUP)

1,167,959

NO. TESTS ON DRINKING WATER (GROUP)

49,800 km

NETWORK MANAGED SERVING THE GROUP'S DRINKING WATER SYSTEM

ENERGY

Distribution

29,000 km

ROME AND FORMELLO DISTRIBUTION NETWORK

11,200 GWh

ELECTRICITY DISTRIBUTED IN ITALY IN 2015

42%

NDEX OF TERRITORIAL PROTECTION

UNDERGROUND HV NETWORK/TOTAL HV NETWORK

ENVIRONMENT

Waste management

340,000 t

WASTE PROCESSED IN WASTE TO ENERGY PLANTS

307 GWh

ENERGY PRODUCED IN SAN VITTORE DEL LAZIO AND TERNI PLANTS

Sludge

151,200 t

TOTAL SLUDGE PRODUCED
BY ACEA ATO 2 AND ACEA ATO 5

110,000 t

SLUDGE RECYCLED FOR AGRICULTURAL
SECTOR AND COMPOSTING
BY ACEA ATO 2 AND ACEA ATO 5

APPROXIMATELY 73% OF THE TOTAL

Production

783 GWh

TOTAL ENERGY
PRODUCED

613 GWh

ENERGY PRODUCED
FROM RENEWABLE SOURCES

80 GWh

THERMAL ENERGY PRODUCED BY TOR DI
VALLE PLANT SUPPLYING POWER TO **36,900**
INHABITANTS OF SOUTH ROME WITH DHS

SAN VITTORE DEL LAZIO
13.5 MWh/h

TERNI
10 MWh/h

ENERGY PRODUCED (MWh) PER WTE OPERATING HOURS

SAN VITTORE DEL LAZIO
2.7 t/h

TERNI
2.0 t/h

WASTE PRODUCED (t) PER WTE OPERATING HOURS

LED lights for the baths of Caracalla. Photo by Fabio Anghelone, Acea Archive

DISCLOSING SUSTAINABILITY: METHODOLOGICAL NOTE

The *Sustainability Report* describes the **financial, social and environmental performances of the Group** with a view to providing stakeholders with information as clear, comprehensive and integrated as possible. This edition refers to the 2015 financial year and it represents the eighteenth report published by Acea on a yearly basis.
Following its formal approval by the ***Board of Directors***, the **Sustainability Report** is published **in conjunction with the Statutory financial statements** and is handed out during the Shareholders' Meeting.

REFERENCE GUIDELINES AND ASSURANCE

The *Sustainability Report* was prepared in compliance with the principles and performance indicators set forth in the ***GRI-G4 Guidelines***[1] and **in the *Electric Utilities Sector Disclosures-G4***, which were applied according to the "***comprehensive***" level.
Consistent with the "*comprehensive*" level, the *Guidelines* **require reporting on the 58 "general standards"** and **only on the "aspects"** identified as **"material" for the company** which, as a whole, make up **the "specific standards".** Each "aspect" **includes a description of the management approach (***Disclosure Management Approach***)** and is **shown in indicators.**

Out of a total of 54 "aspects" as stated in the *Guidelines* and *Sector Disclosures*, Acea identified 42 of them as material (see ***GRI-G4 Content Index*** at the bottom of the document and, for the "material" aspect identification process, herebelow).
The *Report* also includes the ***Environmental accounts***, consisting of more than **260** items that quantify the physical flows arising from the Group's operations: values of production, factors used (resources) as well as outputs impacting the external environment (waste and emissions).
Since 2007, Acea has been involved in the **Global Compact** (GC) initiative, acknowledging **consistency between the ten principles** supported by the United Nations through the "Global Pact" **and the ethical guidelines established by the Group's *Code of Ethics***.
The advanced level *Communication on Progress* (CoP) is included in the *Sustainability Report* through a **combined statement of the GRI indicators and Global Compact principles**, as pursuant to the understanding reached between the two organisations.
Prior to being published, the *Sustainability Report* is reviewed by an **independent firm** specialised **in assurance,** with whom Acea does not have any joint interests or any other links. The independent firm is

[1] In 2002, the Global Reporting Initiative (GRI), established in England in 1997 by the Coalition for Environmentally Responsible Economies (CERES), became an independent official centre to support the the United Nations Environmental Programme (UNEP) and collaborate with the Global Compact. The GRI-4 Guidelines (published in 2013) are available at www.globalreporting.org. They outline the relevant sustainability reporting standards, general standards and economic, social and environmental performance indicators. The Electric Utilities Sector Supplement, comprising specific industry indicators, is also available on the GRI website.

tasked with checking the adequacy of the methods used to prepare the document, examining the contents throughout the document, including the *Environmental accounts,* checking consistency with the Guidelines adopted and issuing an **overall opinion** on its clarity, completeness and transparency (see *Independent Auditors' Opinion Letter* and *GRI-G4 Content Index*).

CONTENT AND STRUCTURE OF THE DOCUMENT

The contents of the *Sustainability Report*, the aim of which is to meet the information needs of the various stakeholders in a clear and balanced way, are provided, as mentioned, according to the indications set out in the *GRI-G4 Guidelines* as applicable to the Company's business and operating background. Account was taken of the **legal nature of the (public) Company**, the **relationships** between **the parent company and the other Group companies**, the **business areas in which the Group engages** (energy, water and environment), the utility-oriented **corporate mission**, the **country** - Italy - **where business is mainly carried on** and the **types of stakeholders** with whom Acea interacts.

Between the end of 2014 and the first two-month period of 2015, Acea implemented a **process for identifying the most significant ("material") topics**, which led to the **definition of the "matrix of materiality"**. The purpose of this analysis was to **highlight the economic, social, environmental and governance-related topics that are most relevant** to both the **company** and **its stakeholders**.
This activity was conducted by the in-house **CSR Team** and involved **3 main phases**:

- **Desk review of documents**, during which an **initial list of "relevant topics"** was drawn up, such topics resulting from a review and systematisation of the contents of about 60 documents (scenario-related, representing stakeholders' demands, strategic and internal management-related documents, etc.), as well as from the application of calculation methods that took into account both the type of document being reviewed, subject to appropriate considerations, and the rate of occurrence of the topics;
- **Interviews with managers**, during which **20 managers** were interviewed to share the methodological approach to the analysis being conducted. The managers were also asked to state the extent to which they agreed or disagreed with each of the "relevant topics" identified in the first stage so as to have a clearer **picture of the Company's position**;
- **Multistakeholder focus groups** - On 21 January 2015, an **independent consultant** was recruited to hold **4 discussion groups** between the representatives of the different types of stakeholders, **involving in all 34 people**. In addition to soliciting insights and suggestions aimed at making the *Sustainability Report* more effective from a communication perspective, during the meetings the workgroups were also asked to voice their opinions with regard to the "relevant topics" identified in the first stage so as to **provide a clearer picture of the stakeholders' position**.

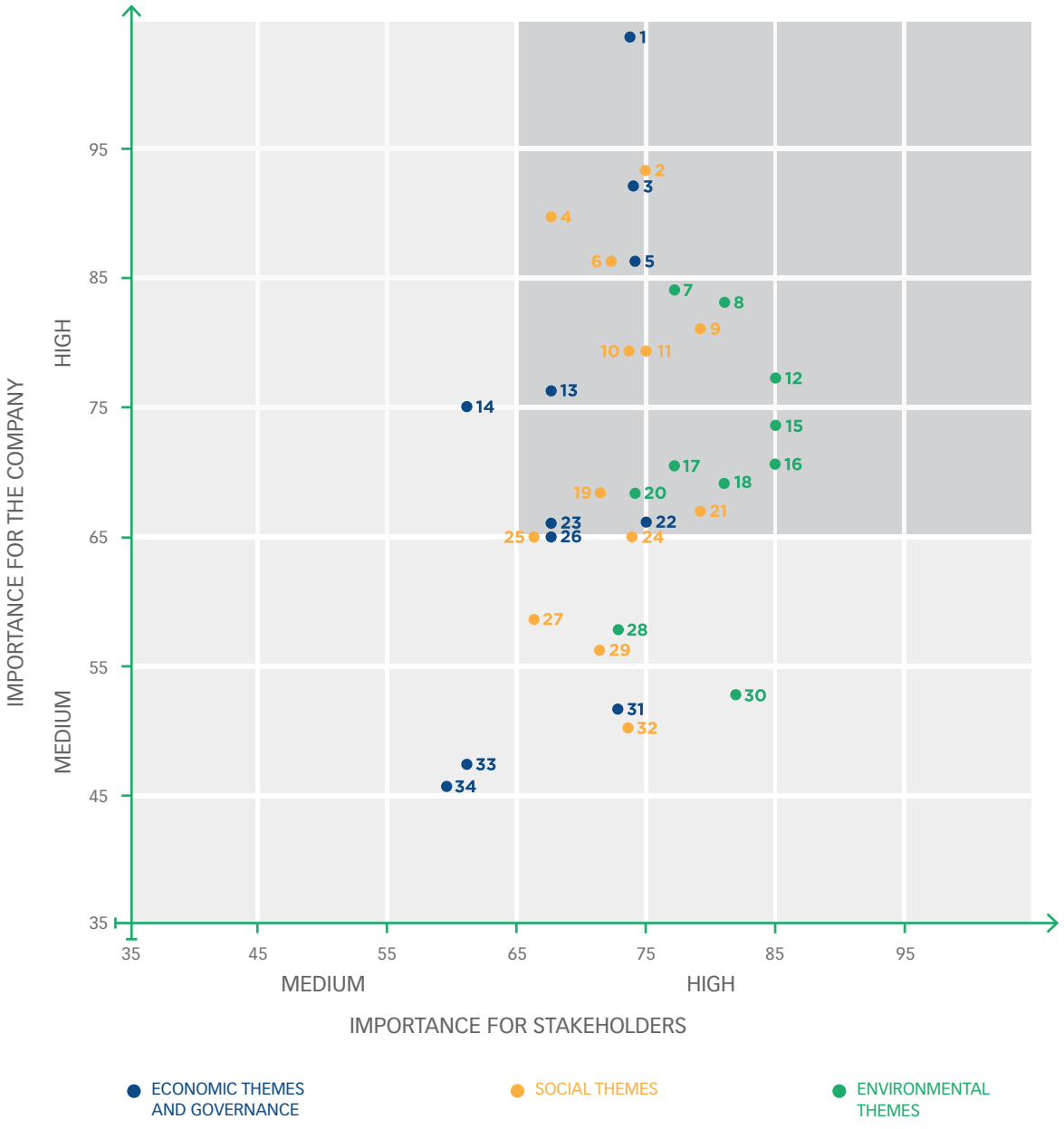
Each one of these stages enabled **matrix of materiality milestones** to be set, leading eventually to a **final drafting** of such matrix, as outlined in chart 1, where only high and medium relevance topics are shown. **The results of the materiality analysis process**, which is carried out every two years with intermediate updates as appropriate, **are reflected in the contents of the *Sustainability Report***.

Moreover, **in order to define which "aspects" among all those under the "specific standards" of the *GRI-G4 Guidelines*** *(and Sector Disclosures)* **were to be viewed as "material"** - i.e. significant and, as such, to be reflected in the *Sustainability Report* -**, in 2015 special attention was paid to**[2] **their correlation with Acea's (highly significant) material topics** previously identified by the company through the **"matrix of materiality"** definition process (see chart 1 and table 1). Discussions also took place regarding their interpretation and the meaning ascribed to them by the GRI. While in some cases they related to company operations, in **other cases they were deemed as not relevant or not applicable**[3].
Out of the 54 "aspects" set forth as a whole in the GRI-G4 specific standards and *Sector Disclosures*, **42 were considered as consistent with the highly significant topics identified by Acea matrix of materiality**, even though they do not always provide a full meaning thereof as more broadly covered in the paper, if appropriate[4]. In addition, **only 7 of all the indicators included** in the aspects considered as "material" **were deemed to be not applicable** and, therefore, were not covered.

On the other hand, **20 of the 25 highly significant topics** identified by Acea's matrix of materiality **are consistent with the aspects as under the GRI-G4 specific standards**.
Two more are related to some of the **58 general standards** of the Guidelines: "*Top management remuneration and evaluation*" (G4-51 e G4-52) and "*Introduction of elements of sustainability in corporate governance*" (from G4-42 to G4-50). While the three material topics known as "*Improving methods and channels of contact with customers*"; *Reduction of water losses*" and "*Waste-to-Energy development and integrated waste management*" do not specifically match with the aspects set forth in international Guidelines, they were nonetheless covered in this paper in view of their magnitude.

[2] Consideration should be given to the fact that the aspects of the GRI-G4 specific standards - each of which comprises a description of the management approach (*Disclosure Management Approach*) 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, as a result of which they cannot be presented in this paper. Reference should be made to the *G4 Sustainability Reporting Guidelines* (part 1 and part 2) and *Electric Utilities Sector Disclosures*.
[3] This led, for example, to the exclusion of all aspects related to Human Rights, as they pertain more to multinational enterprises based on the interpretation of the *GRI Guidelines*.
[4] For example, "Improving service quality", a highly significant topic for Acea, was included among the GRI-G4 aspects only to a minor extent.

CHART 1
RELEVANT THEMES FOR THE COMPANY AND STAKEHOLDERS: ACEA "MATRIX OF MATERIALITY"



1 CREATION OF ECONOMIC-FINANCIAL VALUE
2 HEALTH AND SAFETY AT WORK
3 OBSERVANCE OF RULES AND COMPLIANCE
4 STUDY AND APPLICATION OF NEW TECHNOLOGIES FOR THE IMPROVEMENT AND EVOLUTION OF SERVICES
5 PROMOTION OF ETHICS AND INTEGRITY IN CORPORATE CONDUCT
6 DEVELOPMENT AND VALORISATION OF HUMAN RESOURCES SAFEGUARD
7 OF TERRITORY AND MITIGATION OF EMISSIONS: CLIMATE CHANGE, QUALITY OF THE AIR
8 EFFICIENT ENERGY USE (ENERGY CONSUMPTION AND SAVINGS)
9 IMPROVING SERVICE QUALITY
10 IMPROVING METHODS AND CHANNELS OF CONTACT WITH CUSTOMERS
11 EMPLOYMENT DEVELOPMENT AND PROTECTION OF LABOUR UPGRADING
12 WATER TREATMENT, SEWAGE WORKS AND SLUDGE DISPOSAL
13 RISK MITIGATION AND DEVELOPMENT OF BUSINESS OPPORTUNITIES BUILDING AND CONSOLIDATING THE
14 COMPANY REPUTATION
15 PROTECTING DRINKING WATER QUALITY
16 REDUCTION OF WATER LOSSES
17 DEVELOPMENT OF INVESTMENTS FOR THE REDUCTION OF ENVIRONMENTAL IMPACT
18 EFFICIENT WATER USE (CONSUMPTION AND SAVINGS)
19 SUSTAINABLE MANAGEMENT OF THE SUPPLY CHAIN AND SELECTION/EVALUATION OF SUPPLIERS ON THE BASIS OF ESG (ENVIRONMENTAL AND SOCIAL) CRITERIA
20 WASTE-TO-ENERGY DEVELOPMENT AND INTEGRATED WASTE MANAGEMENT
21 CONSUMER PROTECTION
22 CONTRIBUTION TO THE DEVELOPMENT OF THE ECONOMIC BASE TOP
23 MANAGEMENT REMUNERATION AND EVALUATION EVALUATION AND VALORISATION OF THE IMPACT OF CORPORATE
24 ACTIVITIES ON THE COMMUNITY MANAGEMENT OF CORPORATE DIVERSITY AND WELFARE
25 INTRODUCTION OF ELEMENTS OF SUSTAINABILITY
26 IN CORPORATE GOVERNANCE INITIATIVES PROMOTING AWARENESS
27 IN THE COMMUNITY AND THE RESPONSIBLE USE OF RESOURCES
28 FAUNA AND FLORA PROTECTION
29 OBSERVANCE OF SUPPLIER PAYMENT TIMES
30 DEVELOPMENT OF THE PRODUCTION OF ENERGY FROM RENEWABLE SOURCES
31 STAKEHOLDER ENGAGEMENT
32 PROTECTION OF HUMAN RIGHTS
33 DEVELOPMENT OF PARTNERSHIPS WITH PUBLIC AND PRIVATE ENTITIES
34 VALORISATION OF ESG ELEMENTS (ENVIRONMENTAL, SOCIAL AND GOVERNANCE) IN RELATIONS WITH THE FINANCIAL WORLD

TABLE 1
MATCHING BETWEEN GRI-G4 "MATERIAL ASPECTS" AND ACEA "MATERIAL TOPICS"

GRI-G4: CATEGORY ECONOMIC	ACEA'S MATERIAL THEMES
Economic Performance	1, 3, 7, 11, 13
Market Presence	11
Indirect Economic Impacts	22, 24
Procurement Practices	19, 22
Availability and Reliability (DMA) *	13
Demand-Side Management *	4
Research and Development *	4, 9
System Efficiency *	8
GRI-G4: CATEGORY ENVIRONMENTAL	
Materials + (EN1)	8, 18
Energy (from EN3 to EN6)	8
Water +	18
Biodiversity + (from EN11 to EN13)	7, 15
Emissions +	7
Effluents and waste + (from EN22 to EN24, EN26)	7, 12
Products and Services (EN27)	8, 18
Compliance	3
Transport	7
Overall	17
Suppliers Environmental Assessment	19
Environmental Grievance Mechanism	3
GRI-G4: CATEGORY SOCIAL	
LABOR PRACTICIES AND DECENT WORK	
Employment +	11, 19, 22, 25
Labor/Management Relations	11
Occupational Healt and Safety +	2, 19
Training and Education	6
Diversity and Equal Opportunity	25
Equal Remuneration for Women and Men	25
Supplier Assessment for Labor Practices	19
Labor Practicies Grievance Mechanism	3
SOCIETY	
Local Communities +	24, 17
Anti-corruption	3, 5
Public Policy	5
Anti-competitive Behavior	3
Compliance	3
Supplier Assessment for Impacts on Society	3
Disaster/ Emergency Planning and Response *	24
PRODUCT RESPONSABILITY	
Customer Health and Safety +	3, 21
Product and Service labelling	9, 21
Marketing Communications (PR7)	3, 21
Customer Privacy	3, 21
Compliance	3
Access *	3
Provision of Information *	3, 21

Note: the "material aspects" were identified among all those set forth in the specific standards of the *GRI-G4 Guidelines* and *Electric Utilities Sector Disclosures*. The latter are shown with "*", while a "+" symbol appearing next to one of the aspects of the *Guidelines* indicates additional information required under the *Sector Disclosures*. If indicators are placed in brackets next to one aspect, then only the indicators shown in the table will be considered to be material. On the other hand, unless otherwise specified, all the indicators relating to the aspect are material (also see *GRI-G4 Content Index*). For Acea's material themes - as identified in the table by a number - reference should be made to the figure illustrating the matrix of materiality (chart 1).

The **structure of the *2015 Sustainability Report*** consists of three sections: ***Corporate Identity***, ***Socio-economic relations with stakeholders*** and ***Environmental issues***, supplemented with the ***Environmental accounts***. The Report is circulated by **posting it on the corporate website** – www.acea.it - **as well as on the Company intranet**. It is distributed on a pen drive to a selected mailing list (around 750 recipients) and on the occasion of events.

REPORT BOUNDARY

The area being reported on (i.e., the "Report Boundary") was established **consistent with the Group** size (see the *Group Profile* below) and **without omitting significant information or data**.

The broader boundary being considered pertains to **financial information** referring to the sum of the parts of Acea SpA and the other companies included in the **basis of consolidation**, as defined in the 2015 *Consolidated Financial Statements*[5]. **Whenever the aforesaid boundary changes**, depending on the actual availability of data as related to the progressive centralised management and significance thereof, **any such changes will be appropriately reflected in the text**[6].
The activities carried out by the parent company and the main operating companies in the water, energy and environmental businesses, where the Group's most significant financial, social and environmental results are achieved, were always subject to reporting on a regular basis to ensure data comparability over time.

DEFINITIONS AND BOUNDARY

"Acea Group" and "Acea" mean all the companies that are comprised in the basis of consolidation, including Acea SpA.
"Acea SpA", "Parent Company" and "Holding Company" are terms that carry the same meaning.
The main companies that are comprised in the Reference Boundary in addition to Acea SpA include: Acea Distribuzione, Acea Illuminazione Pubblica, Acea Reti e Servizi Energetici, Acea Energia and Acea Produzione, A.R.I.A., Aquaser, SAO, Acea Ato 2, Acea Ato 5, Acea Elabori, Acea8cento.
The companies that engage in the water business: Acque, Gori, Acquedotto del Fiora, Publiacqua and Umbra Acque, which were consolidated with the shareholders' equity method following the review of the accounting principles, **are included in some of the Group's data and are described in a separate chapter.**
Where possible, the report boundary also included other companies, as from time to time specified in the document.

DATA RELIABILITY AND RETRIEVAL SYSTEM

The data and information published in the *Sustainability Report* are essentially provided by the relevant Divisions (dataowners). They were further supplemented and illustrated through in-depth discussions and exchanges between the internal workgroup, who is responsible for preparing the *Sustainability Report*, and the Industrial Areas, the Divisions and Companies directly concerned, until final validation.

Where appropriate, data was reprocessed or reclassified according to the adopted *Guidelines*. sta elettronica: RSI@aceaspa.it.

Requests for additional information about the *Sustainability Report* and its contents may be sent to the following email address: RSI@aceaspa.it

Giuseppe Sgaramella
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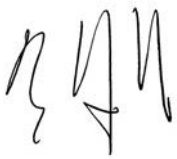


[5] Available at www.acea.it, Shareholders section.
[6] In several cases, the reporting boundary of the *Socio-economic relations with stakeholders* and *Environmental issues* sections does not tally with the basis of consolidation, although it invariably refers to the Group's major companies, ensuring significance and comparability. Boundary adjustments are always shown in the text, in the boxes named *Reference Boundary*.

COMPLIANCE WITH GLOBAL COMPACT

The Global Compact is an initiative launched by the Secretary General of the United Nations at the end of the proceedings of the World Economic Forum in 1999. In his appeal, he invited the leaders of the world economy to provide their support and champion nine **universal principles** relating to **human rights**, **labour** and the **environment**, with a tenth principle being added in 2004 - **the fight against corruption**. Since then, the network of organisations and business that join this initiative through formal commitments has grown.
Acea subscribed to the ten principles as early as 2007, renewing its support every year.

TABLE 2
THE TEN PRINCIPLES OF GLOBAL COMPACT

HUMAN RIGHTS

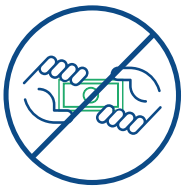
1. Businesses should support and respect the protection of internationally proclaimed human rights.
2. Business should make sure they are not complicit in human rights abuses.

LABOUR

3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.
4. Businesses should uphold the elimination of all forms of forced and compulsory labour.
5. Businesses should uphold the effective abolition of child labour.
6. Businesses should uphold the elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

7. Businesses should support a precautionary approach to environmental challenges.
8. Businesses should undertake initiatives to promote greater environmental responsibility.
9. Businesses should encourage the development and diffusion of environmentally friendly technologies.



ANTI - CORRUPTION

10. Businesses should work against corruption in all its forms, including extortion and bribery.

THE ADVANCED LEVEL OF COMMUNICATION ON PROGRESS AND CORRELATION WITH GRI-G4 GUIDELINES

Starting from 2014, Acea decided to further increase consistency between the principles set forth in the "Global Pact" and the actions undertaken, with **the elements meeting the *advanced* level *of* Communication on Progress** being identified in the *Sustainability Report*, as under the Global Compact.

Below is a table that lists and outlines such elements according to 21 criteria defined by Global Compact and shows their correlation[7] with the general standards and specific standards (*DMA* and indicators of the material aspects identified) of the *GRI-G4 Guidelines* used in preparing the *Sustainability Report* based on the "*comprehensive*" level of compliance. For the pages of the document where the relevant data and information may be found, reference should be made to the *GRI-G4 Content Index*.

TABLE 3
THE ELEMENTS OF ADVANCED COP AND GRI-G4 GUIDELINES

GC - Advanced Criteria	GC – Matching Scopes	Link with GRI-G4 (general and specific standards – material aspects)
	Integration of sustainability in Corporate Functions and Business Units	from G4-34 to G4-55
CRITERIA 1-2 Implementing the Ten Principles into Strategies & Operations	Integration of sustainability in the value chain	G4-12 – G4-13 – G4-41 – G4-EC9 – DMA of the aspect *Supplier Environmental Assessment* – G4-EN4 – G4-EN17 – G4-EN32 – G4-EN33 – DMA of the aspect *Supplier Assessment for Labor Practices* – G4-LA6 – G4-LA14 – G4-LA15
CRITERIA 3-5 Robust Human Rights Management Policies & Procedures	**HUMAN RIGHTS** Commitments, strategies, policies; Management systems; Monitoring and evaluation mechanisms	The aspect Human Rights and indicators related to it, as proposed by GRI-G4 Guidelines, are relevant for multinational enterprises. Acea has therefore considered such aspects non-material. In the meaning that the Global Compact gives to aspects relating to Human Rights (such as employment protection, freedom of Association, non-discrimination, etc.), they are included in other aspects of the GRI-G4 Guidelines, deemed "material", as well as in the "material themes" of Acea and are therefore covered in the report.
CRITERIA 6-8 Robust Labour Management Policies & Procedures	**LABOUR** Commitments, strategies, policies; Management systems; Monitoring and evaluation mechanisms	Labor practices and decent work - DMA and indicators of the aspects: *Employment* (from G4-LA1 to G4-LA3) *Labor/Management Relations* (G4-LA4) *Occupational Health and Safety* (from G4-LA5 to G4-LA8) *Training and Education* (from G4-LA9 to G4-LA11) *Diversity and Equal Opportunity* (G4-LA12) *Equal Remuneration for Women and Men* (G4-LA13) *Supplier Assessment for Labor Practices* (G4-LA14, G4-LA15) *Labor Practices Grievance Mechanisms* (G4-LA16)

[7] This chart was defined using the document called *Making the Connection: Using the GRI G4 Guidelines to Communicate Progress on the UN Global Compact Principles*, available online at www.unglobalcompact.org.

GC - Advanced Criteria	GC – Matching Scopes	Link with GRI-G4 (general and specific standards – material aspects)
CRITERIA 9-11 Robust Environmental Management Policies & Procedures	**ENVIRONMENT** Commitments, strategies, policies; Management systems; Monitoring and evaluation mechanisms	Environmental - DMA and indicators of the aspects: *Materials* (G4-EN1) *Energy* (from G4-EN3 to G4-EN6) *Water* (from G4-EN8 to G4-EN10) *Biodiversity* (from G4-EN11 to G4-EN13) *Emissions* (from G4-EN15 to G4-EN21) *Effluents and Waste* (from G4-EN22 to G4-EN24, G4-EN26) *Products and Services* (G4-EN27) *Compliance* (G4-EN29) *Transport* (G4-EN30) *Overall* (G4-EN31) Supplier Environmental Assessment (G4-EN32, G4-EN33) Environmental Grievance Mechanisms (G4-EN34)
CRITERIA 12-14 Robust Anti-Corruption Management Policies & Procedures	**ANTI CORRUPTION** Commitments, strategies, policies; Management systems; Monitoring and evaluation mechanisms	from G4-56 to G4-58 Society - DMA and indicators of the aspects: *Anti-corruption* (from G4-SO3 to G4-SO5) *Public Policy* (G4-SO6)
CRITERIA 15-18 Taking Action in Support of Broader UN Goals and Issues	Strategies, business activities, promotion and engagement with stakeholders to support UN sustainable development goals (SDGs)	DMA of the aspects included in the categories Economic, Environmental and Social (*Labor practices and decent work*, *Society, Product Responsibility*)
CRITERIA 19-21 Corporate Sustainability Governance and Leadership	CEO commitment and leadership	G4-1, G4-2
	Board adoption and oversight	from G4-34 to G4-55
	stakeholder engagement	from G4-24 to G4-27
High standards of transparency and disclosure	Use of the GRI-G4 Guidelines	from G4-3 to G4-13
External Assessment		G4-33

INDEPENDENT AUDITORS' OPINION LETTER

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Building a better working world

Independent auditors' report on the limited assurance engagement of ACEA Group's Sustainability Report as of December 31, 2015
(Translation from the original Italian text)

To the Shareholders of ACEA S.p.A.

We have carried out a limited assurance engagement of the "Sustainability Report 2015" (hereinafter "Sustainability Report") of ACEA S.p.A. and its subsidiaries (hereinafter "ACEA Group") as of December 31, 2015.

Management's responsibility on Sustainability Report
The Management is responsible for the preparation of the Sustainability Report in accordance with the "G4 Sustainability Reporting Guidelines", issued in 2013 by GRI - Global Reporting Initiative, that are detailed in the paragraph "Methodological note" of the Sustainability Report, as well as for that part of internal control that they consider necessary in order to allow the preparation of a Sustainability Report that is free from material misstatements, even caused by frauds or not-intentional behaviors or events. The Management is also responsible for defining the ACEA Group's commitments regarding the sustainability performance and for the reporting of the achieved results, as well as for the identification of the stakeholders and of the significant matters to report.

Auditors' responsibility
It is our responsibility the preparation of this report on the basis of the procedures carried out. Our work has been conducted in accordance with the criteria established by the principle "International Standard on Assurance Engagements 3000 - Assurance Engagements other than Audits or Reviews of Historical Financial Information" ("ISAE 3000"), issued by the International Auditing and Assurance Standards Board for the engagements that consist in a limited assurance. This principle requires the respect of relevant ethical principles, including those related to independence, as well as the planning and the execution of our work in order to obtain a limited assurance that the Sustainability Report is free from material misstatements. These procedures included inquiries, primarily with company's personnel responsible for the preparation of the information included in the Sustainability Report, documents analysis, recalculations and in other procedures in order to obtain evidences considered appropriate. The procedures performed on the Sustainability Report were related to the compliance with the principles for defining report content and quality, as articulated in the "G4 Sustainability Reporting Guidelines", and are summarized below:

a. Comparison of the economic and financial data and information included in the Sustainability Report with those included in the ACEA Group's consolidated financial statements as of December 31, 2015, on which we issued our auditors' report, pursuant to art. 14 and 16 of Legislative Decree n. 39 dated April 6, 2016;
b. Analysis, through interviews, of the governance system and of the process to manage the issues related to sustainable development regarding Group's strategy and operations;
c. Analysis of the process relating to the definition of material aspects included in the Sustainability Report, with respect to the criteria applied to identify priorities for the different stakeholders' categories and to the internal validation of the process outcome;

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d. Analysis of the operating mode of the processes supporting the initiation, recording and management of the quantitative data reported in the Sustainability Report. In particular, we have carried out the following procedures:
   - interviews and discussions with personnel of the Management of ACEA S.p.A. and of its subsidiaries ACEA Ato2 S.p.A., A.R.I.A S.r.l. and ACEA Produzione S.p.A., to obtain an understanding about the information, accounting and reporting system in use for the preparation of the Sustainability Report, as well as about the internal control processes and procedures supporting the collection, aggregation, data processing and transmission of data and information to the department responsible for preparation of the Sustainability Report;
   - analysis on a sample basis of the documentation supporting the compilation of the Sustainability Report, in order to confirm the processes in use, their adequacy and the operation of the internal control for the correct processing of data and information referred to the objectives described in the Sustainability Report;
e. Analysis of the compliance and internal consistency of the qualitative information included in the Sustainability Report to the guidelines identified in paragraph "Management's responsibility on Sustainability Report" of the present report;
f. Analysis of the process relating to the stakeholders engagement, with reference to the procedures applied, through the review of minutes or any other existing documentation relating to the main topics arisen from discussions with them;
g. Obtaining of the representation letter, signed by the legal representative of ACEA S.p.A., relating to the compliance of the Sustainability Report with the guidelines indicated in paragraph "Management's responsibility on Sustainability Report", as well as to the reliability and completeness of the information and data presented in the Sustainability Report.

The data and information which are subject to the limited assurance are reported, in compliance with "G4 Sustainability Reporting Guidelines", in the table "GRI-G4 Content Index" of the Sustainability Report. Our engagement is less in scope than reasonable assurance engagement in accordance with ISAE 3000 and, as consequence, we may not have become aware of all the significant events and circumstances which we could have identified had we performed a reasonable assurance engagement.

Conclusion

Based on our work, nothing has come to our attention that causes us to believe that the "Sustainability Report 2015" of ACEA Group as of December 31, 2015 is not in compliance, in all material aspects, with the guidelines "G4 Sustainability Reporting Guidelines" issued in 2013 by the GRI - Global Reporting Initiative, as stated in the paragraph "Methodological note" of the Sustainability Report.

Rome, April 8, 2016

Reconta Ernst & Young S.p.A.

Filippo Maria Aleandri, Partner

This report has been translated into the English language solely for the convenience of international readers

Sports Hall (Palatiziano)-Rome

CORPORATE IDENTITY

Overview Acea's headquarters in Piazzale Ostiense. Photo by Fabio Anghelone, Acea Archive

GROUP PROFILE

ACEA'S HISTORY

First established in 1909 as Azienda Elettrica Municipale (AEM) in the Municipality of Rome for the purpose of providing energy for public and private lighting, the company's development path has been characterised by the growth of its business segments: first through the running of the aqueduct service (since 1937) and then through the acquisition of the treatment service (in 1985) and the areas reached by the service.

In the 90s, Acea acquired legal status and entrepreneurial independence and, eventually, in 1999, became a joint-stock company listed on the Italian Stock Exchange. Starting from the year 2000 and throughout the following decade, Acea gained a stronger foothold as a public utility operator across the Capital, taking over the energy distribution business from Enel SpA (2001) and acquiring the management of the sewerage service for the Rome Municipal Area (2002), thereby undertaking an industrial development and growth path by partnering with GdF-Suez (a French leading operator), resulting in the establishment of AceaElectrabel joint venture engaging in the energy sector (2002). During this time, Acea extended its operations to the (i) electricity generation and sale sector by acquiring, for example, an equity interest in Tirreno Power and expanding its commercial channel to reach areas outside Rome as well; (ii) water sector by taking over the management of the integrated service in the Optimum Areas of Operation (locally known as ATOs) located in Lazio, Tuscany and Campania; and (iii) environmental sector (waste-to-energy) by acquiring companies operating in the industry (2006). In 2010, Acea resolved to wind up the joint venture with its partner GdF-Suez and became independent within the energy sector by establishing companies fully owned by it: Acea Energia and Acea Produzione.

In recent years, the company has been focusing on the development of environmental businesses and the management of technological innovation and electricity distribution operating efficiency activities with a view to becoming a "smart utility for smart cities". Today, Acea has undertaken an **internal organisational and technological evolution path known as *Acea2.0***. An integral and cross-cutting business transformation project aimed at having the company gain a nation-wide leading role in innovation and creation of value for the stakeholders by devising state-of-the-art digitalisation projects and change management schemes that will change the business model and corporate culture through the engagement of Acea's people and modernisation of company processes.

ACTIVITIES AND FUNCTIONS OF THE MAIN COMPANIES OF THE GROUP

Acea is one of Italy's leading multiutilities that has been engaging in energy network, integrated water and environmental services for over a century. The Company started its industrial endeavours in the area of Rome, where it still holds a leading role in the energy and water sectors, then extending its franchise across the whole country, with special reference to the central and southern area of Italy, by acquiring equity interests and participating in the operational management of other local public service businesses.

The Group conducts its business by relying on an effective and sustainable operating and economic and financial management, complying with corporate social responsibility principles, fostering a sustainable development of the local areas, and pursuing widespread progress shared with all the relevant stakeholders.
Today, Acea is Italy's leading water operator in terms of inhabitants reached. Moreover, according to the latest data published by AEEGSI it ranks third in terms of distributed volumes of electricity and fourth in terms of volumes sold on the end-user energy market. With regard to the environmental area (Waste-to-Energy), it ranks sixth in terms of volumes of waste treated at a national level.

TABLE 4
THE ACEA GROUP FIGURES (2015)

Employees (number of, by % of consolidation)	4,978
Net Revenues (€/m)	2,917.3
Total Capitalisation (€/m)	3,787.3
Bonds	*1,904*
Shares	*1,098.9*
Long-term Loans	*784.4*
Total Assets (€/m)	6,706.9
Electricity	
Generation (GWh) (gross)	783.07
of which from renewable sources (GWh) (gross)	612.91
Hydroelectric	*449.19*
Photovoltaic	*13.93*
Waste to Energy	*149.79*
Distribution (GWh)	11,200
Sale (GWh) (free market and enhanced protection market)	9,418
Electricity and gas customers (number)	1,439,393
Waste to Energy (WtE)	
Energy Generation (GWh) (gross)	307
Waste burnt (t)	339,763
RDF	*239,871*
pulper	*99,892*
Public Lighting	
Lighting points managed in Rome (number)	195,176
Water (integrated water service)	
Drinking water supplied (Mm^3)	657.6
Number of tests on drinking water	1,167,959
Wastewater treated (Mm^3)	895.9
Inhabitants served in Italy (millions)	8.6
abroad (millions)	3.6

Note: Figures relating to energy generation pertain to Acea Produzione, Acea Reti e Servizi Energetici and A.R.I.A., a company wholly-owned by Acea SpA; figures relating to the water services, pertaining entirely to the Group, refer to the main water companies.

The specific business areas and territorial reach of Group companies are essentially shown in chart 2.

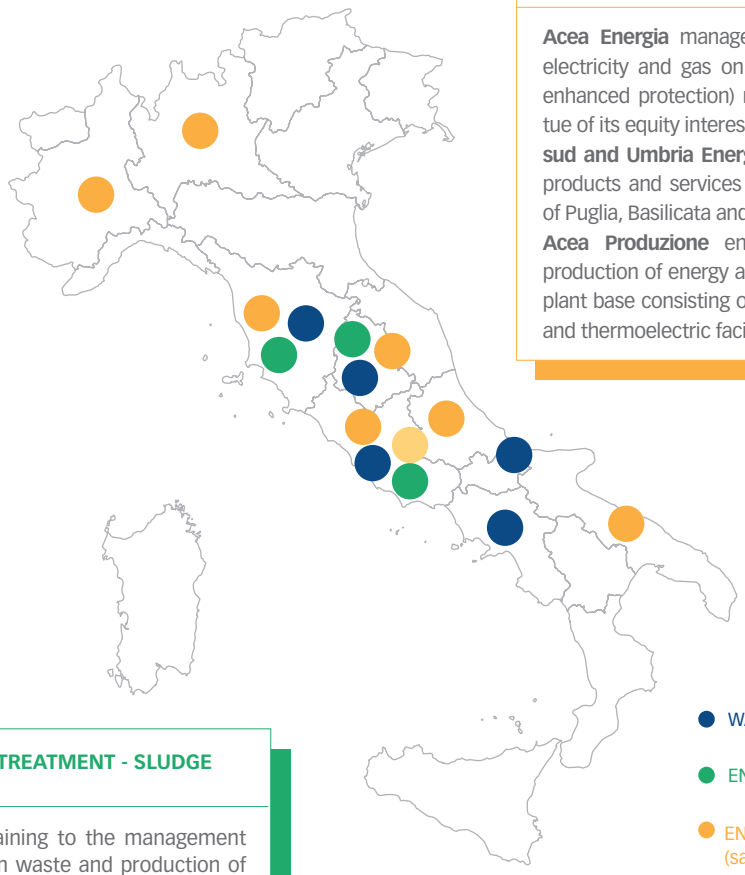
CHART 2
ACTIVITIES CONDUCTED BY ACEA'S KEY COMPANIES ACROSS THE ITALIAN TERRITORY

DISTRIBUTION - PUBBLIC LIGHTNING - ENERGY EFFICIENCY

Acea Distribuzione plans, designs and builds distribution plants (stations) and manages distribution and metering services on HV/MV/LV networks in the Municipalities of Rome and Formello. It also manages cemetery lighting systems in the Municipality of Rome.
Acea Illuminazione Pubblica engages in the management and development of functional and artistic lighting systems in Rome.
Acea Reti e **Servizi Energetici** acts as an ESCO *(Energy Service Company)*, supplying energy efficiency services for internal (efficiency gain obligations under Ministerial Decree dated 20 July 2014) and external customers, while ensuring supervision of technological innovation as related to energy savings.
Ecogena designs and rolls out cogeneration and trigeneration plants.

ELECTRICITY GENERATION - ENERGY AND GAS SALE

Acea Energia manages the sale of electricity and gas on the (free and enhanced protection) market. By virtue of its equity interests held in **Elgasud and Umbria Energy**, it offers its products and services in the regions of Puglia, Basilicata and Umbria.
Acea Produzione engages in the production of energy and heat with a plant base consisting of hydroelectric and thermoelectric facilities.



WASTE-TO-ENERGY - RDF PRODUCTION - WASTE TREATMENT - SLUDGE RECOVERY AND DISPOSAL

A.R.I.A. engages in environmental operations pertaining to the management (treatment and disposal), production of energy from waste and production of RDF. A.R.I.A., a leading industry operator in Umbria and Lazio, operates with its own plants in Terni, Paliano and San Vittore del Lazio as well as with firm SAO.
AQUASER, in conjunction with Kyklos, Solemme and ISA, is involved in the stages of recovery, treatment and disposal of sludge resulting from the wastewater treatment phase of the integrated water service.

WATER COLLECTION - TRANSPORT - DISTRIBUTION - SEWERAGE - WASTEWATER TREATMENT - ANALYSIS AND PLANNING

In **Tuscany and Umbria** the Group operates through the following companies: **Acquedotto del Fiora**, delivering the service in 56 Municipalities in the provinces of Siena and Grosseto; **Acque**, operating in 55 Municipalities in the provinces of Pisa, Florence, Pistoia, Siena and Lucca; **Publiacqua**, a contractor for the water service operating in 55 Municipalities in the provinces of Florence, Pistoia, Prato and Arezzo; **Nuove Acque**, reaching 37 Municipalities in the provinces of Siena and Arezzo; **Umbra Acque**, reaching 38 Municipalities in the provinces of Perugia and Terni.
In **Lazio** and **Campania** the following companies are active: **Acea Ato 2**, managing the integrated water service in Rome and 111 additional Municipalities across the province; **Acea Ato 5**, providing the service in 86 Municipality in the province of Frosinone; **Gori**, acting as service contractor in 76 Municipalities in the provinces of Naples and Salerno.
Other operations are managed through **Gruppo Crea** in the Municipalities of Lucca, Terni, Rieti, Benevento and Termoli.

RESEARCH AND LABORATORY

Acea Elabori provides laboratory, research and development services as well as engineering services (designing and supervising works) engaging primarily in water and environmental operations for Acea Group companies.

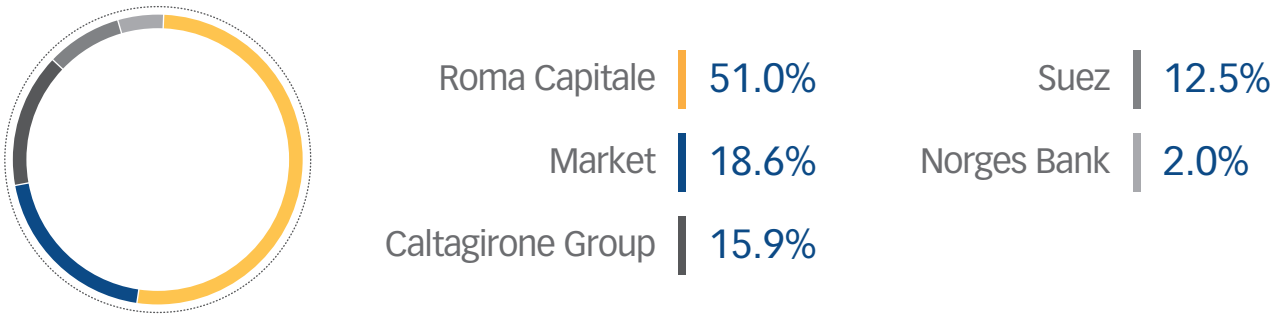
CUSTOMER CARE

Acea8cento manages customer care operations for the operating companies of the Acea Group, with special emphasis on remote contact channels.

CAPITAL STRUCTURE, ORGANISATION AND BASIS OF CONSOLIDATION

Acea SpA is listed on the Electronic Stock Exchange organised and managed by Borsa Italiana. The Municipality of Rome is Acea SpA's majority shareholder, holding 51% of its share capital. At **31 December 2015**, other significant direct or indirect equity interests were held by the Caltagirone Group (15.9%), Suez (12.5%) and Norges Bank (2.0%). The rest of the market holds 18.6% of the share capital.

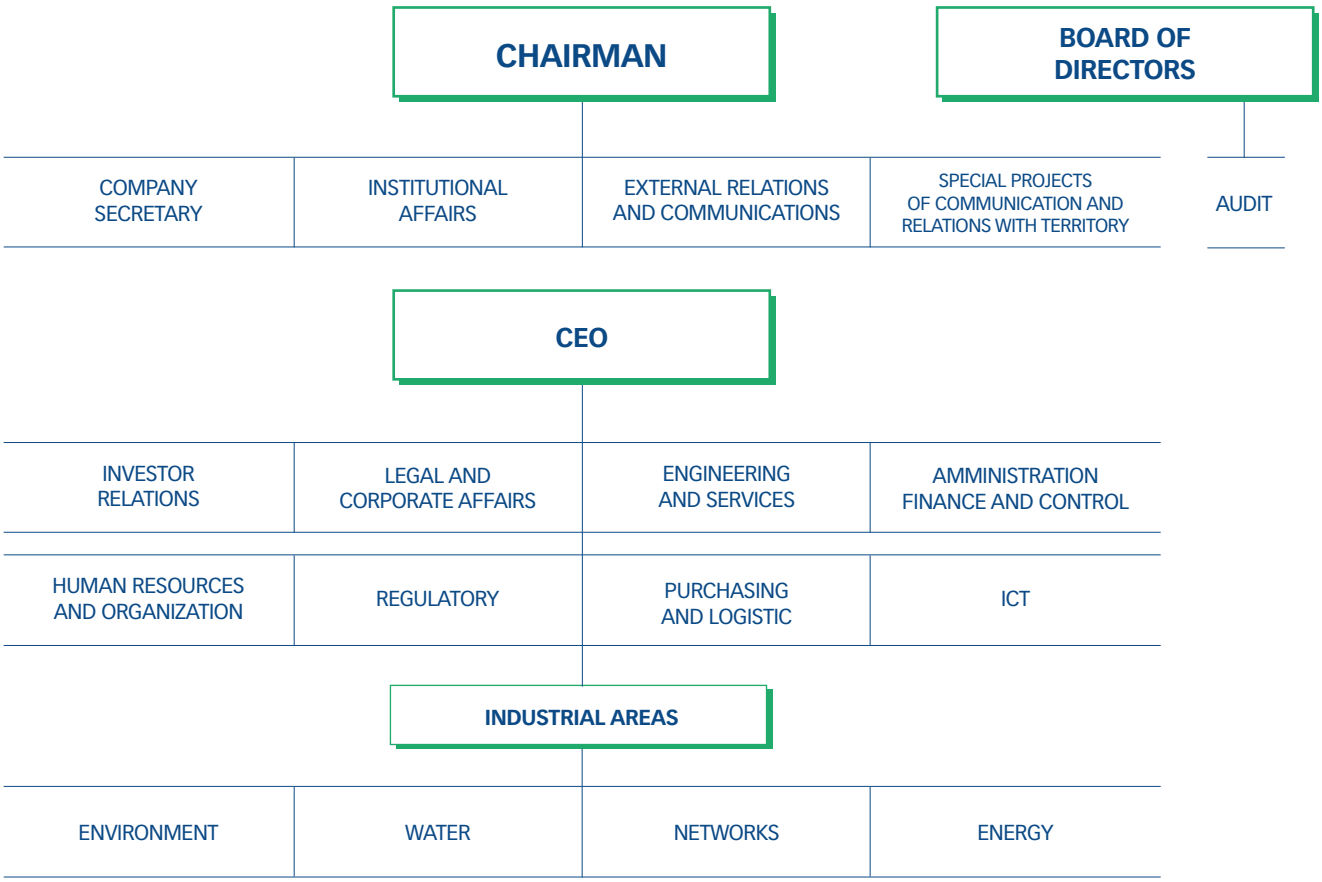
CHART 3
CAPITAL STRUCTURE AT 31 DECEMBER 2015



SOURCE: **CONSOB** - Only shareholdings of 2% or greater are shown

Acea SpA (parent company) holds the corporate shareholdings and discharges duties pertaining to **strategic policy, control** and **economic and financial co-ordination** of the Group's activities. It also provides management support to the operating companies by supplying executive, legal, logistical, technical, financial and administrative services. Acea SpA's **organisational macrostructure** consists of **corporate functions** and **four business areas** - Water, Networks, Energy, Environment - to which the operating companies report (see chart 4).

CHART 4
ACEA SPA ORGANISATION CHART AT 31 DECEMBER 2015



The Group's scope of consolidation at 31 December 2015 **included 33 companies**, which were consolidated in the Financial statements according to the line-by-line method (see table 5) and **additional 29 companies that were consolidated according to the shareholders' equity method,** including water companies operating in ATOs other than those located in Lazio as well as other minor companies operating in the water, energy, environmental and related service sectors.

TABLE 5
BASIS OF CONSOLIDATION AT 31 DECEMBER 2015
(companies consolidated using the line-by-line method)

COMPANY NAME	REGISTERED OFFICE	EQUITY INTEREST HELD BY ACEA SPA	CONSOLIDATION METHOD
Acea Distribuzione SpA	Rome	100.00%	Line-by-line
Acea Illuminazione Pubblica SpA	Rome	100.00%	Line-by-line
Acea Ato2 SpA	Rome	96.46%	Line-by-line
Acea Ato 5 SpA	Frosinone	98.45%	Line-by-line
Acea Dominicana SA	Santo Domingo	100.00%	Line-by-line
Acea Gori Servizi Scarl	Pomigliano d'Arco (NA)	69.82%	Line-by-line
Acea Servizi Acqua Srl (*)	Rome	70.00%	Line-by-line
Acque Blu Arno Basso SpA	Rome	76.67%	Line-by-line
Acque Blu Fiorentine SpA	Rome	75.01%	Line-by-line
Aguazul Bogotà SA	Bogotà-Colombia	51.00%	Line-by-line
Crea Gestioni Srl	Rome	100.00%	Line-by-line
Crea SpA (*)	Rome	100.00%	Line-by-line
Gesesa SpA	Benevento	57.93%	Line-by-line
Lunigiana SpA (*)	Aulla (MS)	95.79%	Line-by-line
Ombrone SpA	Rome	99.51%	Line-by-line
Sarnese Vesuviano SpA	Rome	99.16%	Line-by-line
Acea Elabori SpA	Rome	100.00%	Line-by-line
Acea Energia SpA	Rome	100.00%	Line-by-line
Acea Produzione SpA	Rome	100.00%	Line-by-line
Acea8cento Srl	Rome	100.00%	Line-by-line
Cesap Vendita Gas Srl	Bastia Umbra (PG)	100.00%	Line-by-line
Ecogena SpA	Rome	100.00%	Line-by-line
Elga Sud SpA	Rome	100.00%	Line-by-line
Parco della Mistica Srl	Rome	100.00%	Line-by-line
Umbria Energy SpA	Terni	50.00%	Line-by-line
Voghera Energia Vendita SpA (*)	Voghera (PV)	100.00%	Line-by-line
Acea Energia Management Srl	Rome	100.00%	Line-by-line
A.R.I.A Srl	Terni	100.00%	Line-by-line
Aquaser Srl	Volterra (PI)	88.29%	Line-by-line
Innovazione Sostenibilità Ambientale Srl	Pontercorvo (FR)	51.00%	Line-by-line
Kyklos Srl	Latina	100.00%	Line-by-line
SAO Srl	Orvieto (TR)	100.00%	Line-by-line
Solemme SpA	Monterotondo Marittimo (GR)	100.00%	Line-by-line

(*) Pending liquidation or liquidated.

ACEA 2.0

THE ACEA2.0 PROGRAMME

In order to deal with the increasingly fast-paced changes of our times and view them as development opportunities, Acea has decided to innovate the entire organisation - changing the Group's management, operational and technological structure - and, at the same time, act on the corporate culture. To this end, the company has launched the Acea2.0 programme, an ambitious strategic project aimed at (i) radically overhauling operating procedures, (ii) harmonising the information systems underlying business processes, and (iii) seizing digital-related opportunities to create a new customer experience that will significant improve customer relations and satisfaction.

In addition to training opportunities and people engagement endeavours (see *Training and development of human resources* under *Human Resources*), Acea adopted the **change management model as conceived by John Kotter**, professor at Harvard Business School for the purpose of involving the employees in the change process started through the **Acea2.0** programme.
The challenge picked up through the Acea2.0 programme was expressly stated in the statement of ***La Grande Opportunità*** (The Great Opportunity), which was widely circulated within the company.

THE GREAT OPPORTUNITY OF ACEA GROUP

I nostri **Clienti** hanno già cambiato abitudini, bisogni e aspettative.
Lo **SVILUPPO TECNOLOGICO** ha già mutato radicalmente il modo di comunicare,
di interagire e di fare le cose. **NON** possiamo aspettare.
Vogliamo essere la **PRIMA** utility a rispondere alle nuove esigenze del nostro tempo
con uno straordinario **CAMBIAMENTO** tecnologico e del modo di lavorare.
Possiamo farlo grazie alla **PASSIONE** e al grande potenziale delle **PERSONE**
che costituiscono la **FORZA** di Acea e delle sue partecipate.
Segliamo il **FUTURO** Cambiamo insieme perseguendo eccellenza e valore per i clienti,
per l'azienda e per **NOI** stessi. Condividiamo la **Sfida** di essere migliori.

The pursuit of ***The Great Opportunity*** requires the participation and involvement of people at all levels and in all organisations. As an alternative to a single mainstream organisational system, which is not always able to respond to the necessary changes, a "dual" system will be proposed to provide momentum to the change process by relying on a streamlined network-like structure that allows information to be released quickly and to be transmitted timely to the hierarchical structure.

The Kotter's method features the following elements:

- **Voluntary involvement** of Acea Group's employees in order to ensure active participation in the change and undertake improvement actions;
- **Local acceleration and action teams** consisting of volunteers who build the agile model, with the former engaging in large-scale innovation and improvement projects having an immediate impact, and the latter acting on specific problems identified within their own working environments according to variable timeframes;
- **Leading (or governance) coalition** whose task is to implement, with passion and determination, concrete changes in the organisation of everyday work, selecting the best initiatives in order to reach, in conjunction with the line management, the challenging target set by The Great Opportunity;
- **Urgency team** whose task is to increase the number of volunteers through their direct involvement and by communicating success stories.

ACEA 2.0 | THE ACCELERATION TEAM
LET US GET TO KNOW OUR CUSTOMERS BETTER

The acceleration team called Let us get to know our customers better has worked to **restore the data regarding a specific cluster of Group customers**, with the goal of **raising the quality and efficiency of information present in the database** and accruing economic benefits. Thanks to the efforts made by volunteers, we now have an orderly and up-to-date database for a significant number of customers; given its efficacy, moreover, the working model may be extended to other Group companies.

ACEA 2.0 | THE LEADING COALITION TEAM
SUPPORTING ACEA ATO 2'S GO-LIVE

The *Acea2.0 Special Team* was created to support the colleagues of various companies operating in the go-live initiatives planned for the Acea2.0 programme, making available specific skills for the introduction of new processes.
54 persons, known as SAP Angels, from **8 Group companies**, in September supported the launch of the new SAP in Acea Ato 2.
Thanks to their assistance **70,000 job orders** were processed, and **1,105 transactions were generated using SAP Solution Manager**, making it possible to overcome the various difficulties encountered during the go-live of the new system.

GENERAL ECONOMIC INDICATORS

Following the growth path started by the management, results in 2015 reached the expected targets. **EBITDA** increased to 732 million euros (+2.0% over 2014), while **EBIT** stood at 386.5 million euros, showing a slight drop (-1% over 2014). **Group profit** stood at **175 million euros**, showing a 7.7% increase compared with the previous year.

TABLE 6
ACEA EQUITY AND FINANCIAL HIGHLIGHTS (2014-2015)

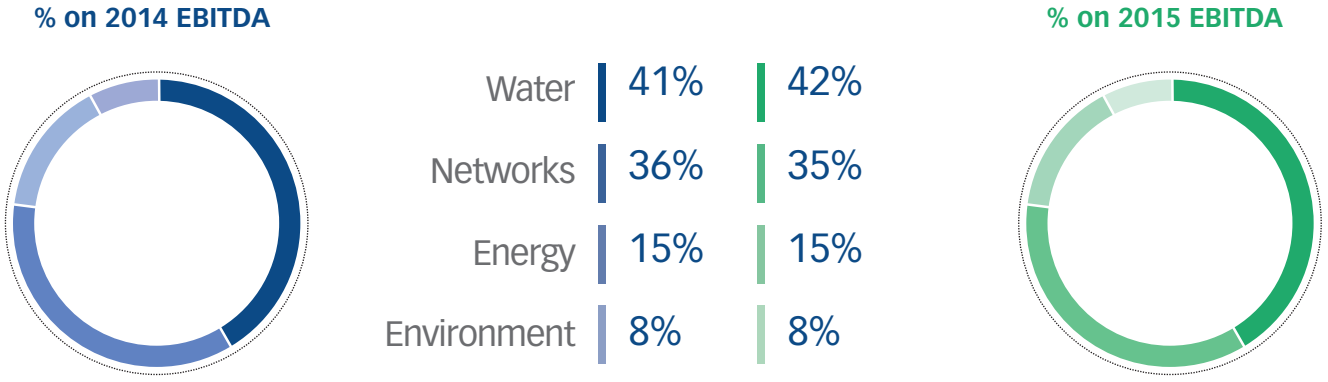
(millions of euros)	2014	2015
net revenues	**3,038.3**	**2,917.3**
operating costs	2,339.3	2,213.9
staff costs	*229.5*	*211.2*
costs of materials and overheads	*2,109.8*	*2,002.7*
income/(expense) non-financial investments	18.8	28.5
gross operating profit (EBITDA)	**717.7**	**732**
operating profit (EBIT)	**390.4**	**386.5**
financial operations	(101.2)	(91.1)
investment operations	0.5	1
profit/(loss) before tax	**289.8**	**296.4**
income tax	120.9	114.8
net profit (loss)	**168.9**	**181.5**
profit/(loss) attributable to non-controlling interests	6.5	6.6
net profit/(loss) attributable to the Group	**162.5**	**175.0**

Consolidated revenues in 2015 amounted to **2,917.3 million euros** (3,038 million euros in 2014). In the **energy and gas** sector income reached **2,021.9** million euros (-6.4% compared with 2014). **Public and cemeterial lighting** operations showed virtually stable trends (73.1 million euros in 2015 compared with 74.8 million euros in 2014), as was also the case with the sale of **green certificates** (20.9 million euros in 2015 compared with 21.6 million euros in 2014).
Environmental services (waste treatment, landfill management, RDF and compost production) showed revenues in the region of **37.5 million euros** (-4.8%).
Revenues from **water management** in Italy and abroad showed a balance of **592.5** million euros, rising by 0.75% compared with 588.1 million euros of 2014.

EBITDA reached **732 million euros**[8] (+2%) as a result of management efficiency measures implemented through the rationalisation and innovation of the operating processes. Excluding the corporate area, the following areas contributed to total revenues:

- **Water** operating segment (42%), with 310.8 million euros (292.2 million euros in 2014). This result was affected by tariff rises and a growth in the business of the companies consolidated using the equity method;
- **Network** operating segment (35%), with 255.7 million euros (253.3 million euros in 2014);
- **Energy** operating segment (15%), with 107.9 million euros (111.7 million euros in 2014), showing a slight drop despite an increase in margins on the enhanced protection service due to the booking of non-recurring cost items pertaining to previous periods;
- **Environment** operating segment (8%), with 57.4 million euros (54.5 million euros in 2014) as a result of greater amounts of energy produced and sold by the business area's plants.

CHART 5
CONTRIBUTION OF THE BUSINESS AREAS TO OVERALL EBITDA (2014-2015)



EBIT stood at **386.5 million euros** (-1% compared with 390.4 million euros in the previous year). EBIT is determined by the value of **amortisation**, **provisions and depreciation**, which stood at 345.5 million euros (+5.6% compared to 327.3 million euros in 2014). This change was due to several trends of its specific items, including on the one hand a decrease in doubtful receivables (from 110.2 million euros to 59 million euros in 2015) and, on the other hand, an increase in provisions (13.6 million euros to 52.5 million euros in 2015) and amortisation (from 203.5 million euros to 234 million euros in 2015).

[8] Revenues from water operations abroad accounted for about 1.7% of water-related total revenues and about 0.4% of the Group total revenues. A brief description of the operations abroad is provided under *Operations Abroad*.

OUTLOOK AND STRATEGIC PLAN

In 2015, many and significant developments took place, both in terms of context as well as within the organisation, which helped outline the baseline scenario for Acea's guiding lines.
Firstly, it should be stressed that the **progressive implementation of the Acea2.0 Programme** as described above provides the company with a strong drive for renewal, including its way of approaching the market. Indeed, while operating in regulated sectors and under monopoly systems for most of its businesses, such as the integrated water service and electricity distribution, Acea endeavours to qualify as a company that acts based on a competitive reward approach and is able to compete with the top players of the European market.
This attitude is reflected **throughout the value chain, involving and rearranging the supply system** of the Group as well, the purpose being to **build reliable, long-term and key relations with business partners** and seek the co-operation of structured and dependable operators whose activity helps reach the challenging performance goals set by Acea for the benefit of its customers and stakeholders. Based on such inputs, the first lots of single procurements were awarded for the maintenance of Acea Ato 2, Acea Ato 5 and Acea Distribuzione water and electricity networks.
The developments named above are instrumental in aligning Acea's planning and management processes with the relevant external context, seizing the opportunities emerging therein.
One of the most significant and emerging opportunities pertains to the **role of Multiutilities for the Development of Smart Cities**; an increasingly concrete and topical scenario in an area where the interconnection of service networks (energy and ICT) and user evolution (prosumer) creates product innovation and brings about changes in functioning paradigms (distributed generation), thereby driving further innovative developments in other network-based businesses (water and environment). In this connection, reference is made for example to the extension granted by the AEEGSI in 2015 - following the results attained - for the experimentation of *smart grid* pilot projects by a group of electricity distribution companies, including Acea Distribuzione.
In addition, opportunities arising at a regulatory level include the provisions of the **2015 Stability Law**. Indeed, this measure addresses the consolidation of local public utilities, contemplating benefits for the local authorities who dispose of investments in such companies - such as excluding from the requirements of the internal Stability Law capital expenses incurred by local authorities with the proceeds of disposals - so as to overcome the excessive fragmentation of operations (chiefly in the water and environment sectors), promote industrialisation and the growth in the size of companies as well as unlocking infrastructural investments. Emphasis is also placed on the approval of the **Environmental Measure connected with the Stability Law** as it introduces provisions for the promotion of Green economy nation-wide (see relevant box).

APPROVAL OF THE ENVIRONMENTAL MEASURE

Towards the end of 2015, the draft law on Green economy was approved *(Environmental provisions to promote green economy measures and reduce the excessive use of natural resources)*. The above measure, first introduced as **Environmental Measure** connected with the Stability Law, covers many topics, including environmental impact evaluation, waste management, blue economy, preventing hydro geological imbalance, green procurement, sustainable mobility and circular economy.
A wide-scale regulatory package that aims to introduce environmental considerations on manufacturing cycles, company behaviours and the life of local communities and citizens.
In particular, a key role is played by the mandatory introduction of **green purchases by public administrations (known as GPP – Green Public Procurement)**, resulting, among other things, in aids extended to companies for participating in such tenders, provided that they own environmental certification systems or marks, such aids consisting in reductions in sureties provided or preference criteria in contract awards.
The adoption of such policies will help drive the market towards low-environmental-impact products and services, while encouraging companies to revisit their manufacturing strategies, which will most likely set off virtuous circles.

As to the regulatory background, where the **AEEGSI** plays a pivotal role in governing both the energy and water sectors, emphasis is placed on the publication of the new **2015-2018 Strategic Framework** (Resolution 3/2015/A), whereby the Authority's future strategic lines of action were defined, as they represent the backdrop for all operators of regulated services (see relevant box).

THE AEEGSI 2015-2018 STRATEGIC FRAMEWORK

At the beginning of the year, the AEEGSI published the 2015-2018 Strategic Framework, illustrating the **priority areas requiring action**, they being crucial to tackle challenges and opportunities arising from European and national medium-term scenarios in the water, electricity and gas regulated sectors.
In particular, the strategic lines to be pursued in the energy sector include: **making electricity markets increasingly safe, efficient and integrated** given the changes brought about by technological developments and decentralised production; **empowering network operators to develop infrastructure on a selective basis** to provide strategic support to network upgrading and adequacy in order to respond to emerging market demands; **promoting an increase in competition** by providing, among other things, value-added services (energy efficiency) and developing demand engagement.
As to the water sector, the Authority has defined three main areas of action: **stabilising the regulatory framework to support infrastructural investments** by rationalising the industry's governance framework - the goal also being to uniform service level across the Country - and identifying innovative solutions to deal with the considerable need for investments; **promoting the operators' efficiency and sustainability of water consumption** by identifying operating efficiency metrics and criteria for defining (energy and environmental) recognised costs; **protecting users while curbing delinquencies** by introducing a water social tariff for low-income households and consumer protection measures.

With account also being taken of these elements, Acea adjusted its growth path by approving the **2015-2019 Business Plan** during the year, such plan focusing on operational and organisational efficiency, innovation and improvement of the quality of services.

According to the Business Plan, investments should increase to **2.3 billion euros**, to be allocated chiefly to regulated activities and the Environment segment.

KEY LINES OF ACEA 2015-2019 BUSINESS PLAN

BUSINESS AREA	STRATEGY
ENVIRONMENT WASTE-TO-ENERGY AND ENVIRONMENTAL SERVICES	• New investments for upgrading waste-to-energy and composting capabilities • Gaining a stronger foothold in the Lazio region with a view to becoming Italy's largest operator in the industrial treatment of waste
ENERGY GENERATION, SUPPLY AND SALE OF ELECTRICITY AND GAS	• Optimising customer portfolio and developing the energy efficiency offering • Energy production plant renewal plan • Improving the quality of services delivered and customer relations by designing high-technological content services (social networks, CRMs, digital channels, billing processes and systems)
WATER INTEGRATED WATER SYSTEM (AQUEDUCT, DISTRIBUTION, TREATMENT, SEWERAGE)	• Increasing leadership on the Italian water market by consolidating, among other things, operations across the areas covered by Acea • Increasing investment in infrastructure and adopting state-of-the-art te-chnologies in operational management
NETWORKS POWER DISTRIBUTION, ENERGY EFFICIENCY, TECHNOLOGICAL INNOVATION, PUBLIC LIGHTING SYSTEM SERVICE	• Carrying on network modernisation activities with a view to smart city • Revamping and extending the public lighting network by employing LED systems

STRATEGY AND SUSTAINABILITY

ACEA: VALUES AND CONTRIBUTION TO SUSTAINABILITY

Acea acts as a network-based service company of public interest: its commitment to the quality of the services provided to the general public in sensitive sectors such as water, energy and environment, its efficiency in using the resources employed in industrial processes and the protection of the environment from which such resources are taken, its focus on the social dynamics of the areas in which it operates, make the Company a key player for the attainment of social goals and the promotion of the economic and civil development of local communities.

Corporate social responsibility as a way to pursue sustainable development is, therefore, embedded in Acea's identity and the Group is committed to spreading CSR values, culture and practises both within the organisation and in the areas in which it operates.

Since it was first incorporated as a public company, the Group's path of expansion on the market, business growth and industrial consolidation has been supported by the development of tools and policies that currently cover the most important stages of planning, managing and accounting of corporate social responsibility.

CHART 6
CSR TOOLS

LISTENING AND ENGAGEMENT

- CSR Training
- Analyses and Research
- Customer Satisfaction Surveys
- Materiality Analysis
- Stakeholders engagement (e.g. AceaxRoma)

REPORTING AND COMMUNICATION

- Sustainability Report
- Website
- Comunication on Progress (Global Compact)

MEMBERSHIPS AND RATINGS

- CSR Manager Network
- Global Compact Network Italy
- Ratings and ESG (Environment, Social, Governance) Indexes

RULES AND PROCEDURES

- Code of Ethics - Ethics Committee
- Organisation, management and control model (MOG) 231
- Quality, Environment, Safety, Energy, SA8000, EMAS Certifications
- QASE, Antitrust Policies
- Diversity Committee

Acea pays attention to the initiatives and signals coming from the **institutional**, **national and international context** in respect of sustainability and corporate social responsibility matters, as they provide a baseline and guiding lines for such issues.

In 2015, in particular, **three international level events** - which will continue to act as landmarks also in the near future - underscored the global community's mature request for sustainable development: (i) the publication of Pope Francis' **Laudato si' Encyclical**, (ii) the definition of the new **UN Sustainable Development Goals**, and (iii) the **COP21** meeting held in Paris.

The documents that gave rise to such insights - regardless of the different sources - show an extraordinary **convergence of the scientific, political and religious** towards **a common perspective of commitment** where **the topic of sustainable development** and man's responsibility for the Planet is viewed as the **paradigm for interpreting the future** (more information about the COP21 meeting in Paris and the *Sustainable Development Goals* is provided under *Environmental issues*, *Sustainable development and environmental protection within Acea*).

At the national level, two major events are underscored with respect to Corporate Social Responsibility: (i) the updating of the ***Code of Conduct for Listed Companies*** in July, where the rules for a good corporate governance now include for the first time the **assessment of sustainability risks by the Board of Directors** of a company, and (ii) the launch of **Benefit Companies** (known as "B-Corps") following the year-end approval of the Stability Law. This resulted in Italy being the first European country (and the second worldwide) that contemplates a form of companies who endeavour to overcome the *profit-no profit* dichotomy by qualifying as companies *for benefit*, that is pursuing financial goals as well as common benefit purposes (see relevant box).

BETWEEN PROFIT E NON PROFIT: BENEFIT COMPANIES

Pursuant to the 2016 Stability Law, **Benefit Companies** (also known as "B-Corps") may be established and operated in Italy, the first European and the only country worldwide apart from the USA that has established such a legal form. It identifies companies that «in addition to sharing profits in the pursuit of their business, they pursue one or several purposes of common benefit and operate in a responsible, sustainable and transparent manner towards the individuals, communities, regions and environment, cultural and social property and activities, agencies and associations as well as other stakeholders». The vision set out is to address and provide legal form and representativeness to the ever growing number of increasingly organised companies who are pondering over their nature, recognising and enhancing social purposes that tie in with financial goals. Such enterprises also aim to play a role in the pursuit of benefits extended to larger audiences of stakeholders as opposed to their own shareholders only. To this end, they set forth specific requirements, including in terms of Articles of Association. Joining the discussion regarding the possible reconciliation between socially committed companies and economically structured social organisations is a third player, benefit companies, who over time may prove to be the ideal solution.

Sharing Corporate Social Responsibility Topics

Acea also eagerly takes part in expert networks, workgroups, *think tanks* and projects organised by academic circles, civil society, institutions or business entities regarding sustainability. In this connection, it should be stressed that Acea is:

- a member of the ***CSR Manager Network*** operating on the initiative of the Altis-Università Cattolica of Milan, which gathers Italy's most active companies in the field of corporate social responsibility;
- a member of ***Global Compact Network Italy Foundation***, the body representing the United Nation Global Compact in our country.

Acea plays an active role in the thematic working groups of, and meetings and workshops held by, the above organisations, where it provides insights by sharing its own specific experiences and participating in collective projects and undertakings.

By virtue of the extensive experience gained in corporate social responsibility matters, the company is invited on a regular basis to attend public conferences or university master courses on the subject, either as a sponsor or speaker.
During the first two-month period of 2015, Acea organised a **multistakeholder focus group** as part of the approach to the **materiality analysis** for reporting on major sustainability topics as under the **GRI-G4 standard** (also see *Methodological Note*). **The results** of these discussion groups, which the company acquired as context benchmarks, **were first presented to and discussed with the heads of the corporate organisational units** during a meeting held by an expert on corporate sustainability, and then provided in writing to external stakeholders.

Moreover, on 5 June 2015, on the occasion of the presentation of its *2014 Sustainability Report*, Acea took the opportunity to promote an **exchange among the different players regarding the changes related to the implementation of Directive 95/2014** on non-financial reporting. The meeting, which was reported by the national press, was attended by Italy's major multiutilities and other external stakeholders involved in the matter to different extents: Utilitatis, Assonime, Global Compact Network Italy Foundation, Fondazione per lo Sviluppo Sostenibile, Pontificia Università San Tommaso d'Aquino-Angelicum, Consiglio Nazionale Commercialisti.

During the year, the CSR Unit also staged a **number of meetings** aimed at illustrating and clarifying **the topic related to "environmental expenses"** involving all Group companies interested in the subject, the purpose being to share the approach and encourage internal discussions.
The goal being pursued is to raise corporate culture awareness and increasingly align Acea's CSR activities with the topics considered as material following a comparison between corporate strategies and stakeholders' demands. At the time of publication of this Report, moreover, **a process was underway for a review of sustainability goals** and the drafting of the new Sustainability Plan of the Group, the purpose being again **to encourage sharing and a multilateral debate**.

On a regular basis, the company is subject to CSR performance reviews and assessments by external observers and is duly recognised for the good results achieved. More specifically, the Group was awarded with CEEP CSR Label 2014-2015 as part of the initiative promoted by the European Commission and the CEEP (European Centre of Employers and Enterprises Providing Public Services) aimed at supporting and encouraging the development of CSR practices.

In 2015, the company took part in the **fourth edition of the Top Utility Award**, a project that evaluates and rewards **the Italian public utility system based on an integrated view of economic, financial, social and environmental sustainability**. The review was applied to **the top 100 Italian utilities in terms of total sales**, including both public and private businesses. It relied on **186 criteria** regarding their financial position over the past three years, operations, communication, social and environmental sustainability, relationships with the consumers and local areas, technological assets and innovation. **Acea was awarded the RSE** award for the **technological, research and innovation** category, thereby lending value to the commitment and results attained in the evolution of processes and use of state-of-the-art technologies. The company also ranked **among the top five finalists in the "sustainability" category,** together with A2A, Aimag, Edison and award-winning **Cap Holding**, as well as **in the "energy efficiency" category** together with Acque, A2A, Marche Multiservizi and award-winning **Enel**. The 5 finalists competing for the final prize - this year awarded to **Marche Multiservizi** - included the Acea Group's companies Acque and Publiacqua.

LED floodlights for the Trevi Fountain. Photo by Fabio Anghelone, Acea Archive

2014-2018 SUSTAINABILITY PLAN AND MEDIUM-TERM GOALS

This year, the infographics outlining the **2014-2018 Sustainability Plan is repeated: the goals** set by the Group in relation to the stakeholders' interests, and **medium-term objectives** defined in 2014 with the support of the **industrial area managers and Group Functions/Companies** and **approved by Acea SpA CEO and Chairman**.

In this connection, it should be noted that at the time this paper was drafted **a process was underway for the review of sustainability goals, consistent with the extensive renewal of the Group and the drafting of the new 2016-2020 Sustainability Plan.** These endeavours, solicited by the top management, are being made **in a col-**

TARGETS	CUSTOMERS AND COMMUNITY	SUPPLIERS	HUMAN RESOURCES
	We will improve relations with customers through the development of advanced management systems, and enhance the channels of contact. We will also express the Public Utility mission through involvement in the social environment.	We will enhance quality, environmental protection and safety in the supply of goods, services and works.	We will drive our people's growth and professional development by promoting an innovation-oriented culture in the pursuit of our business goals.
MEDIUM-TERM GOALS (2014-2018)	• Reach and exceed the changing standards for technical and commercial quality, set by the AEEGSI. • Improve the layout of the energy bill. Reduce service-desk waiting time. Gain customer loyalty. • Improve performance of the digital electricity meters, for fair and quick billing of consumption. • Organise on-line access to information about the plants with highest environmental impact. • Develop customer/citizen awareness about the correct use of water and energy resources. • Plan generous sponsorships, in keeping with Point 8.1 of the "Communication Plan" Group executive rule. • Support artistic, cultural and sports initiatives for the benefit of the community, with special attention to the suburbs. Introduce systemised pre and post-event evaluation of Group sponsorships. • Make on-line content more complete, timely and easier to access. • Launch the SAP "Workforce Management" (WFM) project, with application of advanced IT processes to operations management, for optimisation of resource use and reduction in task times. • Improve the quality of customer service and relations, through development of high-technological content in the services (digital and multichannel).	• Provide a vendor rating system for the operations of the different business areas. • Provide a supply chain monitoring tool for GRI-G4 reporting. • Develop Green Procurement for at least 50% of goods categories, included in the NAP. • Develop a simpler and more efficient supply process for works and services: the "Single Contract" Project.	• Extend the culture of merit to the entire company population, and the tools for its evaluation. • Promote the values of change and innovation as a way of company life, increasing the engagement and contribution from all individuals. • Develop professional development and training paths, including through intra-group mobility, which improve Group know-how: capable of meeting Acea's new challenges. • Apply an industrial relations model that enhances the prerogatives of the Trade Unions to take an active part in the Group's paths towards change. • Develop innovative organisational interventions for optimal performance and synergies. • Create a working environment and organisational culture that encourage merit and diversity.

lective form that requires top managers to undergo an **awareness-raising and development process** - with the support of CSR experts - on the main changes introduced in 2015 regarding sustainability and CSR on the national and international scene. They are also aimed at identifying a core of Group sustainability objectives related to the corporate strategy and stated within the operational structures. The new Sustainability Plan of the Group will be submitted to the Board of Directors for approval.

SHAREHOLDERS AND INVESTORS

We will ensure our governance system meets the highest principles of transparency and fairness.

We will support our management in the identification and assessment of business risks.

- Monitor the function and sufficiency of the Internal Control System. Confirm adherence to legislation, internal procedures and principle values.
- Regularly update the list of principle risks to Acea and its subsidiaries, through application of corporate risk self-assessment (CRSA).
- Support management in identifying improved controls for mitigation of risks and prevention of fraud.
- Provide financial communication geared to the markets, respecting principles of fairness, transparency and equal information among all interested parties (the general public, analysts, Italian and foreign investors).
- Introduce "non-financial" information in the Acea Annual Financial Report (European Union Directive No. 95, 22/10/2014).

THE COMPANY

We will ensure that Group companies are at the forefront of technological, process, and product innovation.

- Develop electric transport in the City of Rome.
- Modernise the electricity networks for correct function in response to the evolving demands of the system and markets, and for improved reliability, transport capacity and efficiency. Apply new technologies as part of the modernisation.
- Participate in EU-initiated projects for technological innovation.
- Centralise and standardise the IT hardware and software solutions of the Group companies.

ENVIRONMENT

We will develop enhanced methods of environmental management.

- Maintain and consolidate all management systems certified under ISO 14001 (Environment) and ISO 50001 (Energy) standards, integrated with ISO 9001 (Quality) and Safety (BS OHSAS 18001) systems standards. Pursue the extension of these systems to all Group companies.
- Begin implementation of Social responsibility management system SA 8000, in Acea SpA.
- Define the guidelines for the organisation of company events with low environmental impact, in keeping with ISO standard 20121.
- Reduce consumption by:
  - 10% for internal use of drinking water;
  - 3% for internal use of electricity;
  - 5% for heating and vehicle fuels.
- Reduce the "real losses" of water in the water distribution networks by 1%.
- Reduce the consumption from Joule effect (technical loss in networks) by 1.5% in the Rome electrical distribution network.
- Rome public illumination network: develop massive installation of LED lights within 2020.
- Monitor CO_2 emissions from processes, for estimation of the carbon footprint and planning of potential interventions.
- Carry out an energy diagnosis audit for the main Acea SpA and Acea Distribuzione buildings (operations centres).

CORPORATE GOVERNANCE AND MANAGEMENT SYSTEMS

CORPORATE GOVERNANCE WITHIN ACEA

Acea governance model complies with the *Code of Conduct for Listed Companies* and is consistent with the principles of **transparency, balance and segregation of policy-driven, management and control activities**.
The Board of Directors of Acea SpA **outlines the Group key policies** and is responsible for their management. **Two committees** are also operational within the parent company (the *Risk and Control Committee* and *Appointment and Remuneration Committee*) **discharging advisory and consultative duties** and interacting with the Company's leadership. In compliance with the regulations issued by the Italian Stock Exchange Commission (Consob), a committee was set up to review *Transactions with Related Parties* consisting solely of independent Directors. The Board of Statutory Auditors performs supervisory duties.
An *Ethics Committee* also operates within Acea. It consists of three non-executive Directors and two external members and its duties include promoting and spreading the *Group's Code of Ethics*[9] and supervising its application by Acea people. In 2015, the Ethics Committee met 4 times.

CORPORATE GOVERNANCE COMMITTEES

The Audit and Risk Committee helps define the guidelines for identifying, assessing, managing and monitoring the main risks for the Group companies, establishing compatibility criteria for such risks and supporting, subject to appropriate preliminary activities, the evaluations and decisions of the Board with respect to the internal auditing and risk management system. With regard to corporate audit activities, it approves the work plan prepared by the Head of the Internal Audit Function and provides its own opinion on any proposals for the appointment, removal and remuneration of the Head of the aforesaid Function, while monitoring the latter's independence, efficiency and performance. In 2015, the Committee met 4 times.

The Appointment and Remuneration Committee's duties include appointing and defining the emoluments of Directors holding particular proxies, the Chief Executive Officer and Executives holding key positions. It provides opinions to the Board of Directors regarding its composition (size, appropriate professional profiles, compatibility of positions) and recommends the policy for remuneration of Directors and Executives holding key positions, supporting medium and long-term sustainability and the balance between fixed and variable elements of remuneration depending on strategic goals and the risk management policy. In this connection, it submits recommendations for performance goals related to variable remuneration. In 2015, the Committee met 5 times.

Since its **listing on the Stock Exchange (1999),** Acea has constantly adjusted its corporate governance system: from its Articles of Association and internal operating procedures, to the relevant best practices and regulatory requirements introduced over time. Group companies adopt **Organisation, management and control models as under Legislative Decree 231/2001** (administrative responsibility resulting from offences) as well as **internal audit and risk management models and procedures**. In compliance with the latest guidelines stated in the *Code of Conduct for Listed Companies*, Acea conducts the ***Board Evaluation*** with the aid of an external consultant for the purpose of evaluating the size, composition and operation of the **Board of Directors and its internal Committees**. Today, Acea's Board of Directors consists mainly of women (5 members out of 9, including the Chairman).

THE SUPERVISORY BOARD OF THE 231 MODEL

The **Supervisory Board**, who is vested with full and independent decision-making and acting powers with regard to the operation and effectiveness of the *Organisation, management and control model* (MOG) adopted pursuant to Italian Legislative Decree No. 231/2001 for the purpose of **preventing the risk of offences** that may expose the Company to administrative liability. The Supervisory Bodies of the parent company and its subsidiaries supervise the effectiveness and adequacy of the MOG by constantly monitoring activities that may potentially lead to offences as under Legislative Decree 231/01. Specific control activities are, therefore, also carried out for the **prevention of risks** pertaining to crimes regarding the **environment**, **workers' safety** and **corruption and bribery**, through information flows transmitted by the corporate structures, complete with risk indicators. The Supervisory Board's duties in Acea SpA are discharged by the Board of Statutory Auditors with a view to rationalising the control systems. In 2015, 7 companies owned by the Group updated their MOG (Organisation, management and control model.

[9] The *Code of Ethics* of the Acea Group (2012 edition) is available both on the intranet and corporate website at www.acea.it.

The management of the Company is entrusted to **the Board of Directors** (BoD) consisting of 5 to 9 members as established by the shareholders' meeting. Board members, who are selected and appointed pursuant to Acea Articles of Association in compliance with applicable regulations, remain in office for three accounting periods and may be re-appointed. The method adopted for their election ensures equity between **genders**, the appointment of an appropriate number of **Directors to represent minority shareholders** and a minimum number of **Independent Directors** as laid down by law[10].

The Board in office, appointed by the shareholders' meeting held on 5 June 2014 and further supplemented with two additional directors by the shareholders' meeting held on 23 April 2015, **consists of nine members** (see relevant box); during the year, the Board met 16 times. **The Chairman** and **Chief Executive Officer** are the only **executive Directors**.

The ***Report on corporate governance and shareholders' structure***, available online on the company website at www.acea.it, provides detailed information regarding Acea SpA Directors, including *CVs*, independence requirements, attendance at Board and relevant Committee meetings as well as any offices held in other companies. With regard to Directors' remuneration, reference should be made to *Human Resource Empowerment and Communications* under *Human Resources*.

STRUCTURE OF THE BOARD OF DIRECTORS AND INTERNAL BOARD COMMITTEES OF ACEA SPA (AT 31 DECEMBER 2015)

	Position held in the Board	Appointment and Remuneration Committee	Audit and Risk Committee	Executive Director	Independent Director
CATIA TOMASETTI	Chairman			X	
ALBERTO IRACE	CEO			X	
ELISABETTA MAGGINI	Director	Chairman	Member		X
PAOLA ANTONIA PROFETA	Director	Member			X
ROBERTA NERI	Director	Member	Chairman		X
MASSIMILIANO CAPECE MINUTOLO DEL SASSO	Director	Member			X
FRANCESCO CALTAGIRONE	Director				
GIOVANNI GIANI	Director	Member	Member		
DIANE D'ARRAS	Director				X

ROLES AND POWERS OF ACEA BOARD OF DIRECTORS

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

- Outlining the Company's general and strategic policies as well as guiding lines; coordinating the economic and financial operations of the Group by approving business plans, including financial plans, investment plans and annual budgets;
- Defining the nature and extent of risk consistent with the strategic goals of the Company;
- Approving and amending internal regulations with regard to the general organisational structure of the Company;
- Establishing the Committees required by the *Code of Conduct* and appointing their members;
- Adopting *Organisation, management and control models* as pursuant to Legislative Decree No. 231/01;
- Assessing the adequacy of the organisational, administrative and accounting structure of Acea and its key subsidiaries;
- Interacting with the shareholders and undertaking initiatives aimed at increasing their engagement and enabling them to exercise their rights smoothly;
- Establishing audits for the protection of personal data or third party's sensitive data, complete with the drafting of an annual security policy report (Legislative Decree 196/03);
- Adopting the necessary procedures to protect the health of workers and appointing individuals to supervise safety in the workplace (Legislative Decree 81/08);
- Evaluating the independence of its non-executive members at least on a yearly basis.

[10] As pursuant to Article 147(b), paragraph 4 of Legislative Decree No. 58/98, known as Consolidated Text on Finance, the minimum number of independent Directors must be 1 in the event of a Board consisting of up to 7 members and 2 if the Board exceeds 7 members. During 2015, the Board checked whether Directors met the conditions required in order to be qualified as independent. At 31 December 2015, 5 Directors qualified as independent.

DUTIES OF THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

The **Chairman** is the legal representative of the Company and is vested with signing powers. He/she also has the power to call and chair Board and shareholders' meetings. His/her duties include: overseeing the Group's activities and checking the enforcement of board resolutions and *corporate governance* regulations; monitoring business activities and processes with reference to delivered vs perceived quality as well as activities related to **corporate social responsibility**; supervising corporate secretariat operations of the parent company.
The **Chief Executive Officer** is (i) entrusted with the ordinary business of the Company, (ii) vested with signing powers, (iii) the Company's legal representative and (iv) authorised to represent the Company in dealings before the courts of law. He/she shall also discharge such other duties as may be entrusted to him pursuant to law provisions and the Articles of Association. His/her terms of reference are based on long-term plans and annual budgets approved by the Board. Moreover, he/she ensures and monitors compliance with operational guidelines, implementing organisational and procedural changes to the parent company's activities consistent with the guidelines issued by the Board of Directors. The current Chief Executive Officer also holds the office of General Manager, without receiving any additional compensation in this respect.
The **Chairman and the Chief Executive Officer** report at least quarterly to the Board of Directors and the Board of Statutory Auditors on the general operating trend and outlook.
If necessary, the Chairman and Chief Executive Officer are entitled to jointly adopt acts lying with the Board of Directors as regards contracts, purchases, participation in tenders, issue of sureties and appointment of members of the Boards of Directors and Boards of Statutory Auditors of the Group's major subsidiaries if the urgency of the matters does not allow a meeting to be called, subject however to informing the Board of Directors in its first subsequent meeting in order to ascertain the legitimacy of any such actions.

The ordinary and extraordinary **Shareholders' Meeting can be summoned** by the **Board of Directors** as well as **upon request of the shareholders**, provided that they represent at least 5% of the share capital as pursuant to applicable law provisions. Furthermore, in compliance with such provisions, the shareholders representing at least 2.5% of the share capital may request that additional matters be discussed by either recommending additional topics or submitting resolution proposals for matters already included in the agenda. Shareholders are encouraged to attend by ensuring appropriate operating conditions, including technology-based interactions (electronic notice of shareholders' proxies; notice convening the shareholders' meeting posted on the website). Moreover, prior to the date set for the meeting, the shareholders may - even by email - submit enquiries regarding topics on the agenda. There are no shares with limited voting rights or non-voting shares[11].

Except for Roma Capitale shareholder, 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-decision process exist other than as a result of the equity interest held.

PROCESS FOR SETTING EMOLUMENTS FOR TOP MANAGEMENT

A policy is in place in Acea for the emoluments payable to top management, directors tasked with specific duties and executives holding key positions. The remuneration system regarding these individuals rests on a clear and transparent process, with a key role being played by (i) the Appointment and Remuneration Committee, as it is consulted and submits proposals concerning the Policy, and (ii) the Board of Directors, who approves it. Finally, the Shareholders' Meeting may set the fixed emolument of the Board members throughout their term of office and, furthermore, issues a resolution for or against the Policy as illustrated and reflected in the *2015 Remuneration Report*, such resolution not being binding as pursuant to Article 123-ter, paragraph 6, of the Consolidated Text on Finance.
During the 2014 Shareholders' Meeting, where the top management currently in office was appointed, a decision was made to reduce the emoluments of directors with regard to both their activity within the Board as well participation in internal committees. The variable component of the Chairman's remuneration was also eliminated. It should be stressed that following the decision made by the Shareholders' Meeting, the emoluments currently applicable to top management in Acea are, compared to market data, among the lowest observed. For example, the fixed compensation extended to the CEO is among the least distant compared to company average compensation. Finally, it should be noted that no independent external experts helped draft the Remuneration Policy. For more information, see the *2015 Remuneration Report* available on Acea website at www.acea.it.

[11] Except for 416,993 treasury shares (corresponding approximately to 0.2% of total shares) in respect of which the voting right is suspended in accordance with Article 2357(b) of the Italian Civil Code of Procedure. Reference should also be made to the *2015 Report on corporate governance and shareholders' structure.*

CHANGES INTRODUCED IN THE *CODE OF CONDUCT FOR LISTED COMPANIES* IN THE LIGHT OF SUSTAINABILITY

In July 2015, the Corporate Governance Committee established at Borsa Italiana SpA made a number of **changes to the *Code of Conduct for Listed Companies***, some of which are aimed at **implementing corporate social responsibility principles**. In this connection, Board duties now include an explicit reference to sustainability as a criterion based on which the Board must evaluate and define the level of risk compatible with the listed company's strategic goals. The changes will become applicable by year end starting in 2016, with information provided to the market through the corporate governance report to be published in the following financial year.

Bearing out the pivotal role that sustainability plays at the core of corporate governance and across the company business is the suggestion provided by the Code to companies listed under the FTSE Mib index, namely **to consider setting up an ad-hoc committee to be entrusted with the supervision of sustainability matters** connected with business operation and relations with stakeholders.
As a result of these changes and following the development of European regulations and a comparison with the best practices of other member States, such as Belgium, Denmark, Germany, Norway and Spain, the **Italian Code is in line with the most developed self-regulation disciplines**.

A number of **corporate Committees discharging technical and advisory duties** (Steering Committee, Management Committee, Business Review, Regulatory Steering) operate in the parent company to improve business integration and decision-making processes.

Sitting on such Committees are the heads of Acea SpA Business Areas and Divisions, with the Holding Company's Chief Executive Officer acting as Chairman. The topics to be dealt with by such Committees may require specific disclosures to be made to the Board.

The **Acea Internal Audit and Risk Management System** (**IARMS**) is a key element of the corporate governance structure comprising rules, policies, procedures and organisational structures aimed at:

- **Identifying** risks and opportunities **for the pursuit of the goals set by the Board of Directors**;
- Encouraging the adoption of **informed decisions** in line with corporate goals;
- **Protecting the corporate assets**, **process efficiency and effectiveness, reliability of financial disclosures** and **compliance with internal and external regulations**.

This system **applies across the entire corporate structure**, involving all corporate entities, albeit to different extents: the Board of Directors and internal board committees, the Director in charge of the IARMS (i.e., the CEO), the Board of Statutory Auditors, the Executive Responsible for Financial Reporting, the Supervisory Board, the Ethics Committee, the Audit Function, managers and employees.

CHART 7
THE KEY PLAYERS OF THE IARMS

INTERNAL AUDIT AND RISK MANAGEMENT SYSTEM

Board of Directors
It defines the Guidelines of the Internal Audit and Risk Management System (IARMS) **in order that the main risks pertaining to Acea may be identified, assessed and addressed**.

Chief Executive Officer
He/She implements the IARMS Guidelines and, upon relying on the support of the Audit Function, identifies the main business risks, submitting them to the Board of Directors.

Board of Statutory Auditors
It supervises compliance with law provisions and procedures as well as best practices and proper corporate governance.

Executive responsible for financial reporting
He/She is responsible for establishing and maintaining the Internal Audit System for Financial Disclosures.

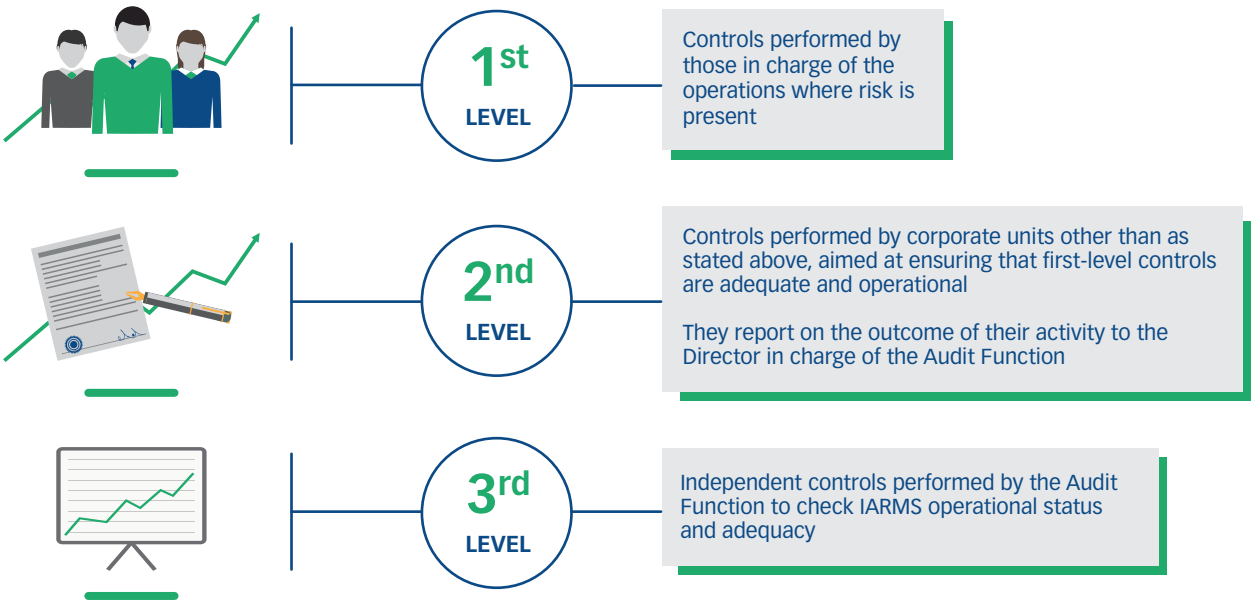
Supervisory Board
It is vested with independent powers to see to the functioning of MOG 231 (Organisation, management and control model), relying on the support of the Ethics Committee in areas of common interest.

Audit Function
It performs independent checks on the operational status and adequacy of the IARMS through a (risk based) audit plan approved by the Board of Directors; it also monitors the implementation of action plans developed following such checks.

Company Personnel
They contribute, in their respective roles as managers and employees, to maintaining an effective risk identification and management process, while operating in compliance with procedures in the discharge of line control duties.

Risk management is, therefore, a **cross-cutting process** that entails **widespread responsibilities and the involvement of all company levels**. It aims to: evaluate exposure to risks; identify actions to prevent or mitigate risks; execute audit tasks and management procedures or systems; transfer inacceptable risks, for example through insurance coverage.

CHART 8
RISK CONTROL FLOW



In 2015, a new Operating Instruction on the Information Flows of the Internal Audit System was issued. In addition to identifying the corporate structures who are to perform second-level supervising tasks in respect of some typical risks, it provides instruction on how to prepare an appropriate periodic report to be submitted to top management and governance bodies reflecting the supervisory tasks performed. As part of the periodical ***Control Risk Self Assessment (CRSA)*** processes designed and managed by the Risk Control and Internal Control Unit of the Audit Function, investigation proceedings were extended to include **all Acea SpA Functions and eight Group companies**. **The process involved more than 100 managers who were required to complete more than 1,500 assessment sheets** and describe the activities and systems implemented to control and mitigate the risks under management. The risks analysed include environmental and physical risks caused by **changes in climatic conditions**, as well as those connected with **regulatory compliance regarding the protection of water**, **waste disposal** and **gas emissions**, **health and safety at the workplace**, **quality of the service supplied** to customers/users.
By performing these tasks the Risk Control Unit **provides insight to the group in respect of the factors that may jeopardise the attainment of company goals and helps the management identify any actions for improvement**.

Extending the CRSA scope of investigation and redefining the processes to which risks are assigned have resulted in a greater ability to **extend the identification and assessment that have an environmental/social impact**, such as risks for not considering climatic changes in the management of the water urban cycle (use of techniques to reuse rain water, engagement of citizens in the management of water resources), risks/opportunities arising from the adoption of a stakeholder engagement model, risks/opportunities arising from interaction with stakeholders through social networks.

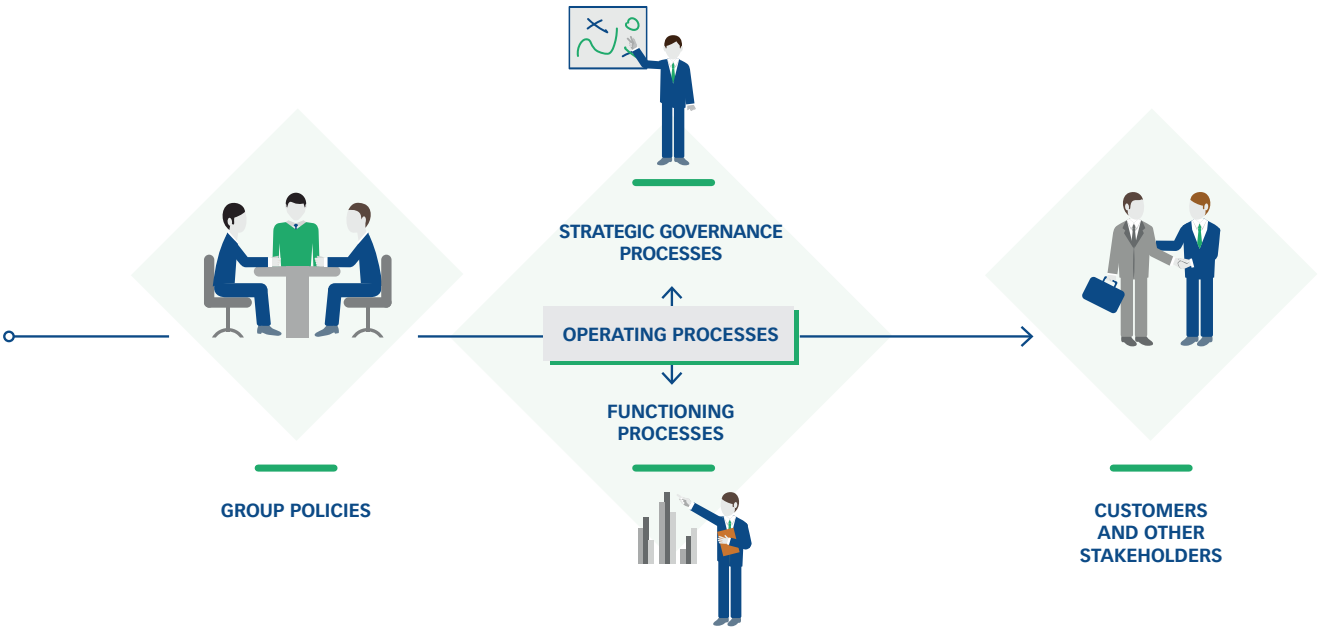
An **internal reporting system** is available for employees and external individuals to report any violations of law provisions, internal regulations and the *Code of Ethics* as well as any problems relating to the Internal Audit System, corporate disclosures, administrative responsibility of the company, frauds, conflicts of interest, consistent with the principles under the Guiding Lines of the Internal Audit System, *Organisational, Management and Control Model* under Legislative Decree 231/01 and the *Code of Ethics* itself (i.e., the "whistleblowing systems"). Consistent with national and international best practices, this reporting system ensures a specific and confidential communication channel as well as anonymity for those voicing their concerns.

MANAGEMENT SYSTEMS

The ***internal rule system*** supervises the proper running of the Group's corporate governance operations, from the issue of general guidelines to the formal statement of particular business aspects according to the following criteria:

- **Group-wise directional rules**, through which the parent company gives instructions to all corporate units;
- **Processes** consisting of governance, functioning and operating processes, depending on whether they pertain to strategic, across-the-board or individual business areas;
- **Procedures** defining the methods whereby company processes are implemented.

CHART 9
THE INTERNAL RULE SYSTEM



The **Human Resources and Organisation Division** of Acea SpA, through the Integrated Certification Systems Unit, deals with the definition, implementation and control of application of group-wise policies governing **quality**, **environment, energy, safety at the workplace**.
The Unit Head, in his/her capacity as Representative of the Acea Certified Management System Department is responsible for periodically reviewing and updating the ***Quality, Environment, Safety and Energy*** (QASE) ***Policy***, whereby Acea has stated its **integrated approach to matters pertaining to the Group's management systems**.

CHART 10
THE CERTIFIED INTEGRATED MANAGEMENT SYSTEM

At 31 December 2015, **19 companies of the Group** have their own **Certified management systems** consistent with **Quality**[12], **Safety**, **Environmental and Energy management standards**, with some facilities also holding **EMAS** Registration (see table 7). In particular, 4 Group companies attained new certifications during the year: **Acea Ato 2** achieved the Quality, Environment, Safety and Energy management system certifications; **Acque** integrated Quality, Environment, Safety and SA8000 management system certifications with ISO 50001 energy management system certification; **Aquaser** achieved Quality, Environment and Safety management system certifications.

As part of the management activities, it should be stressed that in 2015 the ***Environmental Sustainability Operating Processes*** Unit was set up within Acea Ato 2. Its task is to ensure that the orientation towards environmental sustainability is translated into action plans and specific undertakings.
Acea also relies on professional profiles such as the ***Energy Manager*** and ***Mobility Manager***, whose duty is to respond to the demands for optimum management of internal energy consumption and staff mobility, such demands being also reflected in law provisions. The duties of the Energy Manager and Mobility Manager are aimed at **seeking systemic efficiencies** and savings in important aspects related to the running of an organisation, such as **use of energy** and **employees' transfers**. The results of the work carried out by these professionals also create positive external effects in terms of lower use of resources and reduction in greenhouse gas emissions and optimisation of travelling times and routes for employees, respectively, while increasing road safety and reducing urban traffic (also see *Environmental issues*, *Air Emissions*).

[12] The process for UNI EN ISO 9001:2008 Quality certification attained by Acea SpA in 2015 allows the company itself and operating companies Acea Distribuzione, Acea Illuminazione Pubblica, Acea Ato 2 and Acea Ato 5 to meet the requirements for the SOA certificate (qualification for the execution of public works for the relevant types of work).

ACEA 2.0

The **Acea2.0** programme projects a fast-growing company from a technological and digital perspective. Against such a backdrop, the ***Information and Communication Technology*** Function plays a key role in supervising information management systems, with special attention to **safety and protection of the wealth of information processed**. In particular, safety procedures continued to be updated during the year. At the same time, the level of compliance of information system with the requirements under Legislative Decree 196/2003 (the privacy code) was verified, especially with regard to the technologies introduced by the **Acea2.0** programme. In this connection, the privacy organisational models of the main Group companies were updated (see *Institutions and the Company*).

With regard to privacy, the creation of a network should be finally underscored. It consists of resources from different Group companies who deal with relevant matters to the extent as lying within their province. Acea SpA provides guidelines, learning opportunities regarding subjects of common interest between companies, standards and specific forms, as well as opinions and professional support during proceedings before the Privacy Authority or inspections conducted by the Tax Police Special Squad. The companies, in turn, submit projects/processes that may have an impact on privacy, the purpose being to carry out the analysis aimed at identifying lines of action and specific solutions on a joint-effort basis.

TABLE 7
CERTIFIED MANAGEMENT SYSTEMS IN THE ACEA GROUP (AT 31 DECEMBER 2015)

COMPANY	CERTIFICATION SCOPE	QUALITY ISO 9001	ENVIRONMENT ISO 14001	SAFETY BS OHSAS 18001	ENERGY ISO 50001	OTHER CERTIFICATIONS
Acea SpA	• Planning, guidance and control for Acea Group companies. • Delivery of purchasing and logistics services on behalf of Acea Group companies; facility management; ICT; personnel and organisation; administration, finance and control; support to integrated management systems, quality, environment, health and safety and energy; health surveillance management. • Planning, building, operating, maintaining and refurbishing networks and plants for the licence-based management of the electricity distribution service in the Municipalities of Rome and Formello. • Planning, building, operating, maintaining and upgrading functional and artistic public lighting systems. • Planning, building, maintaining and refurbishing networks and plants for the management of the integrated water service in ATO 2 Central Lazio - Rome and ATO 5 Southern Lazio - Frosinone.	X	X	X	X	
Acea Elabori SpA	Planning and designing projects, project management, reports, monitoring and modelling activities for water and environmental projects.	X		X		ISO/IEC 17025:2005 (water tests)
Acea Ato 2 SpA	Planning, building, operating, maintaining and refurbishing IWS networks and management systems in ATO 2 Central Lazio.	X	X	X	X	
Acea Ato 5 SpA	Planning, building, operating, maintaining and refurbishing IWS networks and management systems in ATO 5 Southern Lazio.	X	X	X	X	
Crea Gestioni Srl	Running and operating IWS facilities.	X	X	X		
Publiacqua SpA	Designing and managing contracts for IWS construction works Delivery of IWS.	X	X			
Publiacqua Ingegneria SpA	Designing, supervising and testing IWS-related works .	X				
Acquedotto del Fiora SpA	Design and construction of IWS networks and management systems located in Ombrone ATO - Tuscany.	X				
Acque SpA	Design and delivery of IWS in Basso Valdarno ATO - Tuscany.		BEST4 PLUS (quality, environment, safety, SA8000, energy management)			
Nuove Acque SpA	IWS management.	X				SA8000
Umbra Acque SpA	Design and construction of IWS networks Supply of sewerage and water treatment services Città di Castello Northern Area.	X				ISO/IEC 17025:2005
Acea Gori Servizi Scarl	Engineering, technical and administrative services, supervising and testing IWS-related works.	X	X	X		

COMPANY	CERTIFICATION SCOPE	QUALITY ISO 9001	ENVIRONMENT ISO 14001	SAFETY BS OHSAS 18001	ENERGY ISO 50001	OTHER CERTIFICATIONS
Acea Distribuzione SpA	Planning, building, operating, maintaining and refurbishing networks and plants for the management of the electricity distribution service in Rome and Formello.	X	X	X	X	
Acea Illuminazione Pubblica SpA	Designing, building, operating, maintaining and refurbishing networks and plants for the global and integrated management of functional and artistic public lighting systems.	X	X	X	X	
Acea Energia SpA	Sale of electricity, heat and gas to free and protected markets.			X		
Acea Produzione SpA	Designing, building, operating and maintaining energy production plants (hydroelectric plants: Ferraris, Marconi, Cecchina, Madonna del Rosario, S. Angelo, Salisano, Volta; thermoelectric plants: Montemartini, Tor di Valle); supply of remote heating services.		X	X		
A.R.I.A. Srl	Generation of energy from RDF - Terni Plant.		X	X		EMAS
A.R.I.A. Srl	Production of energy from RDF - S. Vittore del Lazio Plant.		X	X		EMAS
SAO Srl	Design and management of urban and special waste treatment, recovery and disposal plants Collection and transportation of waste to be treated.		X	X		EMAS
Aquaser Srl	Collection, transport, recovery or transfer for disposal of non-hazardous waste produced from treatment and purification plants. Intermediation of non-hazardous waste.	X	X	X		

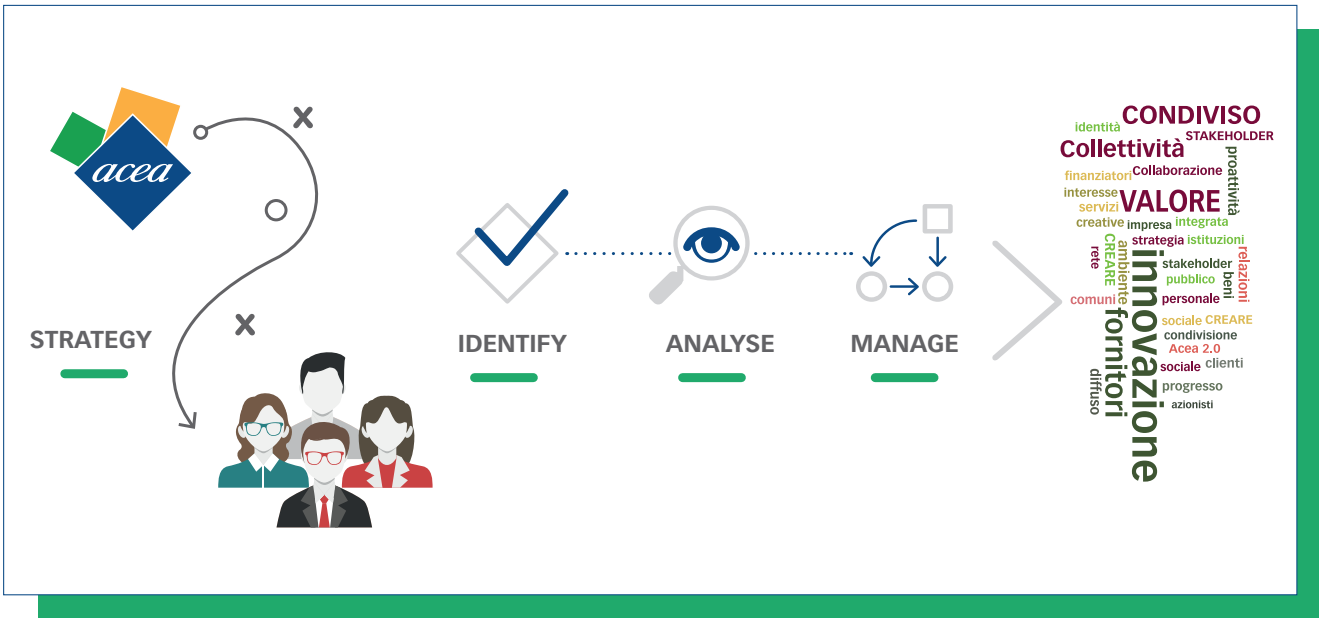
STAKEHOLDERS AND ALLOCATION OF GENERATED VALUE

STAKEHOLDERS AND THEIR INVOLVEMENT

Consistent with the values set forth in the *Code of Ethics*, Acea relies on dialogue and exchange to promote an approach to the engagement of his own stakeholders[13], enhancing the opportunities for the **creation of common value**.
Identifying the different types of stakeholders, analysing and managing interactions between them and the Company are continuous and dynamic activities **stemming from both company drives and objectives as well as inputs from outside**, such as requests from the parties concerned.

The **stakeholder identification** phase makes it possible to identify individuals who are directly or indirectly involved in company activities, the purpose being to evaluate the relevant qualitative and quantitative level of impact.
The **review** phase is used to perform a structured evaluation of the interactions existing both between the company and the stakeholders as well as among the stakeholders themselves so that dialogue and accountability paths may be developed.
Finally, the **management** phase leads to the identification of answers to the questions raised by the stakeholders and the company in order to pursue the attainment of company goals consistent with the stakeholders' expectations.

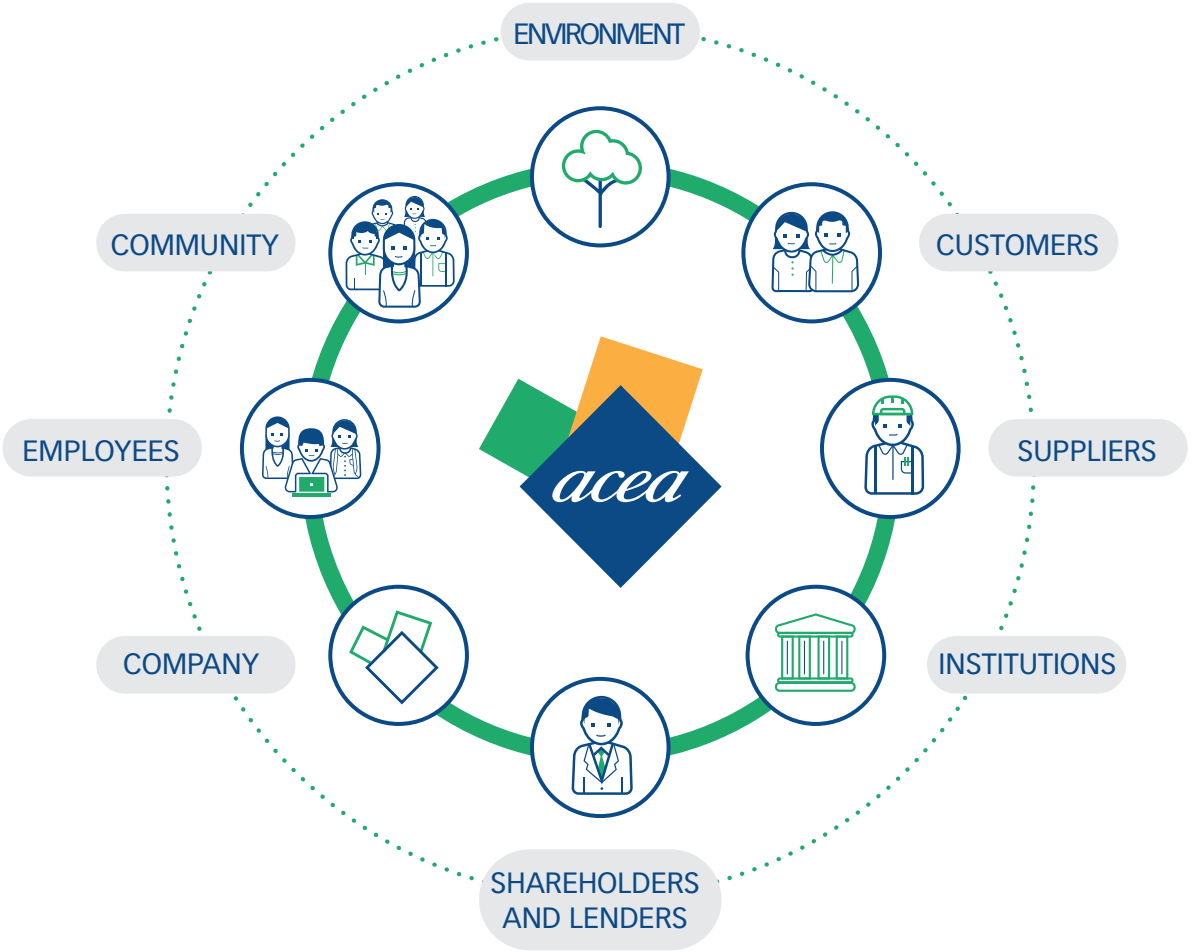
CHART 11
STAKEHOLDERS AND THEIR INVOLVEMENT



[13] *Stakeholders* are entities - individuals, groups or organisations - who have significant relations with the Company and whose interests are - to different extents - involved in the activities of the Company either by virtue of their dealings with the latter or because they are significantly influenced by such activities.

The "**Acea stakeholder map"** identifies the macro-categories of key stakeholders: customers, employees, suppliers, shareholders and lenders, institutions, community, environment and the company itself.

CHART 12
STAKEHOLDERS MAP



In respect of each one of them, engagement initiatives are undertaken which sometime result in collaborative paths that prove crucial to both fostering business development and reinforcing and enhancing the standing and repute ascribed to Acea by its stakeholders.

Starting from 2015, as a requirement for registering with **Acea Qualification Systems relating to (water, electromechanical and electrical) works, suppliers** are required to meet new obligations regarding sustainability, the purpose being to evaluate awareness on the matter as well as any actions already undertaken by the supply chain.
In particular, the contractors concerned are required to complete the **TenP Questionnaire** prepared by an ad hoc workgroup of *Global Compact Network Italy* based on the 10 Global Compact principles (in the areas of human rights, environment, employment, anti-corruption). Moreover, another mandatory requirement is the completion of the **QAS Questionnaire** on **quality, environment and safety**. The above initiatives, which this year were supported by a survey on a representative sample of the Group's suppliers and were combined with an internal and external auditing system, are designed to raise awareness in the *supply chain* and share key principles ensuring business sustainability also in the operating processes of Acea's main business partners.

Relations with the **capital markets** are managed to allow Acea to benefit from the best financial funding sustainability conditions and make investment in the company safe for and appreciated by investors (equity/debt). Relations with analysts, credit rating agencies, banks and shareholders are based on dialogue and aim to build a relationship of mutual trust supported by the quality of the initiatives and projects submitted by Acea and in which investors take part. One case fully meeting the above criteria was the funding obtained from the EIB (European Investment Bank) in 2015 for the implementation of a number of endeavours contemplated in the 2015-2019 Business Plan, which were found to be fully consistent with environmental and social sustainability principles. The interest in the ESG (Environmental, Social, Governance) analysis of investments is constantly growing and Acea is committed to having exchanges and discussions with the financial operators who adopt this approach.
As a proof of its commitment, the company is experiencing appreciation, such as the results achieved with the **Carbon Disclosure Project** or the inclusion in the **Ethibel Excellence Investment Register**.

With regard to internal stakeholders (**employees**) many engagement initiatives were undertaken, starting from all those stated in the **Acea2.0** programme and illustrated in different sections of the *Sustainability Report*, comprising opportunities for socialising and dialogue. During the year, extensive training activity was carried out and a survey on work-related stress as well as a focus group to gain further insight into the subject were completed. In addition, **the individual evaluation process was extended to all corporate population**, assessing performance and aptitudes, including leadership skills. In this process, which sets out to **enhance the employee's commitment**, emphasis is placed on **the collaborative relationship between the manager and the employee** as an optimum method for managing human resources, while possible development, growth and specific personal education goals are defined.
Two additional initiatives that involved employees in solidarity projects: *Acea AMA le Differenze* and *Acea per il Banco Alimentare-Più Buoni Più Aiuti*. With regard to the former, Acea employees gained further insight into the topic of environmental protection and safeguard as part of a co-operation agreement entered into with the company responsible for environmental hygiene of the Municipality of Rome. The latter was held in conjunction with Banco Alimentare (a Food Onlus Foundation), with Acea employees participating in a structured food raising project.

The customer viewed as a user and citizen. Indeed, network services are of a collective nature and **are crucial for the quality of life and development of local areas**.
Acea qualifies as **a customer-oriented company** and it is not by chance that Acea2.0 aims to implement an intense programme of evolution of the contact channels and related management systems, while pursuing challenging performance goals regarding the quality of the services supplied.
Acea constantly monitors service quality performance for the purpose of planning and driving its improvement. In this respect, the company conducts customer satisfaction surveys to measure customer experience. Customer engagement is activated on other occasions and in addition to structured interactions, such as relations with Consumer Associations. For example, in 2015, as part of the **Maker Faire**, event, SAP experts activated *design thinking* sessions for Acea to share and experiment **innovative projects for digital services**.

In its dealings with the **community**, Acea is increasingly acting as a **social innovation champion**, undertaking initiatives such as the ***Acea per Roma*** listening campaign for the development of urban quality projects. In its capacity as a multiutility engaging in the management and protection of water, environmental and energy resources, Acea adopts many awareness-raising campaigns designed to **increase the citizens' knowledge and awareness** of the use of natural resources and the value of a proper service management.
Finally, understanding the major role it plays in the communities in which it operates, Acea contributes to the citizens' well-being by supporting events and projects benefitting the general public, with special focus on **new generations**.

Environment is the key reference backdrop for all Group activities. The responsible and efficient use of resources, protection of natural areas where facilities and service networks are deployed, physical impacts and external effects caused on the ecological context by the operating processes are all aspects that Acea monitors and supervises on a daily basis. The widespread adoption of certified environmental management systems makes such approaches towards the environment both consistent and current, given the continuous improvement and constant definition of new management-related efficiency goals. As an example of a concerted action undertaken in 2015 with players operating across the territory, emphasis is placed on the demolition of power lines built in previous decades along Rome's Ostia coastline, such lines currently falling in natural protected areas too. Moreover, Acea also staged a number of meetings aimed at illustrating and clarifying the topic related to "environmental expenses" involving all Group companies interested in the subject, the purpose being to share the approach and encourage internal discussions.

As part of the activities relating to service planning and delivery, mediation with the communities and seeking solutions to common problems, the **institutions** (i.e., independent authorities, local and government agencies) have constant relations with the Group. Acea takes part in and organises consultation sessions. For example, a "Multi-institutional Round Table" was established within Acea Ato 2 in 2015, comprising the entities involved - to different extents - in handling drinking water sources across the Area. This initiative represents the first stage of the gradual implementation of a "Water Safety Plan" that reinvents the drinking water control model as a global system for managing the risk spanning the entire water sector, from collection to end-user point.

With a view to creating long-term value, **Acea** itself **pursues optimum management of its own strategic tangible and intangible assets**. The analysis of business operations, together with economic and financial data and operating outputs (i.e., service performance) are monitored with a view to continuous improvement and internal organisation strengthening. The *change management* and *business transformation* project underway aims to achieve a new corporate vision. The future Acea - digital, multi-channel, inclusive, proactive - will be the first milestone of this major commitment against a backdrop of general modernisation of Utilities, towards new global challenges and new service model. This process will require the constant engagement of all players and the development of integrated methods of co-operation between employees, organisational units, business partners and suppliers.

THE ACEA PER ROMA LISTENING CAMPAIGN

A widespread listening campaign that reached all Municipalities of Rome and an answer to put the efforts of active citizens into real practice. This was the **stakeholder engagement initiative** called ***Acea per Roma***, funded by Acea with 450,000 euros to support the completion of projects in each Municipality. This initiative required the citizens, individually or in groups, to outline social, educational, urban redevelopment, cultural and inclusion projects for their own local area. The motivation of the participants to create and be held accountable for the design and management of projects and to pursue the best possible results generated a **significant wealth of relations and intangible capital**. Of the 800 proposals received and published on the website for maximum transparency and sharing, 60% pertained to services to people, while the remaining 40% pertained to the redevelopment of urban areas and the purchase of materials for schools, libraries, green areas, with special reference to the construction of urban orchards and the recovery of recreational and sports areas. There was a considerable input from the city's suburban districts, where 75% of the proposals originated. At the end of the assessment process, 55 projects were eligible for funding.

DISTRIBUTION OF VALUE GENERATED BY ACEA

The economic value generated by the Acea Group in 2015, including revenues generated by core business operations and financial transactions, amounted to **2,967 million euros** (3,085.9 million euros in 2014).

Below is a breakdown of the above figure amongst the stakeholders: **67.4%** to **suppliers**, **14%** to the **company** as resources to be reinvested; **7.1%** to **employees**; **3.8%** to **shareholders** in the form of dividends; **3.7%** to **investors** in the form of interest on capital provided; **3.9%** to **public authorities**[14] in the form of taxes paid and **0.1%** to the **community** by way of sponsorships and donations for events and kindred endeavours.

TABLE 8
ECONOMIC VALUE DIRECTLY GENERATED AND DISTRIBUTED (2014-2015)

(in millions of euros)	2014	2015
Total economic value directly generated	3,085.9	2,967.0
Distribution to stakeholders		
Operating costs (suppliers)	2,106.4	1,999.5
Employees	229.5	211.2
Shareholders	91,6 (*)	113.2
Investors	129.4	111.2
Public administration	120.9	114.8
Community	3.4	3.2
Company	404.7	413.9

(*) In 2014, additional dividends were paid to the shareholders from reserves to the extent of 10.7 million euros.

TABLE 9
BREAKDOWN OF GENERATED VALUE BY STAKEHOLDER (2014-2015)

	2014 (%)	2015 (%)
Suppliers	68.3	67.4
Employees	7.4	7.1
Shareholders	3	3.8
Investors	4.2	3.7
Public administration	3.9	3.9
Community	0.1	0.1
Company	13.1	14

[14] The amount paid to the PA net of state and regional public contributions that Acea receives from this stakeholder (6.1 million euros) totalled 108.8 million euros.

Colosseum - Rome

SOCIO-ECONOMIC RELATIONS WITH STAKEHOLDERS

Video mapping projection on the Colosseum for "Legenda Aurea". Photo by Fabio Anghelone, Acea archive.

CUSTOMERS AND THE COMMUNITY

REFERENCE BOUNDARY

Data pertaining to the volume of customers relates to Acea Energia and, with regard to water, to Acea Ato 2, Acea Ato 5, Acque, Publiacqua, Acquedotto del Fiora, Umbra Acque and Gori (even though the water companies operating in Tuscany, Umbria and Campania are consolidated using the shareholders' equity method); data pertaining to perceived quality, delivered quality, customer care and communication activities relates to a narrower boundary and to the operating companies from time to time referred to in the text.

The interactions among Acea, customers and community are described and illustrated in one single chapter, as the information and data related to the services delivered - **perceived quality, delivered quality, customer care** - refer mainly to the **central and southern Lazio area, where the two stakeholders virtually coincide**[15]; on the other hand, data referring to electricity and water service customers comprises all areas covered by the operating subsidiaries.

[15] In the area of Rome and provincial districts Acea runs the integrated water service, the supply of electricity (for more than 1 million customers), distribution of energy and public lighting service. As a result, customers and communities in this area virtually coincide. Moreover, in the area of Frosinone and related provincial district, Acea manages the integrated water service. For (financial, social and environmental) data pertaining to subsidiaries, operating in the water sector in other areas, reference should be made to Water Company Data Sheets.

ACEA GROUP CUSTOMERS: ELECTRICITY AND WATER SERVICES

APPROXIMATELY **1.3 million** CUSTOMERS FOR THE SALE OF ENERGY

MORE THAN **144,000** GAS CUSTOMERS

APPROXIMATELY **1.6 million** CUSTOMERS FOR THE DISTRIBUTION OF ENERGY

MORE THAN **810,000** WATER CONNECTIONS ACROSS LAZIO (Acea Ato 2 and Acea Ato 5)

EQUAL TO **4.2 million** INHABITANTS REACHED

2.5 million WATER CONNECTIONS ACROSS ITALY

EQUAL TO **8.6 million** INHABITANTS REACHED

According to the data published by the Authority for electricity, gas and water[16], **Acea Energia** is **Italy's fourth largest operator in terms of volumes sold on the energy sale end-user market**, with a **3.9% market share**. Furthermore, the company is the second largest national operator in terms of volumes sold to customers in the enhanced protection market, with its market share rising to 5% (from 4.3% of the previous survey), and is ranked sixth in terms of volumes sold to the free market, with a 3.6% market share (3.8% in the previous survey).
In 2015, Acea Energia managed **around 1,440,000 supply contracts** as a result of combined sales of energy and gas (see table 10). Customer base changes year over year, either upwards or downwards, depending on the normal competitive patterns of an energy sale market that has been already fully liberalised for more than eight years. In particular, between 2015 and 2014 a **slight drop** (5.6% overall) was observed in the customer base of the different energy market segments ("free" and "enhanced protection")[17] managed by Acea Energia; compared with 2014, the sector showing the largest decrease (-9.8%) is the free market, mass market.

Acea Distribuzione is **Italy's third largest operator** in terms of **volumes of electricity distributed**, with a 3.8% market share, and **Italy's second largest operator** in terms of **customer base**[18]. In its capacity as holder of the ministerial licence, the company delivers energy across the areas of Rome and Formello and in 2015 its **overall withdrawal points exceeded 1,620,000**. The trend of the customer base is due to both urban expansion and disposals resulting, for example, from discontinuance of businesses (see table 10).

Acea is also **Italy's leading integrated water service operator** (catchment, supply, purification, wastewater collection and treatment) in terms of **population covered**, with a **more than 2.5 million connected users** and an overall base consisting of **about 8.6 million inhabitants in Italy** (see table 10). The company, the water service long-standing operator in Rome and Fiumicino where it boasts about 626,000 connections (i.e., 3.7 million inhabitants) has progressively extended its reach, becoming the reference operator for other Optimum Areas of Operation (locally known as ATOs)[19] in the provinces of Rome and Frosinone (Lazio), Pisa, Florence, Siena, Grosseto, Arezzo and Lucca (Tuscany), in the areas ranging from the Sorrento peninsula to Vesuvian towns in the provinces of Naples and Salerno (Campania) and in the area of Perugia and Terni (Umbria). The Group also operates in a number of South American countries[20].

[16] Reference should be made to the *Annual report on the state of services and activities carried out*, 2015 edition, *Structure, pricing and quality in the electricity sector* section avaliable online on the AEEGSI website.
[17] The relevant national Authority accurately defines the energy market segments. See AEEGSI, *Glossario della bolletta elettrica* (annex to Resolution No. 500/2013/R/COM dated 7 November 2013). "Enhanced protection" customers receive energy under the terms and conditions laid down by the AEEGSI, whereas "free market" customers choose the supplier from whom and the terms and conditions under which electricity may be purchased, based on the offers available on the market.
[18] Reference should be made to the *Annual report on the state of services and activities carried out*, 2015 edition, *Structure, pricing and quality in the electricity sector* section avaliable online on the AEEGSI website.
[19] The Italian territory, in compliance with Law No. 36/1994, known as the "Legge Galli", whereby water services were reorganised, is divided into Optimum Areas of Operation (ATOs) based on water catchment areas. For information regarding ATOs where Acea operates through subsidiaries, reference should be made to the paragraph dedicated to the main Group Companies under *Corporate Identity* and the *Water Company Data Sheets* chapter.
[20] See *Operations abroad*.

TABLE 10
SOCIAL INDICATORS: ACEA GROUP CUSTOMERS (energy and water sectors) (2013-2015)

	U.M.	2013	2014	2015
SALE OF ENERGY AND GAS (Acea Energia)				
Enhanced protection market	(Number of withdrawal points)	1,071,557	1,023,316	980,946
Free market - mass market	(Number of withdrawal points)	224,733	293,737	264,928
Free market - large accounts	(Number of withdrawal points)	76,543	53,899	49,334
Free gas market	(Number of redelivery points)	98,676	154,601	144,185
Total	**(Number of supply contracts)**	**1,471,509**	**1,525,553**	**1,439,393**
ENERGY DISTRIBUTION (Acea Distribuzione)				
Low voltage household customers	(Number of withdrawal points)	1,299,523	1,305,010	1,304,281
Low voltage non-household customers	(Number of withdrawal points)	319,934	318,307	314,068
Middle voltage customers	(Number of withdrawal points)	2,925	2,885	2,886
High voltage customers	(Number of withdrawal points)	7	7	7
Total	**(Number of withdrawal points)**	**1,622,389**	**1,626,209**	**1,621,242**
SALE AND DISTRIBUTION OF WATER (Main water companies of the Acea Group)				
Acea Ato 2	(Number of connections)	590,499	591,580	625,952
Acea Ato 5	(Number of connections)	188,487	187,121	185,673
Acque (*)	(Number of connections)	323,449	323,505	324,124
Publiacqua	(Number of connections)	384,290	385,968	388,365
Acquedotto del Fiora	(Number of connections)	234,286	234,156	234,122
Gori	(Number of connections)	541,438	523,803	523,144
Umbra Acque	(Number of connections)	230,439	230,849	231,372
Total	**(Number of connections)**	**2,492,888**	**2,476,982**	**2,512,752**
Acea Ato 2	(population served)	3,700,000	3,700,000	3,700,000
Acea Ato 5	(population served)	460,000	460,000	470,000
Acque (*)	(population served)	782,297	735,404	735,404
Publiacqua	(population served)	1,229,691	1,229,691	1,229,691
Acquedotto del Fiora	(population served)	407,469	407,469	494,766
Gori	(population served)	1,441,170	1,441,170	1,441,170
Umbra Acque	(population served)	501,351	506,999	505,912
Total	**(population served)**	**8,521,978**	**8,480,733**	**8,576,943**

(*) Acque's 2014 data was adjusted based on the latest final data; 2015 data pertaining to "population" is to be considered as temporary.

QUALITY PERCEIVED

MORE THAN **18,700 people** WERE HEARD
ACROSS LAZIO THROUGH CUSTOMER SATISFACTION SURVEYS

2015 OVERALL RATINGS ON THE SERVICES SUPPLIED:

ELECTRICITY SERVICE «SALES»: **7.4**/10

ELECTRICITY SERVICE «NETWORK»: **7.6**/10

PUBLIC LIGHTING SERVICE: **6.3**/10

WATER SERVICE (ROME AND FIUMICINO): **8**/10

WATER SERVICE (FROSINONE AND PROVINCIAL DISTRICTS): **5.5**/10

Every year Acea measures **customer and citizen satisfaction with regard to the services supplied** in the electricity, water[21] and public lighting areas.
Customer satisfaction surveys are administered by a qualified independent contractor identified through a tendering process, with the support of a dedicated team within the parent company.
The Institutional Relations Unit of the holding company, in conjunction with the operating companies running the services, co-ordinates the process and follows the different phases of the surveys: from drafting the questionnaires to selecting the samples to be interviewed and then reporting the results to the top management.
In 2015, as was the case in previous years, **two six-month surveys** were conducted using a method[22] that allowed specific dimensions to be processed:

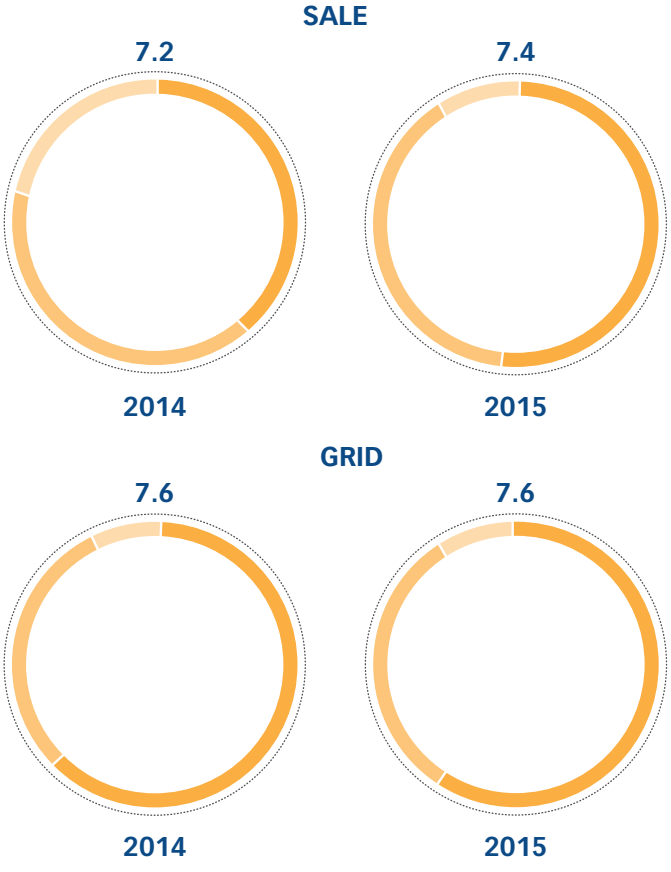
- **Overall rating** on the general quality of the service (on a **scale of 1 to 10**), an index of the customers' "impulsive" rating;
- **Summary satisfaction indexes**, both overall and referring to service dimensions surveyed (**Customer Satisfaction Index – Satisfied Customer CSI** , **index 0-100)** based on the percentage of customers who stated they were satisfied and processed considering the customers' ratings regarding the individual aspects of the service;
- **Satisfaction degree indexes**, both overall and referring to the service dimensions surveyed (**Customer Satisfaction Index – Satisfaction degree CSI**, **expresses as a % function of satisfied customers - threshold 75%)**[23], measuring "how much" customers were satisfied or not satisfied with the service.

It is further stressed that surveys regarding "**contact channels**" were administered to customers selected with the "call back" method, that is people who had recently used telephone services (free toll number to seek commercial information or report faults) or had contacted the helpdesk or sought technical assistance, agreeing to be called back.

Electricity service rating

In order to **evaluate customer satisfaction regarding the supply of electricity**, **9,140 people** accounting for **enhanced protection market** and **free market** customers **were interviewed between May/July 2015 and December 2015/January 2016**: **4,988** for **energy sale-related aspects** pertaining to **Acea Energia** and **4,152** for **technical and management aspects relating to the energy distribution** network managed by **Acea Distribuzione**.
The **overall opinion about the electricity service** regarding both commercial and technical aspects **was good** and in line with the previous year; the percentage of respondents that judged the service as **very satisfactory** was on average 56.1%.

CHART 13
OVERALL RATING ON THE ELECTRICITY SERVICE (2014-2015) (1 to 10 scale)



	2014	2015
Very satisfied (8-10)	53.0%	52.1%
Averagely satisfied (6-7)	35.0%	40.0%
Dissatisfied (1-5)	12.0%	7.9%

	2014	2015
Very satisfied (8-10)	63.5%	60.1%
Averagely satisfied (6-7)	29.5%	30.0%
Dissatisfied (1-5)	7.0%	9.9%

Note: overall ratings and satisfaction percentages shown in the chart are the average of the two half-yearly surveys.

[21] As regards the water service, in addition to surveys conducted in the Lazio region involving customers of subsidiaries Acea Ato 2 (Rome and provincial districts) and Acea Ato 5 (Frosinone), Acea SpA also handled surveys about the level of quality perceived for subsidiaries operating in Campania, Tuscany and Umbria, sharing with them both the concept and results of such surveys.
[22] CATI Method (*Computer Assisted Telephone Interviewing*), with the support of a structured questionnaire administered on a sample arranged on the basis of certain variables (such as place of residence, consumption brackets), with a maximum statistic error of 3.2% and a level of significance of 95%.
[23] Satisfaction degree CSI indexes were created based on the average score of satisfaction and the weight assigned to each aspect.

Enhanced protection market customers showed a high level of appreciation for **energy sale activities**, with an **overall satisfaction index** (CSI) of **83.5 (out of 100)** as an average between the two surveys, showing a rise compared with 82.6 reached in the previous year; a positive opinion was also expressed for the four items of the service being evaluated: **billing (84.4 out of 100)**, **website (84.3)**, **commercial toll-free number (84)** and **helpdesk counter (79.8)**.
The evaluations on service items viewed as most important show, within each dimension and again as an average of the two yearly surveys, the following data: (i) "**billing**" - percentages of customers satisfied about "**accuracy of amounts shown**" and "**regular delivery of invoice**" stood at 86.3% and 85.4%, respectively, with both items showing an increase over the previous year; (ii) "**website**" - the percentage of customers satisfied with the "**range of operations available online**" stood at 84.7%, showing a sharp rise compared with 77.5% of the previous year, while "**plenty of information available**" remained positive at 85.6%, although showing a slight drop. As to the "**commercial toll-free number**", "**operators' competence**" and "**thoroughness of the answers**" were the key drivers, with customer satisfaction rising to 83.7% and 84%, respectively. Finally, with regard to the "**helpdesk counter**" item greater importance was given to "**operators' competence**", with 84.8% of the respondents being satisfied as compared with 78.5% in 2104, and "**waiting time**", a quality driver that unlike the others proved critical, i.e. considerably **below the adequate satisfaction threshold** (**54.1%**) (for data and comparison with previous year see table 11 at the bottom of section).

The overall satisfaction index for **free market customers regarding the sales service** as an average of the two half-yearly surveys remained positive at **80 out of 100, even though it showed a slight drop over 2014. While the four items relating to service, i.e.** billing, website, commercial toll-free number and helpdesk counter continued to show **good levels of appreciation**, they posted **significant drops in the satisfaction index** for "**helpdesk counter**" (from 90 to 75.9 out of 100) and "**website**" (from 96.3 to 86.5).

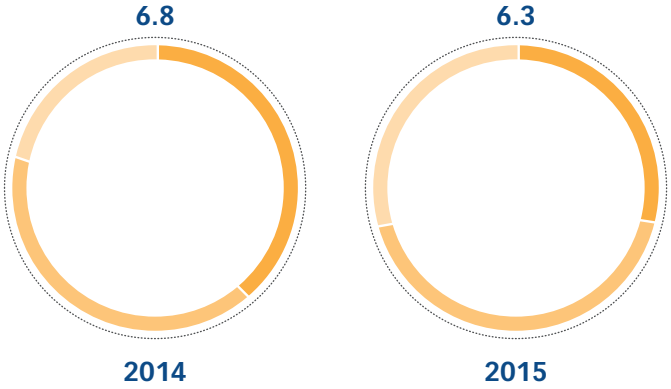
With regard to the factors considered as most important, the "**billing**" area showed **a rise** in "**accuracy of amounts shown**" and "**regular delivery of invoice**" (the latter rising from 76.5% to 85.2%). **By converse, percentages dropped as to the quality elements of the three contact channels**, even though they remained above the "adequate satisfaction threshold" (75%), with the **"website" item in particular showing high rates** (86.8% of the customers stating their satisfaction with both the "range of operations available" and "ease of navigation"). **An exception** to the above trend is again to be found in the **"waiting time" at helpdesk counter**, where the **percentage of satisfied customers dropped as low as 51%** (see table 11).

Regarding **energy distribution activities** (network), the surveys confirmed a **very high degree of satisfaction overall (88.4 out of 100)**, albeit showing a slight decrease compared with the previous year. With regard to the **four service items** evaluated - i.e. technical aspects, scheduled service interruption, fault reporting and technical assistance - the results remained positive, albeit with some reductions, as was the case for technical assistance (77.3 out of 100) and in some cases were even excellent, such as technical aspects (i.e. supply continuity), reaching 95.1 out of 100.
With regard to the **quality factors considered as most important, the percentages of satisfied customers** as an average of the two half years **remained positive, even though they showed a downward trend**: in particular, the "**percentages of satisfied customers"** relating to "**service continuity**" and **voltage consistency**" within the "**technical aspects**" dimensions **proved excellent**, standing at 94.4% and 93.8%, respectively; "**schedule service interruption**", "**accuracy of information about service resumption time**" and "**notice before service disruption**" stood at 89.7% and 88.8%, respectively; with regard to the "**fault reporting**" dimension, customers satisfied with the "**thoroughness of the answers**" totalled 82.6%, while "**operators' politeness and helpfulness**" reached 85.5%. The only item that fell **below the threshold value** of satisfaction within the "**technical assistance**" dimension was "**troubleshooting response time**", dropping to 69.7%, while "**technicians' competence**" proved satisfactory for 81.8% of the respondents (see table 11).

Public Lighting service rating

Satisfaction with **quality of the public lighting service** was measured by administering **2,400 interviews** to **citizens residing in the Municipalities of Rome and Formello** in April and October 2015. The sample surveyed in the Capital accounted for 15 districts of the city grouped in 3 macro-areas: central-north, east-southeast, south-west Rome.
The **overall opinion** showed a slight drop but remained **satisfactory on average** (6.3 out of 10) thanks to the balancing effect of 44.7% of the respondents who gave a sufficient rating (6-7) and notwithstanding considerable changes in the percentages of unsatisfied and very satisfied customers.

CHART 14
OVERALL RATING ON PUBLIC LIGHTING IN ROME (2014-2015) (1 to 10 scale)



	2014	2015
Very satisfied (8-10)	36.0%	27.4%
Averagely satisfied (6-7)	44.5%	44.7%
Dissatisfied (1-5)	19.5%	27.9%

Note: overall ratings and satisfaction percentages shown in the chart are the average of the two half-yearly surveys.

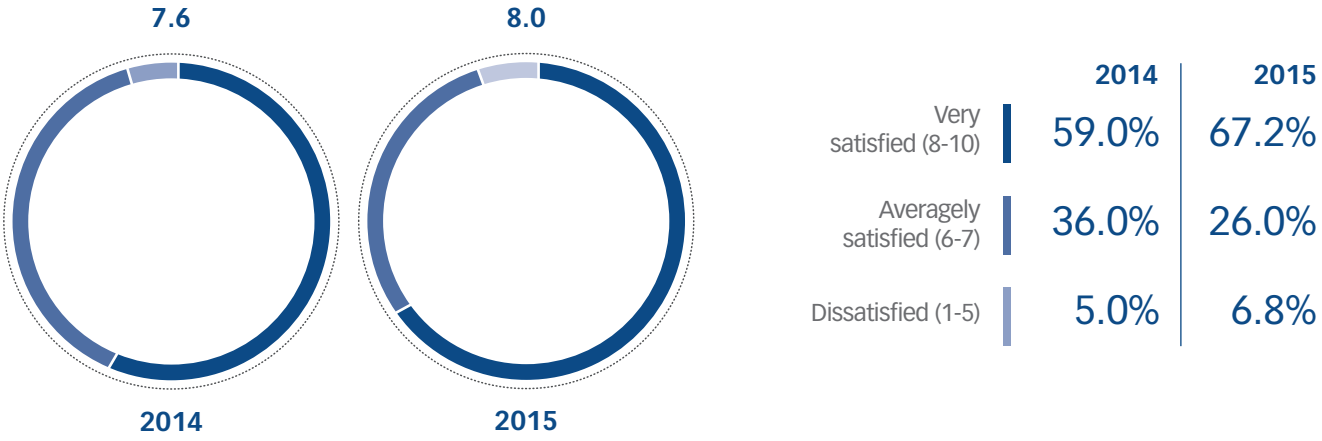
Two aspects of the service were evaluated: the "fault reporting toll-free number" and "technical aspects". The latter were divided into **aspects pertaining directly to Acea Illuminazione Pubblica** - lighting service continuity (i.e., absence of failures or disruptions across the city), switching on and off times and colour of lights - **and aspects dependent on other parties**[24] – service availability and extension, lighting intensity.
The **overall service satisfaction index** as an average of the two surveys totalled **77.3** out of 100, in line with the previous year, as was also basically the case with the ratings of "**technical aspects**" of the service **pertaining to Acea operations** (satisfaction index was 78 out of 100), those **ascribable to others** (75.9 out of 100) and **fault reporting** service (79 out of 100).
As part of the "**technical aspects"** directly **dependant on Acea, the quality elements considered as most important** include "**lighting service uptime**", where satisfied citizens totalled 71.9%, showing a drop compared with the previous year (77.7%) and slightly below the threshold value (75%), and "**switching on and off times**", where customer satisfaction reached 83.4%. With regard to "technical aspects" **not directly pertaining to the company**, "**service availability and extension across the city**" and "**lighting intensity**" were rated as satisfactory by the respondents to the extent of 75.2% and 72.3%, respectively. Finally, with regard to the "**fault reporting**" dimension, 77.9% of the respondents that used the service were satisfied with the "**thoroughness of information provided by the operator**", while **"waiting time on the phone" proved a factor falling below the threshold value** (satisfied customers totalled 68.6%) (see table 11 for data and comparison with the previous year).

Water service rating

With regard to the water service operated in the Lazio region, the degree of satisfaction was measured for **Acea Ato 2 customers (**Rome and provincial districts) and **Acea Ato 5** (Frosinone and provincial districts).

Surveys on the **quality of water service perceived by Acea Ato 2 customers in Rome and Fiumicino** were conducted through telephone interviews in April/July 2015 and November 2015/January 2016. The sample of interviewed customers, representing the entire area being surveyed, involved as a whole **3,211 people**, including **household customers** and **condominium managers**.
The **overall opinion** on water service proved **very good**, showing an improvement compared with the previous year, with **67.2%** of the respondents rating it as **fully satisfactory**.

CHART 15
OVERALL RATING OF THE WATER SUPPLY SERVICE IN ROME (2014-2015) (1 to 10 scale)



Note: overall opinions and satisfaction percentages shown in the chart are the average of the two half-yearly surveys.

The overall satisfaction index as an average of the two half-yearly surveys totalled **86 out of 100**, bearing out the **high level of appreciation**. Among the **five service aspects** subject to evaluation, "**technical aspects**" (continuity), "**billing**", "**commercial toll-free number**" and "**helpdesk counter**" continued to show **very high satisfaction scores** ranging between 82 and 97 out of 100, while "**fault reporting**" and "**technical assistance**" scores **dropped** from 80.9 to 75.6 out of 100 and from 80 to 71.2 out of 100, respectively.
The **percentages of customers satisfied** with the **quality elements** of the service considered as **most important** within each dimension proved **excellent** and exceeded 90% for **continuity items**; with regard to "billing", satisfaction with both "accuracy of amounts shown" and "bill transparency and ease of reading" exceeded 86%; on the other hand, while "thoroughness of information provided" stood above the adequacy threshold (76.7%), "**waiting time on the phone**" **dropped to 69.2%** within the "fault reporting" dimension. With regard to the "**technical assistance**" dimension, "**technicians' competence**" scored 79.7%, while the percentage of customers satisfied with "**troubleshooting response time**" **dropped as low as 59%**. The ratings on the "**commercial toll-free number**" proved good with regard to the two key quality factors - i.e. "**operators' competence**" and "**thoroughness of information provided**" - showing satisfaction percentages **in excess of 81%** and even higher

[24] Indeed, public lighting operations across the urban territory are carried out based on the instructions given by the Municipality of Rome, for whom Acea delivers the service. The lighting intensity of streets, pavements, parks and gardens can also be affected by factors that do not depend on business operations, such as the presence of foliage pending tree pruning.

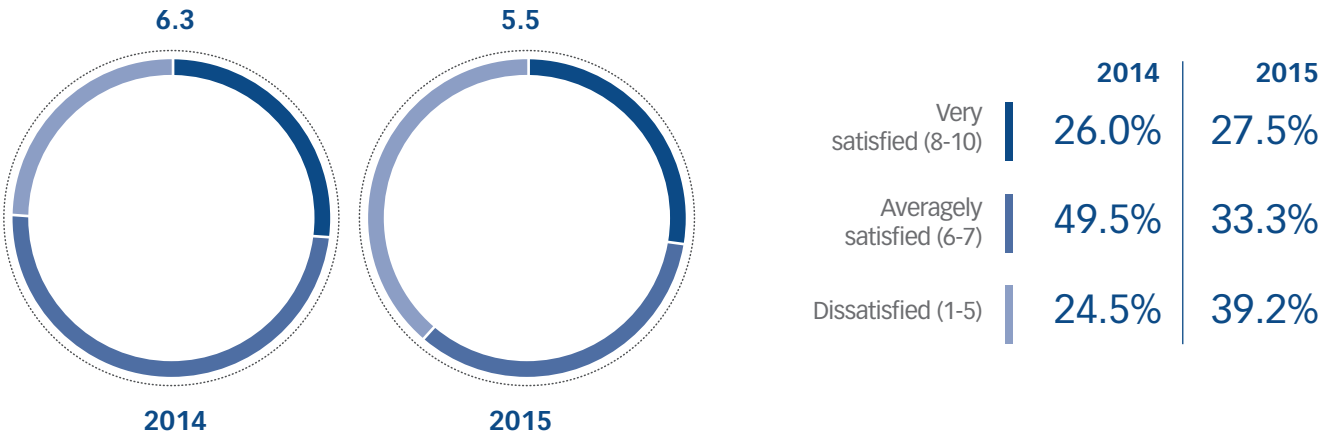
for the "**helpdesk counter**" dimension for the same quality factors, where **satisfaction stood at 88%** for both such factors, even though the survey on this dimension was conducted only during the first half of the year due to technical reasons (see table 11 at the bottom of section).
An in-depth review was conducted again in 2015 **on Acea Ato 2 website** among the respondents that use this channel. It showed a decrease in the percentage of satisfied customers with the two quality elements considered as most important, that is "**ease of navigation**" (from 92.3% to 77.9%) and "**range of operations available online**" (from 89% to 72.3%).

SURVEYS ON CUSTOMER SATISFACTION WITH WATER SERVICE DELIVERED IN OTHER ATO 2 MUNICIPALITIES – CENTRAL LAZIO

In addition to Rome and Fiumicino, surveys aimed at measuring customer satisfaction with the water service delivered were conducted in other municipalities located in the province of Rome.
In 2015, the two half-yearly surveys covered a sample representing the population of household users in four "sentinel" Municipalities - Frascati, Guidonia, Monterotondo and Tivoli - that are part of ATO 2 - Central Lazio. As a whole, 2,014 residents were interviewed, with the overall rating standing at 7.3 out of 10, virtually unchanged compared with the previous year.
The overall satisfaction index as an average of the two surveys scored **81.6 out of 100**; with regard to the individual **service dimensions** being **evaluated**, satisfaction index proved **less satisfactory** for **commercial toll-free number** (73.9 out of 100)**, fault reporting** (70.9 out of 100) and **helpdesk counter** (69.4 out of 100), while they were **very positive** for **technical aspects** (continuity) (92.2 out of 100) **billing** (83.5 out of 100) and **technical assistance** (84.6 out of 100).

Surveys on **water service quality perceived by the customers** of **Acea Ato 5** in the **Frosinone** area were conducted in May/June and October/November 2015. Telephone interviews were administered to an overall sample of **4,000 residents** in the Municipalities across Ato 5 - Frosinone, consisting of direct, household and non-household customers.
The **overall rating** on the water service showed a decline, with **5.5 out of 10**: the percentage of those who stated they were **very satisfied (27.5%)** remained **stable**, **the average satisfaction area diminished** and the percentage of **unsatisfied customers increased**.

CHART 16
OVERALL RATING OF THE WATER SUPPLY SERVICE RUN BY ACEA ATO 5 (2014-2015) (1 out of 10 scale)



Note: overall ratings and satisfaction percentages shown in the chart are the average of the two half-yearly surveys.

The **overall satisfaction index** as an average of the two half-yearly surveys totalled 74.7 out of 100. Regarding the single aspects of the service, the satisfaction indexes stood at 72.9 for technical aspects (continuity), 64.7 out of 100 for **billing**, showing a drop over the previous year. On the other hand, **fault reporting** (83.8 out of 100), technical assistance (86.3 out of 100), commercial toll-free number (81.1 out of 100) and helpdesk counter (82.1 out of 100) remained positive.

The **percentages of satisfied customers** with the **quality elements** of the service considered as most important within each dimension dropped below the satisfaction adequacy threshold (75%) for "**service continuity" and** "**water pressure level**, with 70.5% and 73.6% of the respondents being satisfied, respectively. A sharper drop was observed in the billing dimension for "**accuracy of amounts shown**" and "bill transparency and ease of reading", where

satisfaction stood at 57% and 66.8%. **By contrast, the fault reporting** dimension scored full satisfaction regarding "**thoroughness of information provided**" (84.1%) and "**operator's politeness and helpfulness**" (87.3%). Within the technical assistance dimension, "**troubleshooting response time**" (77.8%) also proved satisfactory, while "**technicians' competence** was rated as **excellent** (91% satisfied customers). Positive feedbacks was also provided on the commercial toll-free number, with 80.2% customers being satisfied with the "**operator's competence**" and 82.6% with the "**thoroughness of information provided**", while an **excellent** rating was given within the **helpdesk counter dimension** regarding the two most important quality factors: "operator's competence" and "thoroughness of information provided", where satisfaction exceeded 92% for both items (see table 11 for data and comparison with the previous year). **Customer satisfaction surveys involved again an in-depth review on Acea Ato 5 website too**; with regard to the two factors considered as most important - i.e. "**thoroughness of information available on the site" and** "**ease of navigation**" - the results remained very positive even though they showed a slight decrease over the previous year, with customer satisfaction standing at 85.3% and 86.7%, respectively.

TABLE 11
SOCIAL INDICATORS: CUSTOMER SATISFACTION (2014-2015)
(average of the two half-yearly surveys)

	u. m.	2014	2015	
ELECTRICITY SERVICE - ENERGY SALE (Rome and Formello)				
ENHANCED PROTECTION MARKET CUSTOMERS				
sales activity (overall csi)	0-100	82.6	83.5	
service dimensions and quality factors				
billing	0-100	84.2	84.4	
accuracy of amounts shown	%	*85.0*	*86.3*	
regular delivery of invoice	%	*84.2*	*85.4*	
website	0-100	86.7	84.3	
range of operations available online	%	*77.5*	*84.7*	▲
thoroughness of information available	%	*88.6*	*85.6*	
commercial toll-free number	0-100	82.4	84.0	
operator's competence	%	*77.0*	*83.7*	▲
thoroughness of the answers	%	*78.0*	*84.0*	▲
helpdesk counter	0-100	77.8	79.8	
operator's competence	%	*78.5*	*84.8*	▲
waiting time	%	*64.5*	*54.1*	▼
FREE MARKET CUSTOMERS				
sales activity (overall csi)	0-100	83.0	80,0	
service dimensions and quality factors				
billing	0-100	74.7	80.2	▲
accuracy of amounts shown	%	*76.0*	*79.7*	
regular delivery of invoice	%	*76.5*	*85.2*	▲
website	0-100	96.3	86.5	▼
range of operations available online	%	*95.0*	*86.8*	▼
ease of navigation	%	*98.5*	*86.8*	▼
commercial toll-free number	0-100	87.0	80.5	▼
operator's competence	%	*82.3*	*80.0*	
thoroughness of the answers	%	*84.0*	*78.8*	▼
helpdesk counter	0-100	90.0	75.9	▼
operator's competence	%	*91.4*	*82.2*	▼
waiting time	%	*83.4*	*51.0*	▼
ELECTRICITY SERVICE - ENERGY DISTRIBUTION (Rome and Formello)				
distribution activity (overall csi)	0-100	90.2	88.4	
service dimensions and quality factors				
technical aspects of service	0-100	96.8	95.1	
service continuity	%	*97.2*	*94.4*	
voltage consistency	%	*95.6*	*93.8*	
schedule service interruption	0-100	95.3	90.9	
accuracy of information about service resumption time	%	*95.6*	*89.7*	▼

	u. m.	2014	2015	
notice before service supply disruption	%	*94.9*	*88.8*	▼
fault reporting	**0-100**	**83.6**	**83.5**	
thoroughness of information provided	%	*85.8*	*82.6*	
operator's politeness and helpfulness	%	*88.4*	*85.5*	
technical assistance	**0-100**	**82.0**	**77.3**	▼
troubleshooting response time	%	*81.7*	*69.7*	▼
technicians' competence	%	*80.7*	*81.8*	
PUBLIC LIGHTING SERVICE (Rome and Formello)				
public lighting (overall csi)	**0-100**	**77.7**	**77.3**	
service dimensions and quality factors				
technical aspects of service (pertaining to acea)	**0-100**	**80.5**	**78.0**	
service continuity	%	*77.7*	*71.9*	▼
switching on and off times	%	*87.2*	*83.4*	
technical aspects of service (pertaining to others)	**0-100**	**75.4**	**75.9**	
lighting service availability and extension across the city	%	*79.2*	*75.2*	
degree/level of lighting (intensity)	%	*72.7*	*72.3*	
fault reporting	**0-100**	**76.6**	**79.0**	
thoroughness of information provided	%	*78.5*	*77.9*	
waiting time on the phone	%	*69.4*	*68.6*	
WATER SERVICE - WATER SUPPLY - ACEA ATO2 (Rome and Fiumicino)				
water service (overall csi)	**0-100**	**88.5**	86.0	▼
service dimensions and quality factors				
technical aspects of service	**0-100**	**97.9**	**96.9**	
service continuity	%	*99.2*	*97.3*	
water pressure level	%	*93.7*	*93.5*	
billing	**0-100**	**86.2**	**87.1**	
accuracy of amounts shown	%	*88.2*	*86.8*	
bill transparency and ease of reading	%	*87.3*	*86.1*	
fault reporting	**0-100**	**80.9**	**75.6**	▼
thoroughness of information provided	%	*82.8*	*76.7*	
waiting time on the phone	%	*74.2*	*69.2*	▼
technical assistance	**0-100**	**80.6**	**71.2**	▼
troubleshooting response time	%	*73.3*	*59.2*	▼
technicians' competence	%	*84.9*	*79.7*	▼
commercial toll-free number	**0-100**	**84.9**	**82.4**	
operator's competence	%	*87.5*	*81.8*	▼
thoroughness of information provided (*)	%	-	*81.5*	
helpdesk counter (**)	**0-100**	**89.9**	**85.8**	
operator's competence	%	*90.7*	*88.0*	
thoroughness of information provided (*)	%	-	*88.0*	
WATER SERVICE - WATER SUPPLY - ACEA ATO 5 (municipalities comprised in ATO 5 - Frosinone)				
water service (overall csi)	**0-100**	**79.7**	**74.7**	▼
service dimensions and quality factors				
technical aspects of service	**0-100**	**75.7**	**72.9**	
service continuity	%	*74.9*	*70.5*	
water pressure level	%	*79.2*	*73.6*	▼
billing	**0-100**	**73.4**	**64.7**	▼
accuracy of amounts shown	%	*76.1*	*57.0*	▼
bill transparency and ease of reading	%	*75.0*	*66.8*	▼
fault reporting	**0-100**	**84.8**	**83.8**	
thoroughness of information provided	%	*87.4*	*84.1*	
operator's politeness and helpfulness	%	*91.3*	*87.3*	

	u. m.	2015	2015	
technical assistance	**0-100**	**90.4**	**86.3**	
troubleshooting response time	*%*	*83.7*	*77.8*	▼
technicians' competence	*%*	*91.7*	*91.0*	
commercial toll-free number	**0-100**	**84.5**	**81.1**	
operator's competence	*%*	*89.8*	*80.2*	▼
thoroughness of information provided (*)	*%*	*-*	*82.6*	
helpdesk counter	**0-100**	**92.4**	**82.1**	▼
operator's competence	*%*	*89.8*	*92.5*	
thoroughness of information provided (*)	*%*	*-*	*92.4*	

(*) Quality factor introduced in 2015.

(**) With regard to the water service (Rome and Fiumicino) "helpdesk counter" quality factor, the feedback obtained in 2015 pertains to the first half only. Due to technical reasons, it was not possible to repeat the survey in the second half.

Note: only significant deviations of 5 or more points are shown in the table. It should be noted, however, that 75% or above is the percentage indicating an adequate level of customer satisfaction (threshold).

QUALITY DELIVERED

Every year, Acea relies on the operating companies to **increase or improve capabilities** (networks and plants), **optimise operation** and **ensuring more effective and prompt service resumption in the event of failures** in order to constantly improve **the final quality of the services provided**. The Company is likewise highly focused on the **processes that help improve the way customers are reached,** training dedicated staff and implementing appropriate commercial management systems for this very purpose.
Endeavours continued in 2015 for the implementation of the **Acea2.0 Programme**, as referred to herein several times. The programme is expected to support the **evolution of key operating processes of the Group**, from the organisation of work to the management of contacts with clients, while providing a **major drive for service quality improvement** (see *Quality of Water area* below).

Monitoring and performance review activities, which aim to check the quality of the services, allow efforts to be focused on improvement actions. A number of "supplied quality" factors are measured on the basis of **criteria established by the relevant Authorities** or set out in **service contracts and management agreements** entered into with the local authorities:

- The **technical and commercial quality standards in the energy sector** - relating to both distribution and sale - **and the water sector are defined** by a sole National Authority - the **Italian Regulatory Authority for Electricity Gas and Water** (AEEGSI).
- More specifically, at the end of 2015 **Resolution 655/2015/R/Idr**[25] was issued for the water sector, which has been operating under the control of the AEEGSI since 2012. Consistent with provisions already governing the electricity sector, it **defines** the **specific and general levels of water service contractual quality**, identifying nation-wide consistent maximum turnaround times and minimum quality standards for the services supplied to the users. In particular, with regard to services subject to specific quality standards, users will be entitled to automatic compensation in the event of failure to meet such turnaround time. As to services subject to general standards, any non-compliance for two consecutive years may lead to sanctions to be inflicted against the operator. Moreover, the Authority stated that in future provisions it will define an incentive system aimed at achieving higher quality standards as compared to the minimum levels that have been set. The resolution also defines the terms for recording, communicating and checking the data pertaining to the services supplied by the operators upon the users' request. **Quality regulations are expected to become applicable as of 1 July 2016**, while in other areas - such as the application of standards relating to call centres - enforcement is expected in 2017. **For any matter not covered yet, the Service Charter and Regulations for End Users will continue to apply**.
- For the **public lighting service**, the agreement entered into between Acea and the Public Administration also governs quality standards (performance standards).

The Company is required to comply with the quality standards established by the counterparts, such standards also contemplating incentive systems **with bonuses for good performances and penalties in the event of failure to comply therewith**. Customers are also entitled to automatic compensation in the event that service quality standards are not met.
As illustrated hereafter, both Acea SpA and its operating companies operate in compliance with Certified Management Systems (also see *Corporate Identity*, *Management systems*).

[25] *Regulation of contractual quality of the integrated water service or of each of the single services it is made up of (RQSII).*

IMPLEMENTATION OF THE MV REGULATORY PLAN, WITH AN INCREASE IN NETWORK TRANSPORT CAPACITY AND REDUCTION IN LEAKAGE:
19 operations IN 2015

93 supports AND **19 km** OF HV OVERHEAD LINES DECOMISSIONED DURING THE YEAR

6,038 MV nodes CONTROLLED REMOTELY

NETWORK REVAMPING AND UPGRADING OPERATIONS: **242 km** of 20 kV MV cables AND **194 km** of LV cables DEPLOYED

TO MEET THE DEMAND FOR NEW CONNECTIONS AND WATTAGE INCREASE:
107 sub-stations DEPLOYED OR UPGRADED AND
1,192 operating stations rebuilt

Acea Distribuzione, in its capacity as owner of a Ministerial licence, operates the **electricity distribution service in Rome and Formello**.
It plans and carries out **modernisation and extension work for its infrastructure**, comprising **high, medium and low voltage electricity lines**, **stations and substations**, **systems for remote control and for measuring energy withdrawn** from and fed into the network.
The company operates in compliance with procedures under the **Quality, Environment, Safety and Energy** (QASE) **Management System certified pursuant to UNI EN ISO and OHSAS standards** (also see *Corporate Identity*, *Management systems*). As regards contracts awarded, Acea Distribuzione has adopted a **system to control and monitor quality, ensure compliance with environmental and work safety policies** through checks performed by a dedicated Business Unit (see *Suppliers*).

Work on infrastructure aimed both at gradually **improving service quality** in compliance with the objectives set by the AEEGSI and **increasing the energy efficiency of the networks** is performed in accordance with licence provisions, industry regulations and service requirements, with special reference to the connection of new customers related to urban expansion and the increase in electricity uses.
In 2015, Acea Distribuzione carried on works for the **upgrading of energy infrastructure** and **technology innovation projects**. Major infrastructure works include **the gradual implementation of the MV Regulation Plan,** whereby **new backbones will be deployed** for the purpose of **streamlining and upgrading the network** and, at the same time, **executing the relevant voltage switchover from 8.4 kV to 20 kV.** The above works contribute to ensuring a high level of quality of the electricity service, inasmuch as switching to a higher voltage will **considerably increase the network transportation capacity,** thereby ensuring an adequate amount of residual power for new connections, while **reducing energy losses and voltage drops**. In 2015, a total of **19 MV Regulation Plan implementation actions** were completed (5 in the central-north area, 7 in the east-southeast area and 7 in the south-west area across Rome).

Each year, infrastructure management and development endeavours are carried out, involving **construction**, **extension, transformation, modernisation, upgrading, decommissioning** - and, as a result, reduction of environmental impacts in specific areas - **measuring, protection, day-to-day and extraordinary maintenance** operations on **stations and substations, high voltage (HV) lines as well as low and medium voltage (LV and MV) networks.** Each of the aforesaid operations, the most significant of which are shown in the relevant box, makes it possible to distribute electricity with a view to constant improvement regarding both service availability and continuity as well as the quality of the service supplied (see relevant box on main operations pertaining to the operation and development of electricity networks and stations).

MAIN ACTIONS FOR THE OPERATION AND DEVELOPMENT OF ELECTRICITY NETWORKS AND STATIONS (2015)

PROTECTION AND MEASURES FOR MV AND HV LINES

Technical operations were carried out to arrange, calibrate and commission **power protection systems for 50 new MV line bays. Works were also completed on power protection systems** installed in primary stations for operation testing purposes (57 HV towers, 332 MV towers, 30 HV/MV and MV/MV transformers and 3 automatic load balancers).
Three network analysers were installed to check voltage quality at as many MV customer locations.
Ground resistance was measured in 3,150 substations. Step and touch voltage and total ground resistance were also measured in 17 stations and 22 substations.

HV LINES AND PRIMARY STATIONS

Works started for the deployment of overhead lines in Flaminia – Cassia and Northern Rome – Bufalotta. Once completed, **such works will make it possible to decommission significant sections** (9.7 km each) of other lines (Flaminia-Grottarossa and Flaminia-Bufalotta), **currently extending over 3 km, within Vejo Park**.
Works for the **reconstruction of the "Roma Nord-Prati Fiscali" 150 kV overhead line to increase its range reached completion.**
Works for the demolition of the Casal Palocco-Lidi 60 kV overhead line reached completion, with 29 supports and 6 km of line being decommissioned, while works got underway for the demolition of the Vitinia - Lido 60 kV overhead line. More specifically, **in 2015 64 supports and a 13-km overhead line were decommissioned**.

The new **Cecchignola primary station was commissioned** and plant finishing works were completed. Moreover, in 2015 work for the **upgrading, extension and reconstruction of additional 20 primary stations was carried out**.
The installation of the **Petersen system**, which significantly reduces network failures, was started at 5 primary stations and completed at additional 5 primary stations, where the existing system was extended.
Finally, the following activities were carried out: **routine and extraordinary maintenance** on primary substation equipment, with special reference to **110 HV switches**; **scheduled maintenance** on **780 MV switches**; **overhauling of 14 on-load tap changers** of power transformers, **21 HV voltage transformers** and **33 HV current transformers**.

MV AND LV LINES

Approximately **242 km of 20 kV MV cables** (225 km relating to refurbishment and 17 km relating to extension) **were laid** for **network modernisation and upgrading purposes**.
As part of **extraordinary maintenance work** on MV overhead lines, **45 operations** were carried out for the replacement of equipment, supports, conductors, etc.
Refurbishing and extension work aimed at replacing obsolete parts or upgrading inadequate parts **entailed deploying around 194 km of LV cables** (133 km relating to refurbishing and 61 km to extension).
Activities completed to **improve service quality** included **230 specific network refurbishing operations**.
Voltage switch operations were carried out on the LV network (from 220 V to 380 V), involving 12,124 customers.

SUBSTATIONS (MV AND LV) AND REMOTE CONTROL

To meet the applications for new connections to the grid and voltage increase filed by existing customers, **107 substations were built or extended**.
1,191 operating stations were (totally or partially) rebuilt to upgrade them to 20 kV, make them remote control-ready or upgrade their equipment.
Furthermore, the following activities were completed on substations: **654 extraordinary maintenance operations**, **132 routine maintenance operations** and **3,759 inspections** to check the maintenance and operating status of equipment and premises.

Remote control was extended to a further 80 substations and 300 reclosers, with **remote controlled MV nodes at 31 December 2015 totalling 6,038 units.** Finally, 3,550 maintenance operations were completed.

With reference to **technological innovation, Acea Distribuzione has already completed and continues to develop**, both by itself and in conjunction with other industrial partners, **state-of-the-art projects** in the area of "**smart grids**", **advanced grid management systems, distributed storage** as well as in the broader **"smart city" area**. (See *Institutions and the Company*, *Research and innovation*).

As regards the project connected with the development of **electric mobility in Rome**, following agreements entered into between Acea Distribuzione, Enel and the Municipality of Rome in previous years, the **project continued as scheduled**. After installing and deploying the first 12 charging stations for electric vehicles in 2013 and identifying the remaining installation sites in 2014 together with Enel and the Department of the Municipality of Rome, **in 2015 Acea Distribuzione took part in the activities aimed at seeking the authorisations** (Service Conference) required **for the installation of additional 88 charging stations** deployed across the Capital.
During the year, works continued for the **extension** of the **"ultra-broadband" fibre optic communication network** in Rome (with Internet connection speed up to 100 Mbit/s) as under the **Memorandum of Understanding** signed in 2013 between Acea, Telecom and Fastweb and **renewed in April 2015 with the same partners as well as Vodafone**. **According to agreements reached, around 7,000 new electricity supply points will be rolled out**, applying techniques that minimise the environmental impact when deploying capabilities, such as *no-dig* (i.e., laying optic fibre without open-air trenches) and mini trenches that minimise excavation work. At **31 December 2015**, Acea Distribuzione **commissioned 4,582 new electricity supply points**, totalling 78.6 km of excavation.

With regard to **digital meters** and **smart metering systems**, 2015 saw the continuation of the pilot project started in the previous year for the **experimentation of an alternative technology**, resulting in the installation of 4 concentrators on 3 substations and around 420 meters for customers powered by such substations. The review and comparison between the different technologies is expected to be completed in 2016, with a fourth substation being installed. **In 2015, Acea Distribuzione** also launched a feasibility study for the implementation of a number of pilot projects to build a **Multiservice Smart Metering System** designed to provide support the water sector in particular. Following the above feasibility study, the relevant implementation is expected to be carried out in 2016.
Work to **install remotely-controlled digital meters** for LV customers continued, with additional **51,296** devices being installed, **totalling 1,598,037 meters installed at 31 December 2015 for such customers** (98.7% of total LV customers).

The quality levels regulated by the AEEGSI

The electricity service quality standards as related to **commercial aspects** (i.e., quotes, work, supply activation/deactivation, replies to complaints) and **technical aspects** (supply continuity) **are established** at a national level by the **Authority for Electricity, Gas and Water (AEEGSI), who reviews them on a regular basis, gradually introducing more stringent standards**.
The Authority issued Resolutions[26], currently in force, aimed at **regulating the quality of the** distribution, metering and transmission **services for the IV 2012-2015 regulation period,** as well as the quality of electricity and gas sale services. The regulatory framework requires that customers be indemnified in the event certain quality standards are not met and comprises a fine/bonus system applicable to service operators, so as to encourage them to continually improve their performances.
The **commercial quality** aspects of the service consist of **"specific" levels** and **"general" levels**[27] applicable to the operations pertaining to the electricity **distribution company** (divided into low and medium voltage supplies) as well as operations pertaining to the **selling company** (see tables 19, 22-26). A quality criterion also governs the timely communication of technical data between the energy distributor and seller (see table 19). Every year **Acea submits the results achieved to AEEGSI** for review **and then notifies such results to its own customers,** as required, by attaching them to the bill.
Electricity distribution and metering operations are carried out by **Acea Distribuzione**; **2015 performance** pertaining to the **"specific" levels of commercial quality** regarding both low voltage supplies to household and non-household customers as well as medium voltage supplies showed a steady trend, with few exceptions, **within the maximum deadlines** stated in the standards.
Except for replies to written complaints about metering operations, all parameters also pertaining to the "general" levels **reached the percentage of compliance** established by the standard (see table 12 at the bottom of section).
The system contemplates automatic compensation[28] to be granted to customers in the event of failure to comply with quality "specific" levels starting from a basic amount[29], which can either double (in the event operations are performed in a timeframe between twice and three times the required standard) or triple (if operations are performed in a timeframe three times the required standard).

With regard to the compliance levels of "specific" standards pertaining to selling activities carried out by Acea Energia, a considerable increase in "Reasoned reply to written complaints" was observed in the free market and the enhanced protection service, despite a downtrend in the percentages of deadline compliance. It should be noted that the second half of the year was affected by a backlog that needed to be cleared following an innovative improvement and change process aimed at driving an across-the-board growth of the company's performance in all contact channels (see table 13 at the bottom of section).

The **Authority** also defines and updates the benchmark parameters of service **"technical" quality**[30], relating to **electricity supply continuity**, contemplating an incentive system for the operator (bonuses and fines) and compensation for customers.
It should be stressed that **continuity indicators** relating to 2015 are those stated by the AEEGSI and are still pending certification[31].
The figures shown in table 14 indicate broadly positive results for Acea Distribuzione performance in medium and low concentration areas, whereas the high concentration area was affected by the unusual weather conditions that occurred in July 2015, when extremely high temperatures were recorded over an extend period of time, causing the electricity network to operate beyond design parameters.

Disruption occurring at any voltage level within the electricity system are also regulated for **MV customers**. The regulatory system entitles medium-voltage customers to receive automatic compensation if electricity supply disruptions exceed the number stated by a certain standard, provided that they can certify the adequacy of their own equipment[32].
In 2015, 46 MV customers were indemnified. Moreover, lasting or extensive disruptions (i.e. service downtime exceeding the agreed standards, are likewise regulated for both **LV customers** and **MV customers**. In any such cases, the operator is required to pay a penalty to the Extraordinary Event Fund maintained with the Equalisation Fund for the electricity industry. The extent of this penalty will be calculated based on the number of LV users customers cut off as a result of disruptions due to "other reasons". In addition, the distributor will automatically indemnify customers affected by disruptions.
In 2015, 27 MV customers and 11,760 LV customers were indemnified.

[26] More specifically, Resolution ARG/elt No. 198/11, as amended, governing the quality of electricity distribution and metering services pertaining to the distribution company, and Resolution ARG/elt No. 164/08, as amended, governing the quality of electricity and natural gas sale services.
[27] "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. "General quality standards" are defined as the minimum percentage of services to be provided within a given deadline.
[28] Compensation as pursuant to the Authority's provisions is paid to customers by deducting the amount from the bill or by issuing a cheque within 30 days of the date of the service in question or, at the latest, by three times the period of standard time established for such service, excluding automatic compensation for failure to comply with the punctuality range for appointments, in respect of which the time will commence on the date of the appointment.
[29] The amount currently set by the Authority starts from a basic amount of 35 euros for household low voltage customers; 70 euros for non-household low voltage customers and 140 euros for medium voltage customers.
[30] Resolution No. 198/11 as amended from time to time.
[31] Once the data has been verified, the Authority will publish it and make it available on its website (www.autorità.energia.it).
[32] 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 within their utility plants from having repercussions on the network, damaging other customers connected nearby. Furthermore, in order to access compensation customers will be required to have arranged for the distribution company to receive a plant adequacy statement issued by parties having specific technical and professional expertise. Failure by customers to meet the requirements whereby compensation may be sought will cause the amount of the compensation to turn into a fine, which the distribution company is required to transfer to the Equalization Fund for the Electricity Sector.

TABLE 12
SOCIAL INDICATORS: SPECIFIC AND GENERAL LEVELS OF COMMERCIAL QUALITY - ENERGY DISTRIBUTION (2014-2015) - (AEEGSI parameters and Acea Distribuzione performance; data submitted to the AEEGSI)

ENERGY DISTRIBUTION

SPECIFIC LEVELS OF COMMERCIAL QUALITY

PERFORMANCE	AEEGSI PARAMETERS - Max. time for service delivery	Service delivery average actual time	Percentage of services carried out within time limit	Service delivery average actual time	Percentage of services carried out within time limit
		2014		2015	
LOW VOLTAGE (LV) SUPPLIES					
HOUSEHOLD CUSTOMERS			ACEA DISTRIBUZIONE PERFORMANCE		
Estimates for work on LV networks (ordinary connections)	20 business days	7.20	98.96%	7.09	99.06%
Completion of simple work (ordinary connections)	15 business days	5.39	99.66%	5.00	99.78%
Supply activation	5 business days	1.19	99.94%	1.27	99.75%
Deactivation of supply on customer's request	5 business days	0.81	99.90%	0.82	99.85%
Reactivation of supply following disconnection for late payment	1 business day	0.14	99.71%	0.19	99.73%
Resumption of the supply following faults of the metering equipment (requests sent during business days from 08.00 to 18.00 hrs.)	3 hours	2.84	78.78%	2.78	81.03%
Resumption of the supply following faults of the metering equipment (requests sent during non business days or from 18.00 to 08.00 hrs.)	4 hours	2.51	89.20%	2.35	89.86%
Notification of outcome of metering equipment check on customer's request	15 business days	8.36	90.26%	9.41	89.29%
Notification of outcome of voltage supply check on customer's request	20 business days	14.00	100.00%	28.00	0.00%
Maximum punctuality band for appointments with customers	2 hours	(.)	99.90%	/	99.82%
Replacement of faulty metering equipment (*)	15 business days	8.64	99.79%	10.89	99.42%
Resumption of correct supply voltage (*)	50 business days	/	/	12.00	100.00%
Estimates for work on LV networks (temporary connections) (*)	10 business days	/	/	/	/
Completion of simple work (temporary connections not exceeding 40 kW) (*)	5 business days	/	/	/	/
Completion of simple work (temporary connections exceeding 40 kW) (*)	10 business days	/	/	/	/
NON-HOUSEHOLD CUSTOMERS			ACEA DISTRIBUZIONE PERFORMANCE		
Estimates for work on LV networks (ordinary connections)	20 business days	7.48	99.46%	7.11	99.36%
Completion of simple work (ordinary connections)	15 business days	5.22	99.85%	4.53	99.81%
Supply activation	5 business days	1.20	99.87%	1.27	99.69%
Deactivation of supply on customer's request	5 business days	1.03	99.83%	2.43	99.30%
Reactivation of supply following disconnection for late payment	1 business day	0.19	99.64%	0.19	99.69%
Resumption of the supply following faults of the metering equipment (requests sent during business days from 08.00 to 18.00 hrs.)	3 hours	2.71	77.43%	2.95	78.33%
Resumption of the supply following faults of the metering equipment (requests sent during non business days or from 18.00 to 08.00 hrs.)	4 hours	2.21	92.67%	2.41	88.85%
Notification of outcome of metering equipment check on customer's request	15 business days	8.30	91.84%	8.84	90.75%
Notification of outcome of voltage supply check on customer's request	20 business days	80.00	0.00%	47.67	0.00% figure refers to one request only
Maximum punctuality band for appointments with customers	2 hours	(.)	99.89%	/	99.85%
Replacement of faulty metering equipment (*)	15 business days	7.49	99.35%	9.20	99.43%
Resumption of correct supply voltage (*)	50 business days	/	/	/	/
Estimates for work on LV networks (temporary connections) (*)	10 business days	2.86	99.05%	3.28	98.64%
Completion of simple work (temporary connections not exceeding 40 kW) (*)	5 business days	2.11	99.82%	2.07	99.73%
Completion of simple work (temporary connections exceeding 40 kW) (*)	10 business days	2.10	100%	2.34	99.36%

MEDIUM VOLTAGE (MV) SUPPLIES					
END CUSTOMERS				**ACEA DISTRIBUZIONE PERFORMANCE**	
Estimates for work on MV networks	40 business days	18.89	90.91%	16.94	85.71%
Completion of simple work	30 business days	4.18	100%	5.07	100.00%
Supply activation	5 business days	2.37	100%	3.10	100.00%
Deactivation of supply on request	7 business days	2.30	100%	2.63	100.00%
Reactivation of supply following disconnection for late payment	1 business day	0.53	97.30%	0.41	100.00%
Notification of outcome of metering equipment check on customer's request	15 business days	6.86	95.24%	6.32	100.00%
Notification of outcome of voltage supply check on request	20 business days	/	/	57.50	33.33%
Maximum punctuality band for appointments with customers	2 hours	(.)	100%	(.)	100.00%
Replacement of faulty metering equipment (*)	15 business days	1.73	100%	0.56	100.00%
Resumption of correct supply voltage (*)	50 business days	/	/	/	/
COMMUNICATION OF TECHNICAL DATA BY DISTRIBUTOR TO SELLER (*)					
Technical data (**that can be obtained by reading a** metering system)	10 business days from receipt of request	11.86	52.81%	21.54	58.74%
Technical data (**that cannot be collected by reading a** metering system)	15 business days from receipt of request	13.00	92.49%	9.32	96.61%

GENERAL LEVELS OF COMMERCIAL QUALITY

PRESTAZIONI	AEEGSI PARAMETERS - Minimum percentage of services to be provided within max. time limit	Service delivery average actual time	Percentage of services provided within max. time limit.	Service delivery average actual time	Percentage of services provided within max. time limit
		2014		2015	
LOW VOLTAGE (LV) SUPPLIES					
HOUSEHOLD CUSTOMERS				**ACEA DISTRIBUZIONE PERFORMANCE**	
Completion of complex work	85% within 60 business days	13.75	99.11%	14.50	94.03%
Reply to written complaints/enquiries regarding distribution operations	95% within 30 calendar days	13.72	99.73%	17.29	99.22%
Reply to written complaints/enquiries regarding metering operations	95% within 30 calendar days	125.68	40.62%	32.06	58.33%
NON-HOUSEHOLD CUSTOMERS				**ACEA DISTRIBUZIONE PERFORMANCE**	
Completion of complex work	85% within 60 business days	13.65	99.40%	11.21	98.79%
Reply to written complaints/enquiries regarding distribution operations	95% within 30 calendar days	14.88	99.61%	18.40	98.97%
Reply to written complaints/enquiries regarding metering operations	95% within 30 calendar days	96.10	43.78%	33.51	53.43%
MEDIUM VOLTAGE (MV) SUPPLIES					
END CUSTOMERS				**ACEA DISTRIBUZIONE PERFORMANCE**	
Completion of complex work	90% within 60 business days	6.50	100%	9.48	100.00%
Reply to written complaints/enquiries regarding distribution operations	95% within 30 calendar days	7.91	100%	6.85	99.77%
Reply to written complaints/enquiries regarding metering operations	95% within 30 calendar days	119.56	30.43%	34.25	50.00%

(*) In the event of failure to comply with the above standards, the customer-seller will be entitled to minimum automatic compensation amounting to 20 euros.
(.) Not applicable. The "/" symbol is used for those cases in which service was not required during the year.

TABLE 13
SOCIAL INDICATORS: SPECIFIC AND GENERAL LEVELS OF COMMERCIAL QUALITY - ENERGY SALE (2014-2015) - (AEEGSI parameters and Acea Energia performance; data submitted to the AEEGSI)

ENERGY SALE

SPECIFIC LEVELS OF COMMERCIAL QUALITY (*)

PERFORMANCE	AEEGSI PARAMETERS - Max. time for service delivery	Percentage of services carried out within time limit	Percentage of services carried out within time limit
		2014	2015
ENHANCED PROTECTION SERVICE		**ACEA ENERGIA PERFORMANCE**	
Billing adjustments	90 calendar days	85.7%	64%
Double billing adjustments	20 calendar days	-	42.9%
Reasoned reply to written complaints	40 calendar days	65.7%	85.2%
FREE MARKET		**ACEA ENERGIA PERFORMANCE**	
Billing adjustments	90 calendar days	97.7%	93.2%
Double billing adjustments	20 calendar days	61.1%	20.4%
Reasoned reply to written complaints	40 calendar days	54%	65.6%

GENERAL LEVELS OF COMMERCIAL QUALITY

PERFORMANCE	AEEGSI PARAMETERS - Minimum percentage of services to be provided within max. time limit.	Percentage of services provided within max. time limit	Percentage of services provided within max. time limit
		2014	2015
ENHANCED PROTECTION SERVICE		**ACEA ENERGIA PERFORMANCE**	
Reply to written enquiries	95% within 30 calendar days	97.8%	97.6%
Reply to written requests for billing adjustments	95% within 40 calendar days	96.8%	96.4%
FREE MARKET		**ACEA ENERGIA PERFORMANCE**	
Reply to written enquiries	95% within 30 calendar days	96.3%	96.9%
Reply to written requests for billing adjustments	95% within 40 calendar days	96.6%	95.8%

(*) In the event of failure to meet the standards, enhanced protection service customers (mainly households and small businesses) will receive an automatic compensation of 20 euros.

TABLE 14
SOCIAL INDICATORS: SERVICE CONTINUITY DATA - ENERGY DISTRIBUTION (2013-2015) – (AEEGSI parameters and Acea Distribuzione performance; 2013-2014: data certified by AEEGSI; 2015: provisional data submitted to AEEGSI pending certification)

ENERGY DISTRIBUTION - CONTINUITY INDICATORS - LV CUSTOMERS

DURATION OF DISRUPTIONS AND IMPROVEMENT PERCENTAGES

PERFORMANCE	Average aggregate duration of lasting disruptions without prior notice due to operator's fault affecting LV customers per year (minutes)			Improvement percentage	
	2013	2014	2015	2015 vs. 2013	2015 vs. 2014
High concentration	32.05	30.23	34.55	-7.8%	-14.3%
Medium concentration	51.18	54.73	49.70	2.9%	9.2%
Low concentration	75.72	51.51	58.38	22.9%	-13.3%

AVERAGE NUMBER OF DURATION OF DISRUPTIONS AND IMPROVEMENT PERCENTAGES (*)

PERFORMANCE	Average number of disruptions without prior notice due to operator's fault affecting LV customers per year			Improvement percentage	
High concentration	1.69	1.44	1.74	-3.0%	-20.8%
Medium concentration	3.50	3.30	2.79	20.3%	15.5%
Low concentration	4.79	3.97	3.46	27.8%	12.8%

(*) The yearly average number of disruptions per LV customer takes into account both lasting disruptions (>3 minutes) as well as short disruptions (≤ 3 minutes but exceeding 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 "average concentration"; less than 5,000 inhabitants is defined as "low concentration."

Quality in the public lighting area

195,176 lighting points AND **220,175 bulbs** MANAGED IN ROME

IN 2015, NEW LIGHTING POINTS AND PLANT TRANSFORMATIONS INCLUDED INSTALLATION OF **6,553 LED lighting points** (4,434 in the Tor Bella Monaca district area)

REINSTALLATION OF **493 supports** (DUE TO EROSION) AND REPLACEMENT OF **10,302 bulbs**

artistic lighting FOR THE TREVI FOUNTAIN AND IMPERIAL FORUMS

The functional and **monumental artistic public lighting system of Rome** is licensed to **Acea Illuminazione Pubblica** pursuant to a *Service Agreement*[33] entered into between Acea SpA and the Municipality of Rome. The area **spans approximately 1,300 sq km** (i.e., about 7 times Milan area).

The company is responsible for the **design, construction, operation, maintenance and restoration of networks and plants**. All company operations are conducted in compliance with procedures under the **Quality, Environment, Safety and Energy** (QASE) **Management System certified pursuant to UNI EN ISO and OHSAS** standards (also see *Corporate Identity*, *Management Systems*).

Work across the areas is planned and supervised as **milestones are reached. To this end, a synergy is created between in-house executive and technical skills and the guidelines issued by the local Public Administration Departments and authorities** responsible for supervising new urban developments, improvement projects as well as the cultural heritage. In addition to delivering the service for the Municipality of Rome, the Company makes its know-how available to other stakeholders.

ACEA 2.0

2015 saw the continuation of the endeavours that in 2016 will lead to the introduction of the **WFM Project** (workforce management) into operational management. The project entails the **implementation of new certified and centralised information systems** (SAP) and the introduction of state-of-the-art **mobile technologies** for assigning and reporting field operations in real time.

TABLE 15
PUBLIC LIGHTING IN ROME IN FIGURES (2015)

No. of lighting points	**195,176** (+1.3% compared with 2014)
No. of monumental artistic lighting points	• *approximately **11,000***
No. of bulbs	**220,175** (+1% compared with 2014)
MV and LV grid (km)	**7,835** (+1% compared with 2014)

Major public lighting operations conducted in 2015 in the functional, artistic and monumental domain included two new installations for Prenestina Bis tunnel and Prenestina Bis street, conversion of about 5,000 lighting points in district areas, operations in **underground stations** and **the improvement of via Ardeatina**, the new artistic lighting system of the archaeological area along the **Imperial Forums** (see relevant boxes).

In 2015, **contracts were awarded for the supply and installation of lighting fittings in view of the LED conversion of the city's public lighting systems** consistent with the Plan defined in 2014 with Roma Capitale, which is still being finalised[34]. Under mandate from the city's administration, a portion of the Master Plan was also carried out during the year, with **4,434 lighting points being converted into LED technology** in the suburban area of **Tor Bella Monaca**. This first installation **substantiated the expected energy savings data** (around **55%**).

For the purpose of enhancing operational processes, Acea Illuminazione Pubblica **has developed an interactive data acquisition system** aimed at surveying LED luminaires involved in the conversion process. It allows data relating to the conditions of lighting points and their luminaires to be collected and updated in real time during installation operations by using mobile devices connected to the network (see *Institutions and the Company*, *Research and innovation*).

As part of the **customer satisfaction questionnaires administered in 2015** through two half-yearly surveys, Acea aimed at conducting an **in-depth review on subject of LED lighting**: as an average of the two surveys, it turned out that about 61% of the 2,400 respondents knew the new technology of lighting fittings, while **30.4% of them were able to notice LED lights in the streets**. According to the respondents, the **main three advantages** related to this technology include: energy efficiency (83%), better distinction of colours on the streets (18%) and environmental compliance (9%). As a whole, **87.6% of the individuals interviewed believe that the LED street lighting project is important for the city**.

[33] 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.

[34] The Plan was prepared in 2014 and is currently awaiting formalities (execution of general contract) to be dispatched by Roma Capitale.

LIGHTING WORKS IN PRENESTINA BIS TUNNEL

Following the **pilot project** completed in the previous year **in Settecamini tunnel**, in via Tiburtina, the first project that relied entirely on LED luminaires in a vehicle-accessible underpass, **in 2015 Acea managed to apply the same construction standards** as defined in the previous project **to carry out works in the artificial tunnel of Prenestina Bis** that passes through the Tor Tre Teste park. Lighting works also involved **superficial refurbishments of the Prenestina Bis "link road"** (approximately 1,800 m of dual carriageway, two roundabouts and one junction, with lampposts of different heights and LED luminaires being installed, totalling **138 luminaires**.
The **road underpass**, having a rectangular box section and spanning **450 metres in length**, consists of a single two-way section. The project was developed taking into account the geometric characteristics of the tunnel, the road design speed (70 kmph) and the different requirements set by day-time and night-time configuration, identifying the appropriate luminance curves. The system was built using **LED luminaires** with a view to energy efficiency and savings. This made it possible to install **fixtures with wattage reduced by 50%** compared with conventional sources **while ensuring very high consistency in terms of luminance levels** achieved. As a whole, the following installations were completed: **310 floodlights**: **90 symmetric floodlights for permanent lighting and 220 reverse-flow floodlights for additional lighting**. The **remote-controlled** system allows the power of the individual floodlights to be lowered by changing the luminous flux in the sections where luminance values need to be gradually and considerably reduced.

LIGHTING IN THE UNDERGROUND STATIONS OF B1 AND C LINES AND WORK FOR IMPROVEMENT OF VIA ARDEATINA

As part of the plan developed with Roma Metropolitane, in 2015 Acea deployed the lighting system in **Line B1, the area opposite Jonio station** and the intermediate air vent system between the latter and Conca d'Oro station using **50 LED lighting points,** while in **Line C**, the air vent systems and stations **along the section spanning Mirti Station and Lodi Station 294 LED lighting points** were installed. Different types of lampposts were used to complete all of the above works (single and double fixtures) depending on the intended use (green areas, pedestrian areas or mobility areas).
Operations completed along via Ardeatina were part of the **work for improvement** of road conditions started by the Municipality of Rome to improve road traffic, which is particularly heavy in and out of the city. More specifically, three roundabouts were built at via Tor Carbone, via di Tor Pagnotta and via di Torricola and work for improvement at via A. Millevoi was completed, together with **refurbishment of the road network and upgrading and extension of the public lighting system of the entire area**. The project required the installation of **143 new LED lighting points**. Considering the **archaeological and landscaping constraints existing in the area**, an agreement was reached with the relevant Authorities and the Appia Antica Park Agency to (a) pay special attention to the site of the supports in order to avoid any interference with the many archaeological finds and the underlying ancient via Ardeatina, located at low depth, and (b) ensure a low visual impact of the lampposts installed, the latter being in fibreglass, painted green and placed in such a way as not to obstruct the different views on the Appia Antica Park.

TABLE 16
MAIN PUBLIC LIGHTING WORKS ON LIGHTING POINTS (2015)

Type of work	(No. of lighting points)
Installation **of new lighting points** (including artistic)	**2,474** lighting points (of which **2,055 LED**)
Actions to improve **energy efficiency/technological innovation** (fixture replacement)	**4,498** lighting points
safety measures	**434** lighting points

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

During the year, Acea also carried out scheduled and extraordinary maintenance work on the systems to guarantee an adequate level of lighting across the area under management (see table 17).

TABLE 17
SCHEDULED AND EXTRAORDINARY PUBLIC LIGHTING REPAIRS AND MAINTENANCE (2015)

Type of work	(No.)
Checking corrosion on lampposts	**17,602** lampposts checked
Replacing bulbs prior to luminous flux loss	**10,302** bulbs replaced
Reinstalling lampposts that were corroded or knocked down due to accidents	**493** lampposts reinstalled

Acea constantly monitors the **public lighting system quality standards** and notifies them to the Municipality of Rome, such standards pertaining to the **fault repair lead time**, which is calculated starting from a fault being reported[35]. **Service standards** are **defined based on an average service resumption time allowed** (TMRA) within which repair work should be completed, **and a maximum time limit** (TMAX), **with fines being applicable in the event it is exceeded**[36].

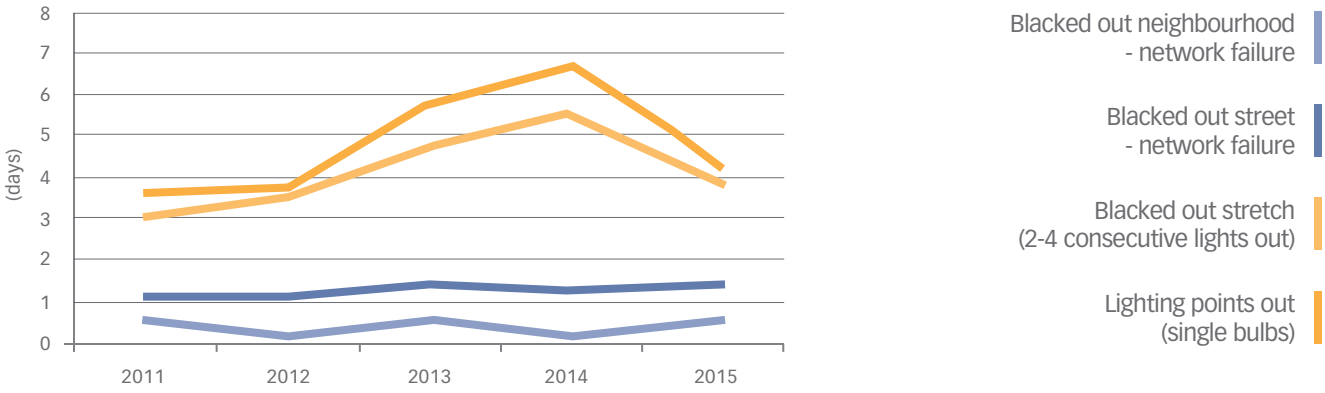
System operation **average service resumption time** (TMR) **taken by Acea in 2015** in respect of the different types of failures **was clearly lower than TMRA**, and - except for network faults - was considerably better compared with the previous year (see table 18 and chart 17).

TABLE 18
PUBLIC LIGHTING SERVICE RESUMPTION FOLLOWING FAILURES: ACEA'S STANDARDS, PERFORMANCE AND FINES (2014-2015)

Type of failure	Fine per day of delay	Service level agreement (*)		Acea's performance	
	(in euros)	TMRA (average service resumption time allowed) (business days)	TMAX (maximum service resumption time limit) (business days)	TMR (average service resumption time) (business days)	
				2014	2015
Blacked out neighbourhood - MV network failure	70	1 day	1 day	<1 day	<1 day
Blacked out street - MV or LV network failure	50	5 days	8 days	1.29 days	1.41 days
Blacked out stretch (2-4 consecutive lights out)	50	10 days	15 days	5.54 days	3.98 days
Lighting points out: single lamps, posts, supports	25	15 days	20 days	6.64 days	4.25 days

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

CHART 17
ACEA'S PUBLIC LIGHTING FAULT RECOVERY PERFORMANCE TREND (2011-2015)



Faults are detected by internal control systems (e.g. remote management) and reported by the citizens and the Municipality of Rome using the different contact channels available (call centre, web, fax or ordinary mail)[37]. Acea Illuminazione Pubblica has also built its own **web portal** (www.webip.acea.it), which provides citizens with a modern and direct contact channel and, at the same time, provides Roma Capitale offices with a tool to monitor public lighting conditions. By 2016, **an app** will also be deployed allowing faults to be geolocalised and reported directly using a smartphone.

In 2015, **23,448 faults were reported**[38], showing a **slight drop** compared with the 23,638 reports received in 2014, **97.9%** being dealt with within the year.

The **percentage distribution of the reports by type of fault** (see chart 19) shows a slight decrease in "blacked out street" incidents related to network failure (from 43.4% to 42%) and "individual lighting points out" (from 40.9% to 39.7%) and an increase in "blacked out stretch" compared with previous years, while "blacked out neighbourhood" incidents due to network failure proved again to have a very low impact (0.2%).

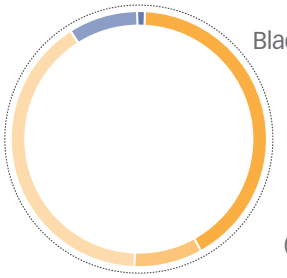
[35] For the purpose of calculating service levels, reports pertaining to damages caused by third parties and to faults affecting the same network section already reported will not be considered.

[36] Fines are calculated using the following criteria: each repair completed beyond the TMAX will be sanctioned; repairs completed within the TMAX but exceeding the TMRA will be sanctioned only if TMR>TMRA. In 2015, total reports subject to fine calculation amounted to 14,870, of which 55 (0.4%) were completed beyond the maximum time limit; the amount of fines in 2015 stood at 19,900 euros (also see *Institutions and the Company*, box dedicated to Investigations, rewards and sanctions).

[37] More detailed information on the call centres' performance and written complaints is provided in the Customer Care section.

[38] Data does not include reminders and tickets opened for the same fault.

CHART 18
TYPES OF PUBLIC LIGHTING FAULTS OUT OF TOTAL REPORTS RECEIVED (2015)



Blacked out neighbourhood - network failure 0.2%

Blacked out street - network failure 42%

Blacked out stretch (2-4 consecutive lights out) 8.6%

Lighting points out (single lamps, posts, supports) 39.7%

Other (ceiling lamp, etc.) 9.5%

In agreement with the relevant Authorities, Acea is committed to **enhancing the artistic and architectural heritage of the Capital** by deploying over **11,000 dedicated lighting points**. Given the wealth of monuments located in Rome, where the company has been operating for many years, **Acea** has **gained specific expertise** in the artistic lighting sector, which can also be extended to the needs of "private customers" (such as ecclesiastical institutions, hoteliers or third parties in general). In addition to ordinary maintenance work performed on the existing systems, in 2015 Acea Illuminazione Pubblica carried out a number of **major operations**, such as the completion of the **Imperial Forums** lighting project designed by Vittorio Storaro, with **526 floodlights** being installed using LED technology, the new lighting system of the **Trevi Fountain** in conjunction with Acea Ato 2, who was responsible for water system operations, deploying **90 floodlights** using LED technology (see relevant boxes). The Ministry for Cultural Heritage and Activities (Special Department of Rome) also requested the company to build the new artistic lighting system using LED technology for the entire **monumental complex of the Baths of Caracalla**. In 2015, **initial work was completed on the ancient Library area**, which was enhanced with the deployment of 21 floodlights whose special colour temperature extols the colours of the ancient walls. Acea also performed works **at the historical Palazzo Piacentini**, which was inaugurated in 1932 and is currently home to the Ministry for Economic Development, where last year the glasswall dedicated to Sironi's *Labour Charter* was restored with Acea's sponsorship. The lighting system designed by Acea engineers was intended for the "**Scalone d'Onore**" (Staircase of Honour) located inside. Again, LED technology was used with 16 linear floodlights replacing the old fluorescent lamps that were used in the past within the four historical wall lights in the entrance hall. With regard to the lighting of the flight of stairs, 5 small-sized floodlights secured to specific clamps were used. They were designed in such a way as to minimise visual impact and enhance the environmental architectural elements.

NEW LIGHTING SYSTEM FOR THE TREVI FOUNTAIN

Upon request of the Cultural Heritage Department of Roma Capitale and as part of the plan for the restoration of Rome Fountains, Acea planned and completed the new artistic lighting system - using LED technology - **of the Trevi Fountain, such project being funded by Fondazione Fendi**. To this end, **86 (19W) underwater floodlights** were used, with 3,500K and 4,000K colour temperature **and deployed inside the basin under the sculpture set**, and **4 (114 W)** floodlights were installed **on the artistic shelf overlooking the facade**.
The new system was built with the support of Cultural Heritage Department engineers, restorers, Acea Ato 2 engineers working on the water system as well as Acea Illuminazione Pubblica engineers. In an attempt to find solutions with the least possible impact, Acea Illuminazione Pubblica specifically arranged for a non-standard white cable to be built so as to minimise the visual impact of the entire electrification system.

IMPERIAL FORUMS LIGHTING SYSTEM

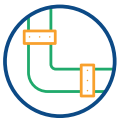
On 21 April 2015, on the occasion of the "Natale di Roma" (Birth of Rome) celebrations, **the new monumental and artistic lighting system of the Imperial Forums** using LED technology was **inaugurated** in the presence of the Mayor of Rome. The lighting design prepared by Francesca and Vittorio Storaro upon request of Roma Capitale was entrusted to Acea Illuminazione Pubblica who executed the project and built the systems. The areas covered by the project included the **Forum of Trajan, Forum of Augustus and Forum of Nerva**.
The **bottom-to-top** lighting **brought out circumstances of ancient Rome**, providing the visitors with an understanding of the architectural layout of the different areas. The stretch of road running from Piazza Venezia to Largo Corrado Ricci affords a truly suggestive night view**, especially in the Forum of Trajan area** - with the **Trajan's Column** and **Basilica Ulpia - and the Forum of Augustus, where the entire complex can be appreciated from a single vantage point. White dynamic light** was used, with a colour temperature ranging between 3,000K and 4,000K managed through a DALI computer-aided system ensuring **lighting level optimisation**.
As a whole, the new lighting system required **the installation of 526 floodlights** with ratings ranging between 22W and 109W, with electricity consumption not exceeding 27 kW.

Quality of Water area

Acea engages in water operations through subsidiaries in different Optimum Areas of Operations (ATOs) across the regions of **Lazio**, **Tuscany**, **Campania and Umbria**.
Below is a description of the integrated water service operations carried out by **Acea Ato 2 in Optimum Area of Operations 2 – Central Lazio** (comprising Rome and another 111 municipalities across Lazio, with an overall inhabitant base of around 3.9 million), representing **the Group's "historical" area of operations**[39], as well as activities carried out by **Acea Ato 5**, who also operates in Lazio (ATO 5 - southern Lazio - Frosinone, comprising 85 municipalities and about 480,000 inhabitants).
Key economic, social and environmental information[40] about the **other Group companies** operating in Italy in the water area is provided under *Water Company Data Sheets* and included, with regard certain Group data, in the section illustrating *Environmental issues* and in the *Environmental accounts*, while water operations carried out in Latin America are described under *Operations abroad*.

The management of the integrated water service comprises the entire drinking and wastewater cycle: from collection of the natural resource from the springs to its return to the environment. It is governed by a **Management Agreement** between the company running the service and the relevant jurisdictional Authority (renamed "Ente di Governo dell'Ambito, EGA" - Area Regulatory Agency).
In addition to the key principles to be followed in managing operations, the ***Integrated Water Service Charter***[41], attached to the Agreement, sets forth the general and specific **quality standards** the operator is required to comply with in its dealings with the users. Dealings with customers are further governed by the ***Users' Regulations***, also attached to the Agreement, setting forth the technical, contractual and financial terms and conditions under which the operator must provide its services[42].
During 2015, extensive discussions were held with the **Authority for electricity, gas and water** (AEEGSI) leading, as mentioned earlier (see *Quality Delivered*), to the **first resolution governing contractual quality**, with Resolution 655/15/R/Idr being published at the end of the year. The aforesaid provision defined the specific and general levels of quality and related standards and will, for most of the aspects being governed, **become effective** as of July 2016.
In compliance with the first regulatory provisions on the subject of transparency and ease of understanding of the contents shown on the bills to be sent to the users as well as on the subject of quality[43] already introduced in previous years, Acea Ato 2 and Acea Ato 5 have made it possible **for users to access information about the quality of drinking water on their websites**.
Quality standards pertaining to the different aspects of the service being supplied **and technical and operational data** are **subject to constant monitoring** and **are notified to the Operating Technical Secretariat (STO, Segreteria Tecnica Operativa) of the Area Regulatory Agency** (EGA) on a regular basis. In 2015, the AEEGSI requested EGAs to provide additional technical and operational data and information, including network log, workforce and labour costs), which Acea Ato 2 and Acea Ato 5 submitted within the required deadline.

The Integrated Water Service in ATO 2 - Central Lazio



ABOUT **10,000 km**
OF NETWORKS MANAGED FOR THE DRINKING WATER SYSTEM (of which about 6,000 km controlled remotely)
AND **6,200 km**
OF SEWERAGE NETWORKS

25 Water Houses INSTALLED
(13 in Roma and 12 in provincial districts)
SUPPLYING ABOUT
2.8 million
LITRES OF WATER

379,333 tests
WERE PERFORMED ON DRINKING WATER
191,552 analytical tests
ON WASTEWATER

LAUNCH OF **WFM project**
TO INCREASE MANAGEMENT EFFICIENCY OF TECHNICAL SUPPORT OPERATIONS

ABOUT **22,000 operations**
FOR METER INSTALLATION
ABOUT **63,000 operations**
DUE TO WATER AND SEWERAGE NETWORK
FAILURES ABOUT **19 km** OF WATER AND SEWERAGE NETWORKS IMPROVED

[39] Acea has been 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. Rome and Fiumicino network is therefore defined as "historical".
[40] It should be stressed that some of Acea's subsidiaries engaging in water operations, especially those operating in Tuscany, publish their own sustainability report, to which reference should be made.
[41] The *Integrated Water Service Charter* - operating in Acea Ato 2 and Acea Ato 5 since 2003 and 2004, respectively - is gradually being extended to the municipalities under management. The full version of the *Service Charter* is available on the respective corporate websites at www.aceaato2.it and www.aceaato5.it.
[42] By Resolution 656/2015/R/Idr, *Standard agreement governing dealings between awarding entities and integrated water service operators - provisions on essential minimum contents*, the AEEGSI defined a nation-wide uniform reference framework to govern the aforesaid dealings and bring current Agreements in line with the "Standard Agreement" (and relevant submission to the Authority for approval) as part of the first tariff setting process, i.e. by 30 April 2016.
[43] Defined by the AEEGSI by Resolution 586/2012, where new provisions and availability of information about water quality were to become effective as of 1 January 2014 and June 2013, respectively.

Acea Ato 2 engages in the **design, construction, maintenance and restoration of networks and plants** across the ATO 2 area - Central Lazio.
All company operations are conducted in compliance with procedures under the **Quality, Environment, Safety and Energy** (QASE) **Management System certified pursuant to UNI EN ISO and OHSAS standards** (also see *Corporate Identity*, *Management systems*).

The service management of the municipalities that fall within the relevant ATO is gradually taken over. Prior to such takeover, Acea Ato 2, in conjunction with the local authorities, performs an accurate **sanity check on the infrastructure** (networks and plants) and if situations of non-compliance are detected, it must wait for the municipalities concerned to complete the actions required to correct any such non-compliances. Following the upgrading of a number of situations, 2015 saw the **completion of management takeovers in the Municipalities of Manziana, Rocca di Papa and Rocca Priora**, while aqueduct service operations were taken over in the Municipalities of **Valmontone and Colleferro**. At **31 December 2015**, out of the 11 Municipalities included in ATO 2 - Central Lazio, **Acea Ato 2 managed the integrated water service** (aqueduct, sewerage and wastewater treatment) **in 78 Municipalities**: the population reached by the service totals about **3.6** million inhabitants (residents), i.e. around 92% of the total population of ATO 2; **in other 17 Municipalities** the Integrated Water Service **is managed partially.**

The **infrastructure managed** by Acea Ato 2 across the area totals about **10,000 km of network** (including aqueduct, transport and distribution)[44] and over 2,500 km of connections, **for drinking water**, and **about 6,200 km of network** and 1,644 of connections**, for sewerage**; networks connected to a complex system of facilities and plants that make it possible to operate the aqueduct, treatment and sewerage service.
The company follows the growth of new urban developments and every year carries out works for the upgrading and refurbishing of plants as well as for completing, extending and improving conduits and networks.

ACEA 2.0

In order to attain rationalisation and efficiency of the operating processes, in 2015 Acea Ato 2 completed the switchover to new information systems and **launched the Workforce Management Project** - WFM (see box for details). The new working model resulting from extensive discussions aimed at defining common processes and solutions **will, therefore, be applied to the other Group water companies** during 2016, through a *Roll in* programme whereby new functions will also be implemented (e.g. integration between GIS and SAP system for asset management).
With a view to continuous improvement, by applying the study method of the so-called Lean Organisation and Value Stream Mapping, in 2015 Acea Ato 2 devised improvement endeavours for "*Efficiency of Solid and Liquid Matrix Disposal*" and "*Criteria for Connecting to Sewerage Networks*" with the aid of dedicated workgroups.

LAUNCH OF THE WFM (WORKFORCE MANAGEMENT) PROJECT IN ACEA ATO 2

In September 2015, following the operation review and definition work completed in the previous years, **Acea Ato 2 was able to launch**, as part of the broader Group project known as Acea2.0, **the WFM Project** aimed at a **more efficient management of water service operations carried out by technicians and blue collars**.
In particular, **new certified and centralised information systems** (SAP) were implemented and **state-of-the-art mobile technologies for assigning and reporting field operations** in real time were introduced. In short, depending on the type of operation to be carried out, the system allows **the nearest appropriately skilled technician to be selected** and **promptly sent to the site where support is required**, tracking operational timeframes and outcome. This will result in a **rationalisation of travelling time**, an **increase in performances and quality of the service delivered** and **will enable corporate information to be shared** using new methods and channels.

2015 also saw the continuation of distribution network study and water loss detection activities conducted in conjunction with Acea Elabori based on the "district division" approach as under Ministerial Decree 99/97. The activities focused on the solution of specific issues in the Municipalities of Velletri and Oriolo Romano and in the XIV and XV Districts of Rome (see *Environmental issues*, *Use of energy and water*).

The digitalisation process of the sanitary water networks in ATO 2 also continued during the year, with data being input in the Geographic Information System[45] (GIS): at 31 December 2015, **10,668 km of water network** and **5,600 km of sewerage were digitalised**.

[44] In details, 1,362.86 km of supply networks, 208 km of acqueduct, 8,488.46 km of distribution and 2,541 km of connections.
[45] GIS is an IT system used to input, record, analyse, view and output information resulting from geographical data, relating different elements according to their common geographical benchmark.

The aqueduct service managed by Acea Ato 2

From a quality and quantity perspective, all main aqueducts (208 km) and the **transport network** (1,363 km) are **controlled remotely** (telemetering, alarms and possible operations via remote control). In addition, Rome distribution network (4,403 km) is operated through remotely controlled water centres fitted with pressure and/or level gauging capabilities. **As a result, the extent of the network that can be considered as subject to remote control spans 5,974 km overall.** Thanks to the progressive implementation of the water centre system, **540** water centres are partially or entirely controlled remotely (with pressure and/or flow and/or level measurements), while **147** are fitted with remote-control quality measurement capabilities.

In addition to **maintenance and improvement work** required for some plants of the Rome supply system (water facilities, feeding water pipes, networks, etc.), major operations completed in 2015 on the aqueduct system included: inspection and maintenance of a **section of the II Acquedotto Marcio tunnel**, from the springs to the Vigna Trezzini construction, and laying of a stretch of pipe with subsequent diversion of the V and VI Siphon of Acquedotto Marcio in order to allow work for the construction of via Tiburtina bis to proceed.

In the Municipalities under management, Acea Ato 2 provides support to deal with **water emergency situations** occurring during the summer season and when consumption increases. For example, in order to tackle the critical situation as mentioned earlier in the Municipality of Velletri, water shifts were enforced and published on the corporate websites, while a supply service using road tankers was made available, thereby reducing discomfort among the population. Similar problems occurred in the Municipality of Olevano, where leakage detection, district division and improvement endeavours helped solve these issues.

The **installation of new meters** or **replacement of those not working properly** also continued in **2015**, requiring about **22,000 operations**.

Table 19 shows the main **routine and extraordinary maintenance work** carried out during the year on water networks in Rome and in the other municipalities under management, as well as **checks performed on the quality of the drinking water supplied**.

TABLE 19
MAIN OPERATIONS ON WATER NETWORKS AND CHECKS PERFORMED ON DRINKING WATER IN ATO 2 – CENTRAL LAZIO (Rome and other municipalities under management) (2015)

Type of work	(No.)
Operations for aqueduct network failure	about **53,000 operations**
Scheduled maintenance work on aqueduct network	about **10,000 operations**
Meter installations (including new installation and replacement)	about **22,000 operations** (about 9,800 new and 12,200 replaced)
Water network extension	**8.85 km of water network extension**
Water network reclamation	**9 km of network reclaimed**
Drinking water quality control	**9,257 samples** collected and **379,333 tests** performed on drinking water

With regard to **water supply continuity**, in 2015 **977 disruptions** were necessary, a figure that confirms the **downtrend observed over the past few years**. Of these, **844 were urgent disruptions** (due to pipe failures) and **133 were scheduled**; **about 4% of the disruptions lasted more than 24 hours**, in line with the previous two-year period (see table 20).

TABLE 20
NUMBER, TYPE AND DURATION OF WATER SUPPLY DISRUPTIONS IN ATO 2 (2013-2015)

	2013	2014	2015
Urgent disruptions (No.)	950	903	844
Scheduled disruptions (No.)	195	126	133
Total disruptions (No.)	**1,145**	**1,029**	**977**
Disruptions lasting >24h (No.)	45	36	40

Acea is committed to protecting the areas where water supply sources are present and then performs key control activities to preserve the **quality of the water distributed for drinking use** and water returned to the environment (see *Environmental issues*, *Water Area* and *Environmental accounts*). Acea Ato 2, with the support of Acea Elabori, performs tests on samples collected from springs and wells, supply systems, reservoirs and along the distribution networks. The **frequency of the tests** and **sample collection points**, both **exceeding the number laid down by current law provisions** (Legislative Decree No. 31/2001), are defined taking into consideration a number of variables, such as volumes of water distributed, population covered, network and infrastructure conditions, specific characteristics of local springs.

In the municipalities supplied with water that has intrinsic quality issues, many more tests are performed and if specific problems are detected, **extraordinary analysis campaigns** will be launched. In 2015, a total of **9,257 samples** were collected and **379,333 tests were** performed on drinking water in the municipalities of the ATO 2 – Central Lazio area. Operations were carried out by both Acea Elabori and Acea Ato 2 itself.
The **spring water** collected to supply the **areas of Rome and Fiumicino** (Acea's "historical network") shows **excellent levels** per se. On the other hand, the **volcanic nature of the terrain** in the **Castelli Romani** area, resulting in **mineral elements** such as fluorine, arsenic and vanadium being released into groundwater in **amounts exceeding the limits laid down by law**, has required that for some municipalities the water supply should be delivered notwithstanding such law provisions pending the completion of work aimed at overcoming these issues, such as the decommissioning of some local sources of supply to replace them with higher quality springs. During the past few years, more than 30 purification plants were rolled out for an overall flow rate of about 500 l/s, which are gradually being managed remotely. In 2015, **a call for tenders was completed for the construction of purification plants** in Oriolo Romano (Cave della Doganella), Vejano (Gorgoglione) and Sant'Oreste (Fontane Nuove), while tendering procedures were started for the construction of purification plants in Allumiere (5 Bottini) and Fiano Romano (Sassete wells field) which will be instrumental in supplementing flow rates available for the relevant Municipalities. Moreover, **the revamping of the ozone facility at the purification plant operating in Bracciano Lake was also planned**. This will make the aqueduct system more reliable **and make the use of such an extraordinary supply source more flexible**.
Data pertaining to the main water quality standards by place of residence can be viewed by **visiting** www.aceaato2.it.

Acea **measures customer habits and experience regarding the quality of the water supplied**. Customer satisfaction surveys conducted during the year call for an in-depth review of this topic both in Rome as well as in other Municipalities of ATO 2. The **opinion given by the respondents on taste, smell and clearness of the water distributed in Rome and Fiumicino** was basically satisfactory, standing at **7.7 out of 10** as an average of the two surveys; the same overall satisfaction figure **in provincial districts stood at 7 out of 10** (increasing compared with 6.3 in 2014). Moreover, the surveys showed that **in Rome 52.6% of the respondents normally drink tap water**, while 24% of them never do (-3% year over year). **In provincial districts**, these percentages reach **41.3%** for those who normally drink tap water - **showing a sharp rise compared with the 27.5% average in 2014 -** and 35.5%, still high but showing a considerable drop compared with 55% in 2014. The **main reasons stated for not drinking tap water** both in the city as well as provincial districts included the habit of drinking mineral water (53.8% in Rome and Fiumicino and 51.8% in provincial districts). With regard to provincial districts, it should be noted that while in the previous year the "lack of trust in hygiene conditions" was stated as the main reason for not drinking tap water (63.5%), **it now dropped to 6.7%**.
Following the first ***Water House*** - **a free of charge natural or sparkling cool water dispenser** available for citizens and tourists alike - inaugurated in September 2014, project activity[46] continued throughout 2015, **with Acea Ato 2 providing additional 24 Water Houses**: **12 in districts located in the city of Rome and 12 in districts located across the province of Rome,** with the goal of installing additional 75 Water Houses over the next two years.
In particular, 5 of the Water Houses installed in the city's historical centre were redesigned with a "kiosk-like" look and painted green, making them more similar to the news agent stands seen across the area and better integrated in the context in which they were placed. The water distributed by these "*hi-tech big-nose shaped fountains*" is the same as that delivered by the aqueducts and the quality is **certified by strict regular checks** conducted by Acea and the relevant local health authorities. Water Houses have a **180 l/h flow rate**, allowing a 1-litre bottle to be filled in 20 seconds, are fitted with **monitoring equipment** in synch with Acea Ato 2 remote control systems, and even showcase power supply sockets enabling cellular phones and tablets (or any USB device) to be charged. **This initiative proved fairly successful**: during the year, Water Houses delivered as a whole **about 2,800,000 litres of water**, with sparkling water reaching 69%. In addition to the obvious **social benefits**, **environmental benefits** can also be observed: the amount of water distributed resulted in **71 tons of plastic savings** (i.e. more than 1.8 million of 1.5 litre bottles) and **about 100 tons of CO_2 not released into the air** insofar as bottles were neither produced nor transported (net of emissions due to energy consumption of the Water Houses and added CO_2 needed for sparkling water).

Acea Ato 2 manages **9 of the main artistic and monumental fountains of the Capital**: the Triton Fountain, the three Fountains in Navona Square (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 Naiads Fountain and the "Fontanone Mostra dell'Acqua Paola": In 2015, Acea Ato 2 and Acea Illuminazione Pubblica technicians carried out major works on the **Trevi Fountain** regarding both the water system as well as the deployment of a new artistic lighting system of the famous Roman Fountain.
In the Municipality of Rome the company also manages the pumping stations, reservoirs that feed the non-drinking water network and irrigation network supplying water for "jeux d'eau" in major artistic fountains. Moreover, with regard to the small fountains supplying drinking water and fire hydrants, Acea Ato 2 is responsible for the water segment up to the "point of delivery" and provides technical support in the event of damages to the water supply system and for water flow opening and closing operations.

[46] By Resolution No. 9/2014, the ATO 2 Mayors' Conference approved the investment scheme, including the operation in the 2014/2017 Investment Plan, with funding being allocated in the region of 3 million euros over three years.

The water treatment and sewerage service run by Acea Ato 2

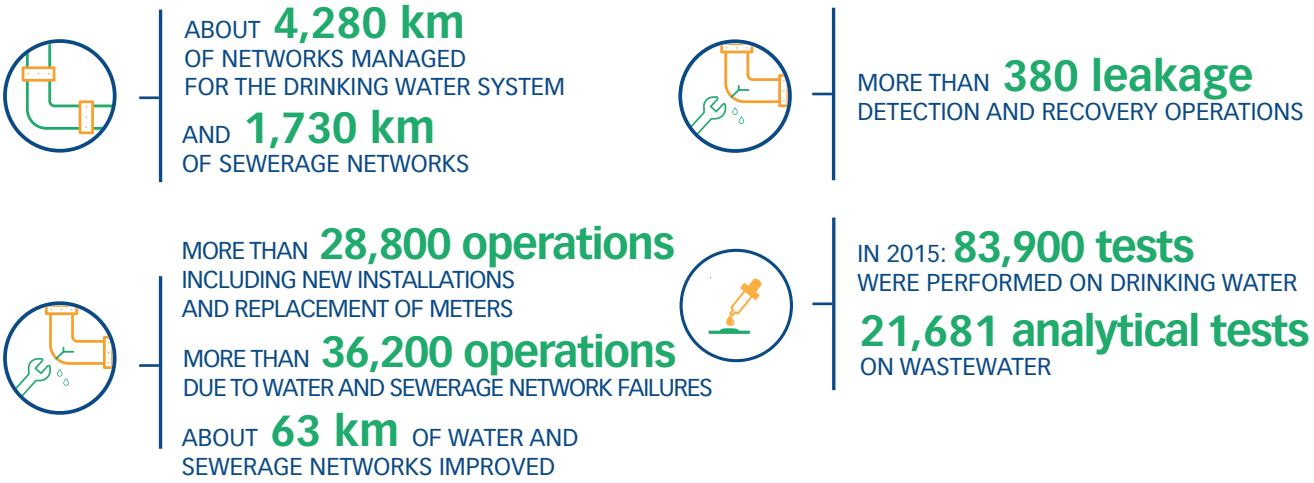
Integrated Water Service operations include the **collection of wastewater** and its **treatment prior to being returned to the environment**.
The treatment system in **ATO 2 – Central Lazio** consists of **"catchment basins"**, territorial units comprising **wastewater treatment plants**, **sewerage networks** connected thereto and the relevant **water lifting stations**. Capabilities managed at 31 December 2015 included **565 sewerage lifting stations** (of which **173** in the Rome municipal area), **179 treatment plants** (of which **33** in the Rome municipal area), approximately **6,200 km of sewerage** (of which approximately **4,088 km** managed for Rome) and **1,644 km of connections**.
During the year, approximately **10,000 troubleshooting operations** and about **4,300 scheduled maintenance operations** were performed in the entire area under management (see table 21). In addition to repairing any damage identified, operations performed on the network often extend to include accurate inspection work on a larger section, so as to **plan any improvement activities** aimed at maximising operating conditions. Besides operation and maintenance activities, work to **expand, complement and enhance the sewerage network** continued.

TABLE 21
MAIN OPERATIONS ON SEWERAGE NETWORKS AND CHECKS PERFORMED ON WASTEWATER IN ATO 2 – CENTRAL LAZIO (Rome and municipalities under management) (2015)

Type of work	(No.)
Operations due to sewerage network failure	about **10,000 operations**
Scheduled maintenance work on sewerage network	about **4,300 operations**
Wastewater quality control	**7,280 samples** collected and a total of **191,552 tests performed on** wastewater
Network extension	**1.08 km of sewerage network extension**
Network reclamation	**9.98 km of network reclaimed**

Acea keeps **a constant check** on the **wastewater treatment system, monitoring the data indicating the quality of the water coming into and flowing out of the purifiers as well as the impact on the receiving water bodies**, i.e. the Tiber and Aniene rivers (also see *Environmental issues*, *Water Area*). **Every year, Control Centres** monitor an increasing number of plants; **in 2015 347 plants were monitored** (including purifiers and sewage lifting stations), **(+16%** over 2014). By relying on cutting-edge technology, **Acea Ato 2's Environmental Operation Centre constantly monitors** remotely-collected data relating to **hydrometric and pluviometric information** concerning the Rome area, such data being shared with the Rome Hydrographic and Marigraphic Office. Data on the **quality of the water along the urban stretches of the Tiber and Aniene rivers is also monitored.**
191,552 tests were performed on wastewater by Acea Ato 2 and Acea Elabori **in 2015**.

The Integrated Water Service in ATO 5 - Southern Lazio - Frosinone



Across the ATO 5 area - Southern Lazio - Frosinone, Acea Ato 5 engages in network and plant design, construction, maintenance and restoration operations and operates in accordance with **Quality, Environment, Safety and Energy** (QASE) **Management Systems certified** as pursuant to **UNI EN ISO and OHSAS standards** (also see *Corporate Identity*, *Management systems*).
The service management of the 85 municipalities that fall within the relevant ATO is taken over on a gradual basis. Acea Ato 5, in conjunction with the local authorities, per-

forms a **pre-emptive sanity check on the infrastructure** (networks and plants) and if any situations of non-compliance are detected, it must wait for the municipalities concerned to perform the actions required to correct any such non-compliances.
During the course of 2015, no new municipalities were added. Therefore, at **31 December 2015** the **Integrated Water Service** (aqueduct, sewerage and wastewater treatment) was delivered in **83 municipalities**. The **target population covered was approximately 460,000 inhabitants**, that is more than 95% of the total population. Two out of scope municipalities (Conca Casale and Rocca d'Evandro) must be added to the above figure.

As a whole, Acea Ato 5 managed about **4,280 km of drinking water network** (including supply and distribution)[47] and about **1,730 km of sewerage network**, excluding connections; networks connected to a complex plant and construction system that make it possible to operate the aqueduct, treatment and sewerage service.
Every year, the company performs work for upgrading and refurbishing the plants as well as complementing, extending and improving conduits and networks.
In 2015, water network structure and **leakage detection and recovery** review operations continued to be performed, with **more than 380 operations being completed** mainly in Cassino, Rocca d'Evandro and Cervaro **and a pilot study being finalised at Isola del Liri** (see *Environmental issues*, *Use of energy and water*).

The **digitalisation process of sanitary networks** in the areas under management continued, with data being fed into the **Geographic Information System** (GIS): at **31 December 2015, 166 km of water network** were digitalised (**140 km** of supply network and **26 km** of distribution network). All water sites (wells, springs, reservoirs/dividers) and treatment and sewerage lifting plants have already been geo-referenced, thereby making technical support easier and more effective. The same work is performed for the sewerage network mapping. At 31 December 2015, the network digitalised in the mapping system spans **211 km** (208 km of primary section, 2 km of connection section and about 1 km of discharge section).

The aqueduct service managed by Acea Ato 5

Some of the water sites managed by Acea Ato 5 consisting of supply sources and distribution plants (divides and reservoirs) are equipped with **remote control**-enabled technology. In particular, telemetry, command and control tasks are performed. The following data is also collected: water flow, tank level, pump start/stop and related electrical parameter as well as quality data (turbidity and residual chlorine). In 2015, field operations were completed for the installation of additional tools and components to ensure a more refined and detailed monitoring of the water sites already controlled remotely. The migration of the **plants monitored on the new Wonderware System Platform** was also implemented. With regard to supervision, **fully remotely controlled plants** included those that show greater water complexity and size, number of inhabitants reached and territorial strategic importance, **totalling 25 sites**.

Finally, the **installation of new meters** or **replacement of those not working properly** continued in **2015**, involving **5,372 operations.** In addition, a large-scale meter replacement campaign was conducted through a specialised contractor, with **23,501 meters** being replaced during the year. Table 22 shows the main **routine and extraordinary maintenance work** carried out on the water networks required to deliver the drinking water supply service in Frosinone and in the other municipalities under management, as well as the **checks on the drinking water supplied.**

TABLE 22
MAIN OPERATIONS ON AQUEDUCT NETWORKS AND CHECKS PERFORMED ON DRINKING WATER IN ATO 5 – SOUTHERN LAZIO (Frosinone and municipalities under management) (2015)

Type of work	(No.)
Operations for aqueduct network failure	about **33,800 operations**
Scheduled maintenance work on aqueduct network	about **120 operations**
Meter installations (including new and replaced meters)	**5,372 operations** (2,092 new and 3,208 replaced meters) in addition to **23,501 operations** for large-scale meter replacement
Water network extension	**2.07 km of water network extension**
Water network reclamation	about **1,200 operations**, totalling **59 km of network reclaimed**
Drinking water quality control	**1,581 samples** collected and **83,910 tests** performed on drinking water

With respect to **water supply continuity**, in 2015 **455 disruptions** proved necessary, of which **233 referring to urgent disruptions** (due to pipe failures) and **222 referring to scheduled disruptions**.

TABLE 23
NUMBER, TYPE AND DURATION OF WATER SUPPLY DISRUPTIONS IN ATO 5 (2014-2015)

Type of work	2014	2015
Urgent disruptions (No.)	175	233
Scheduled disruptions (No.)	173	222
TOTAL DISRUPTIONS (NO.)	**348**	**455**

[47] In details, about 600 km of drinking water supply network and 3,686 km of drinking water distribution network.

Acea Ato 5 performs **drinking water quality monitoring** tasks with the support of Acea Elabori. Tests are carried out on samples collected from springs and wells, supply plants, reservoirs and along distribution networks. The frequency of the tests and sample collection points, both **exceeding the number laid down by current law provisions** (Legislative Decree No. 31/2001), are defined taking into consideration volumes of water distributed, population covered, network and infrastructure conditions and specific characteristics of local springs. In 2015, **more than 83,900 tests** were performed as a whole on 1,581 samples collected. **The main water quality parameters** broken down by "isoquality" zones (i.e. zones having equivalent average quality characteristics) are available online at www.aceaato5.it.

Customer satisfaction surveys for Acea Ato 5 customers also required an in-depth review on **drinking water quality experience** with respect to taste, smell and clearness of the water distributed. The rating was in line with the surveys conducted in the previous year and, as such, **has not reached full satisfaction as yet (5.8 out of 10)**. As was the case in 2014 surveys, the percentage of respondents stating that they usually drink tap water proved again low, reaching just 19.7%, while those stating they never drink any was once more high (65.4%). The main reasons stated by the latter were three: 32% stated "it is not good for my health", 30.7% said "I do not like it, it tastes of chlorine", while 30.2% replied "I am accustomed to drinking mineral water".

The treatment and sewerage service run by Acea Ato 5

The collection of wastewater and its treatment prior to being returned to the environment are part of the integrated water service. The treatment system in **ATO 5 – Southern Lazio** consists of **"catchment basins"** comprising **wastewater treatment plants**, **sewerage networks** connected thereto and the relevant **water lifting stations**. Capabilities managed at 31 December 2015 included **203 sewerage lifting stations**, **127 treatment plants** and **1,730 km of sewerage**, without considering the number of sewerage connections.
In 2015, **2,454 troubleshooting operations** and **185 scheduled maintenance operations** were completed on the networks servicing the sewerage and purification system. In addition to operation and maintenance tasks, work for the **extension, integration and improvement of the sewerage network was carried on** (see table 24).
Wastewater monitoring tasks were performed on 1,601 samples, totalling **more than 21,600 tests**.

TABLE 24
MAIN OPERATIONS ON SEWERAGE NETWORKS AND CHECKS PERFORMED ON WASTEWATER IN ATO 5 – SOUTHERN LAZIO (Frosinone and municipalities under management) (2015)

Type of work	(No.)
Operations due to sewerage network failure	about **2,454 operations**
Scheduled maintenance work on sewerage network	about **185 operations**
Wastewater quality control	**1,601 samples** collected and a total of **21,681 tests performed on** wastewater
Network extension	**9.41 km of sewerage network extension**
Network reclamation	**72 operations** totalling **4.2 km of network reclaimed**

PRICING POLICY

Electricity service pricing

The Italian electricity sales market consists of the following segments: (i) the "**free market**", in which the consumer interacts directly with the operator chosen for the supply of the service; (ii) the **"enhanced protection service"**, where the service is provided to the customer **under the contractual terms and conditions and pricing**[48] **laid down by the Authority for Electricity Gas and the Water** (AEEGSI), i.e. the national body governing the industry, and (iii) the "**safeguarded service**".

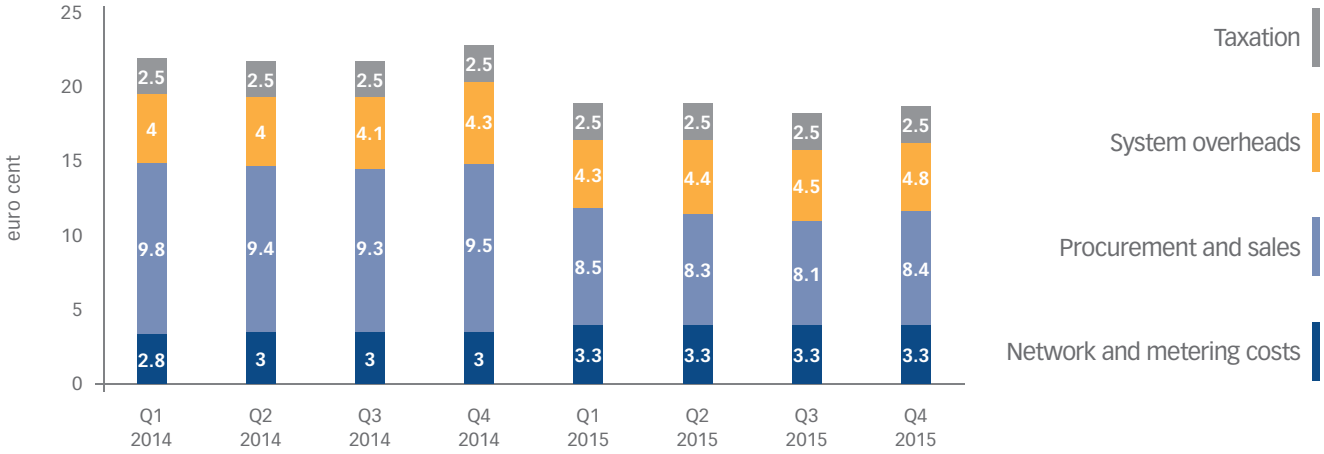
The **costs** shown on the energy bill **refer to four expense items**: **sales** service, **network** and **metering** service, **system-related overheads** and **taxes** due.
The **sales service** is relied upon for free competition purposes[49] - and it includes the prices that the supplier incurs for the procurement, marketing and dispatching of energy to customers. The **network service**, the price of which is set by the AEEGSI according to criteria applicable nation-wide and taking into account inflation, investments and efficiency goals, pertains to **operations for the distribution** of energy and meter management. **System-related overheads** include, among other things, incentives for renewable and kindred sources, the social bonus, energy efficiency and system research. Finally, **indirect taxes** levied on the amount of energy consumed and on the final total cost of the bill.

The **enhanced protection service** is still the reference segment for **Italian household customers** (individuals and families), with a **subscription rate of around 68%**[50] compared to the total population (72% in the previous year). With regard to this segment, in 2015 a **"standard" consumption** of **2,700 kWh/year, with a power supply of**

[48] The pricing is established by the AEEGSI and is updated quarterly based on the costs incurred by the *Sole Purchaser*, minimising the costs and risks connected with the different procurement methods, to meet enhanced protection customers' requirements on the electricity wholesale markets.
[49] The commitments that free market operators are required to undertake in order to carry on their business in compliance with fair competition principles include providing their potential customers with a cost comparison chart. It reflects the cost an average consumer would incur by subscribing to an offer compared to the cost calculated under the conditions set by AEEGSI for the enhanced protection market.
[50] Based on the number of withdrawal points in the enhanced protection market at 31 December 2014 (AEEGSI *2015 Annual Report*).

3 kW would yield an overall annual electricity cost of about 504 euros (18.7 € cents/kWh), showing a slight drop compared with the previous year (19.1 € cents/kWh, totalling about 515 euros). The price change results from the balancing effect, which occurred throughout the 2014-2015 two-year term, between the electricity cost on the wholesale market and the increase in network costs and system overheads. It should be stressed that throughout 2015 the overall impact of energy sale and supply cost items on the bill was less than 50% (see chart 19).

CHART 19
ELECTRICITY PRICE PATTERN FOR A STANDARD HOUSEHOLD CUSTOMER (€ cent /kWh) (2014-2015)



Source: website of the Authority for Electricity Gas and Water (AEEGSI) - statistic data.

With regard to the **enhanced protection service**, **for all customers owning a digital meter** that can read consumption in different time bands a mandatory **dual hourly rate will apply**, as laid down by the AEEGSI, ensuring greater savings for usage during evening hours, during week-ends and public holidays.

For customers facing financial hardship or having large families[51], the Authority, upon recommendation of government authorities, **introduced the "electricity bonus"**, consisting of an electricity cost rebate. **Cost savings are likewise granted to customers whose health conditions** require them to use life-saving energy-consuming electromedical equipment. **In 2015, Acea Energia's customers eligible to receive the bonus** in the protected and free market **totalled 13,133**[52], of whom 454 due to health conditions and 12,679 due to financial hardships. As a whole, in 2015 the electric bonus system allowed the beneficiaries to benefit from financial savings in the region of 1.17 million euros.
Moreover, additional 6,116 customers served by companies other than Acea Energia across the Rome area are eligible for the electricity bonus (5,957 for financial hardships and 159 for physical discomfort).

Acea Energia's sales endeavours on the free market are aimed at **satisfying different needs depending on the types of customers**: from households to large industrial customers. Acea Energia developed its **2015 commercial proposals** based on this criterion (see relevant box).

ACEA ENERGIA'S 2015 COMMERCIAL OFFERINGS ON THE FREE MARKET

Acea Energia's commercial offerings intended for the **mass market segment**, comprising residential customers, freelancers, commercial businesses and small and medium-sized companies, were extended by launching promotions targeted to specific markets/customers. The **Acea Unica** product features a promotional campaign granting a 50% discount on energy and gas components for two months of supply, while **Acea Rapida** is designed for customers subscribing through the Internet and offers a very competitive price for the energy component during the summer season.
In 2015, a **Customer Retention Programme** called **"Acea con Te"** (Acea with You) was launched. It is designed for **Acea Energia's free market household customers**. The programme aims to retain customers by encouraging them to choose the services offered by Acea Energia**, with special reference to online services** (electronic bill, direct debit, payment with credit cards, etc.) and allowing them to benefit from advantages and special discounts by both collecting points and taking part in prize contests launched with the partnership of major organisations operating across Rome. The programme always features new initiatives and benefits available for the subscribers, as constantly notified by Acea Energia.
With regard to **Business and Industrial** customers, negotiations take place on a one-to-one basis, whereby customers can benefit from the support of a dedicated account to identify the most suitable plan according to their energy profile.

[51] For detailed information regarding the conditions entitling customers to apply for and receive the electricity bonus, please refer to the specific section on the AEEGSI website at http://www.autorita.energia.it/it/bonus_sociale.htm.
[52] For customers facing financial hardships reference is made to the number of withdrawal points for which aids are available. For customers with physical discomfort reference is made to the number of validated requests, since there may be several aids available for each withdrawal point.

Water service pricing

In 2015, the **Authority for Electricity, Gas and Water** continued its efforts aimed at bolstering and spreading a **fair, definite, accountable and non-discriminatory pricing system** whereby water services can be managed and run **under conditions of efficiency and economic-financial balance**, pursuant to the ***full cost recovery*** EU principles (full coverage of the industrial and environmental costs of the services) and the **"polluter pays principle"**.

Three measures adopted by the AEEGSI towards the end of the year had a significant impact on the water service: **Resolution 655/2015/R/Idr**, **Resolution 656/2015/R/Idr** and **Resolution 664/2015/R/Idr**.
The first measure defined the **specific and general levels of service contractual quality**, identifying consistent maximum turnaround times and minimum quality standards applicable nation-wide for the services to be supplied to the users. These benchmark standards are in addition to the provisions still applicable as under the Service Charter and User Regulations (see *Quality delivered*).
Resolution 656/2015 - setting forth the **Standard Agreement** as a nation-wide uniform reference framework based on which dealings between the individual awarding entities and service operators need to be amended - laid down the minimum mandatory provisions pertaining to the (i) Area Plan, (ii) instruments to ensure economic and financial balance, (iii) termination and takeover, (iv) additional obligations for the parties, (v) penalties and (vi) sanctions.
Finally, by Resolution 664/2015 the **water tariff method** for the 2016-2019 term was approved. Consistent with the previous method, the newly-approved method is based on a **regulatory structure matrix** that can reflect the different conditions of the individual operations depending on (i) investment needs, (ii) any changes to the operator's goals or business related to grouping processes or quality improvement of the services supplied, (iii) the extent of operating costs as compared to the industry's average pro-capita cost. As is the case with the system applicable to the electricity sector, **incentive mechanisms are in place for improving the contractual and technical quality of the service**, introducing an award/penalty system driven by a specific tariff component (UI2) applicable to all operators, such component to be allocated to a quality fund maintained with the Fund for Energy and Environmental Services.

The **average prices applied in 2015 by the leading water companies of the** Acea Group are shown in table 25.

TABLE 25
AVERAGE WATER PRICES APPLIED BY ACEA GROUP COMPANIES (2015)

Company	€ /cu.m.
Lazio/Campania	
Acea Ato 2 SpA	1.40
Acea Ato 5 SpA	1.83
Gori SpA	1.71
Tuscany/Umbria	
Acque SpA	2.25
Publiacqua SpA	2.57
Acquedotto del Fiora SpA	2.70
Umbra Acque SpA	2.34

PRICING DISPUTES

During the year under review, administrative proceedings involving group water companies were still pending settlement, with specific reference being made to the appeals lodged in 2013 by **Acea Ato 2**, **Publiacqua**, **Acquedotto del Fiora**, **Gori**, **Umbra Acque**, **Acquedotto del Fiora** and **Gesesa** against a resolution issued by the AEEGSI in relation to the temporary tariff method (Resolution 585/2012/R/Idr). In this respect, it should be noted that while the complaints filed regarding **non-compliance of the full cost recovery** principle and a number of infringements of regulatory principles were upheld at first instance by the Lombardy Regional Administrative Court, at present judgement is still pending before the Council of State following an additional appeal lodged by the State Attorney General on behalf of the AEEGSI in 2014 and a request for appeal filed by the water companies.
With regard to **Acea Ato 5** and the disputes on price adjustments relating to 2006-2011 started by the relevant Area Authority, in 2015 the latter filed an additional appeal with the Council of State after the Lazio Regional Administrative Court had rejected its complaints, with judgement presently being discussed before the Council of State.
With regard to **Gori** and the dispute started in 2014 by some Municipalities comprised in the operational area and by User Associations following the charging of the 2014 tariff component called **"Recovery of previous accounts prior to 2012"**, in October 2015 the Campania Regional Administrative Court cancelled the resolutions issued by the Sarnese Vesuviano Area Authority pertaining to such prior accounts.
Finally, the proceedings started by the AEEGSI in 2014 against Gori on 31/12/2015 are still pending, such proceedings pertaining to the infliction of sanctions due to alleged violations of the obligations pertaining to **pricing, data collection procedures and the application of the pricing quota referring to the wastewater treatment service**.

CUSTOMER CARE

ABOUT **5.9 million**
CALLS RECEIVED BY CALL CENTRES, WITH OVERALL SERVICE LEVEL (answers/calls received)
REACHING **86.9%**

MORE THAN **262,000 customers**
RECEIVED AT THE HEADOFFICE HELPDESKS COUNTERS WITH OVERALL SERVICE LEVEL (customers served/tickets issued)
REACHING **83.3%**

VISITS TO WEBSITES OF 2015 OPERATING COMPANIES AND RISE OVER 2014:
www.aceaenergia.it:
ABOUT **3.3 million visits**
(+ 37%)
www.aceaato2.it:
MORE THAN **1 million visits**
(+ 43%)
www.aceaato5.it:
MORE THAN **358,000 visits**
(+80%)

SHARP RISE IN ALL USERS REGISTERED WITH
online helpdesk counters

THE NEW **SAP CRM**
SYSTEM BECAME OPERATIONAL IN ACEA ATO 2

Customer Care Policy

The **operating companies** supplying the services also engage in **"customer care" activities**, while the **Group Customer Care Unit** of the parent company endeavours to provide **consistent and integrated customer management to the maximum extent possible**, in compliance with industry regulations and specific local conditions.

ACEA 2.0

In 2015, the Group saw the **development of the Acea2.0 programme** (see *Corporate Identity*, *Group profile*), where a **review of the overall customer relation strategy** is also addressed. In particular, two of the Acea2.0 projects will have a direct impact on customer care: (i) **the evolution of CRM** (*Customer Relationship Management*), aimed at developing a customer-centric business model capable of providing customised products/services, and (ii) the **implementation of a sophisticated meter-to-cash flow management system** (metering, billing, credit) with a view to optimising processes and minimising customer response time.
In September 2015, **the new systems were introduced into Acea Ato 2**, the company operating the water service in Rome and provincial districts. For example, a client requesting a quotation for a new connection can use the new technological applications to arrange an appointment with the technicians through the call centre and dispatch the necessary formalities on site, without having to queue up at helpdesk counters.

Customer focus is also ensured by **interacting with Consumer Associations**. To this end, Acea relies on the support of a dedicated Unit within the **Institutional Affairs Function** of the parent company as well as on the input of its operating companies, responding to the requests submitted by the consumers and providing insights itself. Moreover, Acea has in place a long-standing **joint settlement procedure** - **an out-of-court commercial dispute settlement process** - where customers are represented and supported by Consumer Associations **recognised by the National Consumer and User Council** (CNCU - Consiglio Nazionale Consumatori e Utenti).
The **joint settlement process** is available for Lazio-based household and non-household customers of Acea Ato 2 and Acea Ato 5 in the water sector, and Acea Energia[53] and Acea Distribuzione in the electricity sector. In 2015, **the requests submitted by Consumer Associations** on behalf of customers of the four operating companies and deemed **eligible for settlement procedure** totalled **346**: 206 filed with Acea Energia, 6 with Acea Distribuzione, 120 with Acea Ato 2 and 14 with Acea Ato 5.
The **meetings** held with **Customer Associations** during the year were aimed at balancing and preventing any emerging criticalities between the needs expressed by the bodies representing the consumers and the interests of the Group's companies. As part of the activities stated in the calls funded by the Electricity Equalisation Fund (CCSE, Cassa Conguagli per il Settore Elettrico), Acea once again attended - as a lecturer - the training courses for the Single Settler of Consumer Associations, which are recognised nation-wide.
Litigations during the year between Acea and its customers are detailed in the relevant box.

With a view to protecting free market customers and in addition to the provisions set forth in the regulations of the industry Authority, Acea Energia continued to implement procedures aimed at **preventing and countering the issue relating to unsolicited contracts**. To this end:

- After signing a contract, customers who subscribe to

[53] With regard to Acea Energia, it should be noted that firms (i.e. non-household customers) registered with Rome Confcommercio (Italian retailers' association), with whom Acea entered into a Memorandum of Understanding as early as in 2012, may also access the joint settlement procedure.

a free market offer through door-to-door sales channels should be contacted by phone (**Check Call**) to **ensure that the contents of the contract** signed **were clearly illustrated** and **that the agent's behaviour was fair**;
- Customers who subscribe to a free market offer through teleselling are contacted again (**Quality Call**) to establish the customer's actual willingness to be signed up. Moreover, Acea Energia **plays back all of the telephone recordings produced by sales agents.** If the checks are not satisfactory, **the new offer activation process will be prevented from being fed into the information systems**.

As part of the **agency agreement** governing the relationship between the parties, the Company also continued to (i) carry out **performance monitor** activities, with fines being inflicted in the event unfair trade practices are detected, and (ii) provide **mandatory training to sales agents** (see relevant box in *Suppliers*, under *Selection and evaluation of suppliers*).

Starting from the previous year, **Acea Energia** ensured compliance with Legislative Decree No. 21 dated 21 February 2014 with respect to Agency and Teleselling contracts as well general terms and conditions of the contract execution proposal, **supplementing the requirements already set forth in the Consumer Code**[54], including **the customer's signature** in order that the contract may be valid, **an extension of the cooling period** and a greater transparency on all cost items making up the commercial offer; **in 2015, the contracts entered between Acea Energia and its sales agents also included bonus-malus systems linked to the quality of acquisitions**. Finally, during the year the company handled **682 requests submitted by customers who had been acquired by other wholesalers through unfair trade practices and who wished to return to the free market or enhanced protection market in which the company operates**.

2015 LITIGATIONS WITH CUSTOMERS

Legal proceedings **brought by customers** against companies of the Acea Group mainly concerned disputes relating to **charges for service supply, refunds and service activation delays**.
Disputes at 31 December 2015 **totalled 575** (502 in 2014 and 455 in 2013), with the average economic value being around 3,124.00 euros (2,360.00 euros in 2014 and 2,900.00 euros in 2013). While litigations with customers were higher, their resolution was quicker and their financial impact was lower.

Contact channels and performance

Acea provides customers with several contact channels: a **corporate switchboard**, **commercial toll-free numbers** and **toll-free fault reporting numbers**, **e-mail** (for water companies) as well as **physical** helpdesk counters. Customers can also reach the Company by **letter**, **fax** and through the **websites** (www.acea.it, www.aceaenergia.it, www.aceaato2.it, www.aceaato5.it), while "large accounts", such as companies and institutions, can rely on dedicated resources. All the information relating to toll-free numbers and other contact channels available to customers can be **easily found on Acea's corporate website** at www.acea.it.
In all dealings with its customers Acea guarantees full compliance with data protection provisions, as pursuant to applicable regulations[55].
The main operating companies of the Group rely on **Acea8cento** services for the management of some **remote channels** - telephones, faxes, webforms, mail, social networks - mainly for commercial purposes[56]. The service delivered by the contact centre aims to maximise operations in order to ensure quality, promptness and consistency in meeting customer's requests.

ACEA 2.0

In 2015, Acea8cento provided its input to the Acea2.0 programme based on the experience gained in the customer care and data management areas. In particular, Acea8cento played a key role in developing and commissioning the **new CRM SAP system for Acea Ato 2** and designing the new system for the management of Acea Energia "enhanced protection" customers.
In 2015, Acea Energia undertook a number of actions to improve the **consistency of the answers provided by helpdesk counter and call centre operators** by having Acea8cento operators act as coaches for helpdesk personnel, the goal also being to use resources more flexibly, addressing any operator shortages at the physical channel.

Every year, the **parent company** performs tasks aimed at **monitoring the quality of the telephone channels and physical helpdesk counters through mystery client surveys**. The **results** are regularly **shared with Service Managers and contact operators** to identify strengths and weaknesses of each channel and take the necessary corrective measures. In 2015, a fact-finding review was conducted to build a model that allows **the results of the surveys on the quality perceived to be related to the indicators of the quality delivered**, including data emerging from mystery client surveys.

The toll-free numbers dedicated to the sale of electricity and gas (for enhanced protection market and free market customers) already ensure a **24h service**. Moreover, **starting from October 2015** Acea Energia and Acea Ato 2

[54] The provisions under Law Decree No. 47 dated 28 March 2014 were also applied, such decree being written in law pursuant to Law No. 80 dated 23 May 2014 ("Urgent measures for emergency housing, the construction market and the 2015 Expo trade fair").
[55] Legislative Decree 196/2003, as amended.
[56] In addition to commercial channels, Acea8cento deals with the numbers for reporting failures affecting the water service run by Acea Ato 5 and Gori as well as the cemetery lighting service delivered by Acea Distribuzione. Furthermore, at the end of 2015 Acea8cento also extended its service to Tuscany-based water companies Acque SpA and Publiacqua SpA, launching the overflow management of a portion of the traffic relating to commercial dealings with customers.

helpdesk counter opening hours were extended to meet customer needs, with special reference to Friday afternoons. Furthermore, starting from May 2015, bills can be paid free of charge using cash dispensers and credit cards directly at the headoffice counters, thereby expediting a number of processes. For example, in case of delinquency customers may remedy any such situations immediately, without having to go to the treasurer's office first and then return to the counter to produce proof of payment.

Acea toll-free numbers in 2015 received **about 5.9 million calls**, increasing by 17.4% over the previous year. The **overall service level** as represented by the answers provided to the total number of calls received, stood at **86.9%**. Trends, including long-term patterns, show a greater balance of the impact of the different numbers on the total flow, where the enhanced protection service prevailed until 2014. In particular, the percentage of calls relating to toll-free numbers of the water service (Acea Ato 2 and Acea Ato 5) and energy free market increased, the greater number of gas customers also playing a role. With regard to Acea Ato 2 water-related fault reporting, the increase in calls is also to be related to the greater number of municipalities under management[57] (see charts 20 and 21 and table 26 at the bottom of the paragraph).

CHART 20
TOTAL TELEPHONE CALLS TO ACEA FREE-TOLL NUMBERS (2014-2015)

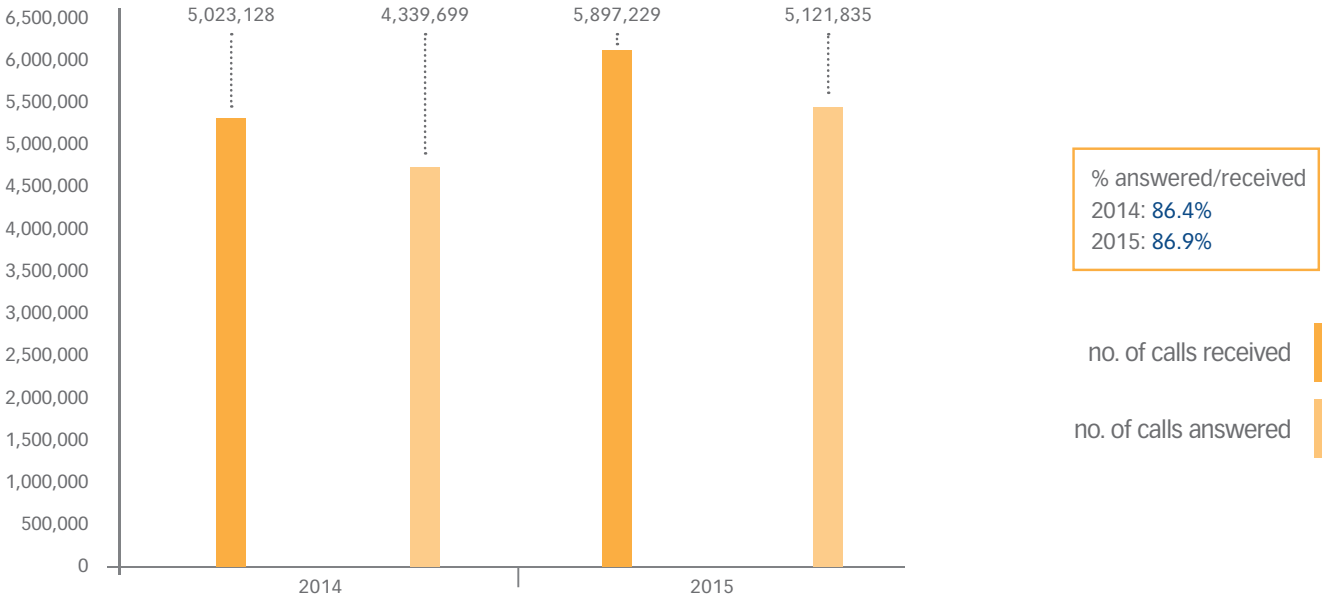
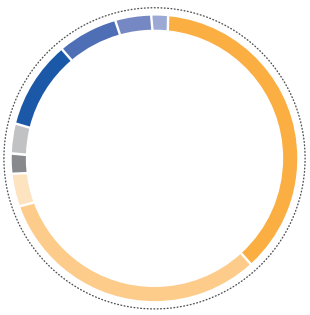


CHART 21
PERCENTAGE BREAKDOWN OF INBOUND CALLS TO ACEA TOLL-FREE NUMBERS (2015)



Electricity enhanced protection market – commercial (Acea Energia)	38.1%	Water – commercial (Acea Ato 2)	10.0%
Electricity and gas free market – commercial (Acea Energia)	32.3%	Water – failures (Acea Ato 2)	6.1%
Electricity – failures (Acea Distribuzione)	3.9%	Water – commercial (Acea Ato 5)	3.2%
Public lighting –failures Rome (Acea Illuminazione Pubblica)	2.0%	Water – failures (Acea Ato 5)	1.8%
Cemetery lighting (Acea Distribuzione)	2.6%		

[57] In 2015, Acea Ato 2 managed the integrated water service in 78 Municipalities and, partially, in other 17 Municipalities, while in the previous year it managed the service in 75 Municipalities and, partially, in other 19 Municipalities.

By Resolution 580/2014/R/com dated 27 November 2014, **the Authority for electricity, gas and water system** reformed the **regulations governing the quality of telephone service in the energy sector**, effective 1 January 2015. In particular:

- service obligations and general standards were reviewed, becoming more stringent;
- specific monitoring of the telephone service quality perceived by the customers will be guaranteed through a public opinion survey on call centres to be conducted by the Authority on a six-month basis;
- the ranking drawn up by the Authority until last year has been replaced by an **annual report on telephone service quality**. It will contain information regarding compliance with the service obligations and minimum standards as notified by each seller; aggregate information about the availability of the services provided by the sellers to manage waiting time; optional information provided by the sellers about the contact channels made available to customers, services offered for each channel and, if available, an estimate of accesses for each channel.

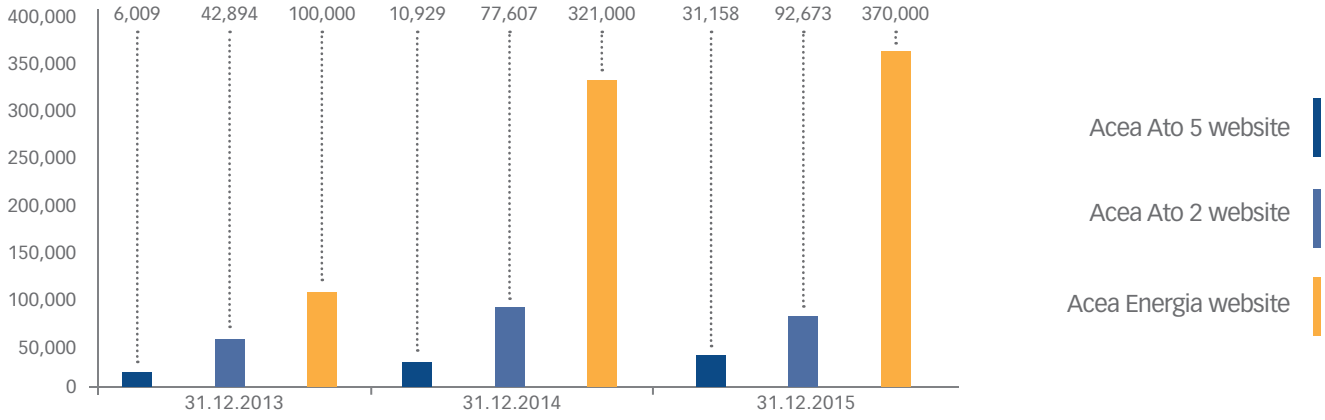
The public opinion survey conducted by the Authority in the first half of 2015 showed, in respect of Acea Energia toll-free numbers, an increase in the overall CSI (Consumer Satisfaction Index) (scale 0-100), rising to **89.2 out of 100** compared with 81.1 out of 100 of the first half of 2014, highlighting an improvement across all quality factors being rated.

The call centre **service levels** as measured by the **percentage ratio of answered calls vs. total calls received** remained high and basically stable for most of the numbers. An improvement was seen in the performance of the commercial water service supplied by Acea Ato 2 and Acea Ato 5 as a result of an increase in the number of operators due to a rise in the number of calls and a decline in Acea Ato 2's water fault reporting, as the merging with the analogous electricity service has not yet been fully implemented. Generally, Acea Ato 2's services were affected by the new information systems introduced at the end of September. The main performance indicators of the last two-year term are shown in table 26 at the bottom of paragraph.

The data relating to the **websites of the different service companies** shows the **customers' increasing interest** in the use of this channel, underscoring **significant rises over the past few years**: **Acea Energia** website (www.aceaenergia.it) totalled **3,298,367 visits** in 2015 (**37% more** compared with 2,414,094 visits in 2014), **Acea Ato 2** website (www.aceaato2.it) recorded **1,042,790 visits (43% more** compared with 727,423 in the previous year) and **Acea Ato 5** website (www.aceaato5.it) totalled **358,965 visits** (**80% more** compared with 199,451 visits in 2014). The websites of the operating companies, which may be accessed either directly or from the parent company's website (www.acea.it), provide customers with a **wide range of features and useful information** that are constantly updated.

The websites also feature **online helpdesk counters** where customers may perform most of the contractual and commercial operations, request information, submit self-metering data, update their profile, check bills and payments and much more. Every year, the operating companies endeavour to improve and broaden the services offered to their customers. For example, starting from December 2015, **the online payment of bills was also activated on Acea Ato 2 online helpdesk counter**.
The **number of customers registered with the virtual helpdesk counters** of all the operating companies **increased considerably**, underscoring the **change taking place** in the way the company can be reached. In particular, at 31 December 2015 **about 370,000 users were registered** with **Acea Energia online helpdesk counter**, 15% more over 2014 but as a whole 270% more compared with 2013. The company has also launched **an app** dedicated to all customers who have registered with the Customer Area of the www.aceaenergia.it website. The app allows many operations to be performed directly using **smartphones**. In 2015, the **Acea Ato 2 online helpdesk counter** recorded **14,587 new registrations**[58], totalling **92,673 registered users,** including condominium and corporate users (about 19.4% more compared with 2014), while **Acea Ato 5 online helpdesk counter** recorded **9,794 new registrations,** totalling **31,158 registered customers** (**185% more** compared with the previous year).

CHART 22
ONLINE HELPDESK COUNTERS OF THE OPERATING COMPANIES: NUMBER OF REGISTERED CUSTOMERS (2013-2015)



Note: with regard to Acea Ato 2 online helpdesk counter, 2015 data pertains to the period spanning January-September.

[58] Data pertaining to new registrations with the online counter pertains to period spanning January September. Indeed, at the end of September Acea Ato 2 switched to a new IT platform which required the reporting systems to be adjusted to the new operating processes.

The **public hall** of **Acea headoffice** located in Piazzale Ostiense in Rome **deals with customers of the electricity, gas and water services** managed by Acea Energia and Acea Ato 2 who prefer to visit **"physical" helpdesk counters**. Other helpdesk counters are located in the Ostia Lido branch office, with Acea Ato 2 managing additional **14 helpdesk counters** dedicated to the water service **in the provincial districts of Rome**.
In 2015, **the public hall at the company headoffice was visited by 262,467 customers**, showing a **4.6% decrease** compared with 275,126 customers recorded in 2014. These figures confirmed the **downtrend** in approaching helpdesk counters**, as was the case in the previous year**.
The drop pertained primarily to enhanced protection electricity service customers following the improvement of some processes, such as metering, while flows to helpdesk counters increased slightly for free market and water service customers.
With regard to **performance of helpdesk operations (see** table 26 at the bottom of the paragraph)**,** service levels as a function of the percentage between customers served and total tickets issued proved again adequate in 2015 for the helpdesk counters **located at the headoffice** of Acea Ato 2, while Acea Energia helpdesk counters showed a decline.
With regard to the energy sector in particular, the **free market helpdesk counter** was affected by the **start-up of the new** CRM (*Customer Relationship Management*) system in January, which required **adjustments** to be made during the year. This had an impact on the lead time required to dispatch formalities at helpdesk counters and, as a result, on waiting time. As to **the helpdesk counter dedicated to enhanced protection customers**, where service level exceeded 80%, **the longer** processing and waiting times **were also due to the operators' stronger problem-solving skills**, as customers had to wait longer compared with 2014 but had their problems solved on a final basis. It should also be stressed that simpler requests were referred to the **telephone service available at the helpdesk counter**, where **more than 17,000 contacts were dealt with**.
With regard to **Acea Ato 5** operating in the Frosinone area, **figures on customers accessing helpdesk counters in 2015 (87,341) were not fully comparable with 2014 figures** inasmuch as "queue managers" were installed (or fitted with all functions for reporting too) at the **4 helpdesk counters** - **Frosinone, Sora, Cassino and Fiuggi** - in mid 2014; from June to December 2015, 47,907 tickets were issued as compared with 42,066 tickets in the same period of 2014, showing a slight increase.

The operating companies also deal with **written complaints, with an information system enabling the relevant process to be followed throughout, from the time the complaint is filed up to its settlement.**
Regarding the **electricity service**, times and percentages of **response to written complaints/enquiries** represent **specific and general levels of commercial quality** for the selling company, such levels being **laid down by the National Authority**. In the event that the seller needs the distributor to provide **technical data** in order to reply to the customer, the distributor must – as per specific quality level – provide such data within 10 or 15 business days, depending on the type of data being requested. Replying to written complaints is also part of the **general quality levels** pertaining to the **distributor** (for **performance data** see *The quality levels regulated by the AEEGSI***,** tables 12 and 13).

The task of replying to **written complaints/enquiries** concerning the **public lighting service** lies directly with **Acea Illuminazione Pubblica**. 2015 figures show a clear improvement over 2014. More specifically, in 2015 **757 complaints were received as a whole (-44%** compared to 1,352 complaints filed in 2014**) and the company** replied, within 31 December, **to 752 complaints**, i.e. more than **99% of total complaints submitted**. Response performance also improved: average response time per complaint was about 4 days and 99% of responses were given within a 30-day timeframe, while the remaining feedback will be provided within the first months of 2016.

With regard to the water service, in 2015 **Acea Ato 2** received as a whole **8,468 commercial complaints** from several municipalities under management (Rome and provincial districts), with **7,205 (85%)** being processed by the end of September with an average lead time of 28 business days. Figures refer to the period spanning January September, considering that at the end of September the adoption of the new information systems required some adjustments to be made in order to update the reports generated. As a result, a full comparison with 2014 final figures cannot be made.
Commercial complaints received by **Acea Ato 5** during the year totalled **5,169**, with **5,089 being dealt with at 31 December** (**98.45% of total complaints**) within an average time of 65 business days. The figures on complaints received rose by 48% approximately compared with 2014 (3,493 complaints**)**, such difference being essentially due to an increase in applications for exemption from sewerage and purification fees related to the purification fee reimbursement process started during the year. Indeed, this type of enquiry tripled compared with the previous year.

The **invoice bill of Acea Energia** sent to customers shows consumption and service costs, payment terms and other useful information. A billing guide intended for free market and enhanced protection market customers is available on website of the energy selling company. Between the end of 2014 and the beginning of 2015, a campaign was launched to promote the electronic bill. Following this campaign**, more than 20,000 customers permanently chose to switch from the paper-based bill** to the electronic bill.
With regard to the water service, in 2015 the utility bills for Acea Ato 2 and Acea Ato 5 were given a **new look and were simplified** with a view to ensuring transparency as per guidelines issued by the Authority.

TABLE 26
SOCIAL INDICATORS: TOLL-FREE NUMBER AND HELPDESK COUNTER PERFORMANCE (2014-2015)

TOLL-FREE NUMBERS

ELECTRICITY SERVICE

COMMERCIAL TOLL-FREE NUMBER (Acea Energia) - ENHANCED PROTECTION MARKET

	u. m.	2014	2015
Total calls received	no.	2,180,609	2,245,313
Total calls answered	no.	1,897,759	2,016,427
Service level (% of answers on calls received)	%	87%	89.8%
Average waiting time before answer	min. s	1'48''	1'29''
Average conversation time	min. s	4'52''	4'16''

COMMERCIAL TOLL-FREE NUMBER (Acea Energia) - FREE MARKET (energy, gas and offers)

Total calls received	no.	1,447,259	1,905,065
Total calls answered	no.	1,247,747	1,617,945
Service level (% of answers on calls received)	%	86.2%	84.9%
Average waiting time before answer	min. s	1'42''	1'41''
Average conversation time	min. s	4'51''	4'30''

FAULT TOLL-FREE NUMBER (Acea Distribuzione) (*)

Total calls received	no.	216,577	230,937
Total calls answered	no.	201,342	213,772
Service level (% of answers on calls received)	%	93%	92.6%
Average waiting time before answer	min. s	1'08''	1'37''
Average conversation time	min. s	2'04''	2'16''

LIGHTING SERVICE

PUBLIC LIGHTING - FAULT TOLL-FREE NUMBER (Acea Illuminazione Pubblica)

Total calls received	no.	133,139	120,432
Total calls answered	no.	122,176	111,728
Service level (% of answers on calls received)	%	91.8%	92.8%
Average waiting time before answer	min. s	1'21''	1'20''
Average conversation time	min. s	1'41''	1'47''

CEMETERIAL LIGHTING - COMMERCIAL/FAULT TOLL-FREE NUMBER (Acea Distribuzione)

Total calls received	no.	98,315	153,263
Total calls answered	no.	81,684	127,802
Service level (% of answers on calls received)	%	83.1%	83.4%
Average waiting time before answer	min. s	2'09''	1'32''
Average conversation time	min. s	4'07''	3'38''

WATER SERVICE

COMMERCIAL TOLL-FREE NUMBER (Acea Ato 2 - Rome and provincial districts)

Total calls received	no.	464,465	590,240
Total calls answered	no.	370,339	501,634
Service level (% of answers on calls received)	%	79.7%	85%
Average waiting time before answer	min. s	2'59''	2'09''
Average conversation time	min. s	4'12''	4'49''

FAULT TOLL-FREE NUMBER (Acea Ato 2 - Rome and provincial districts) (*)

Total calls received	no.	275,559	358,255
Total calls answered	no.	248,267	280,660
Service level (% of answers on calls received)	%	90.1%	78.3%
Average waiting time before answer	min. s	1'53''	4'19''
Average conversation time	min. s	2'35''	2'48''

WATER SERVICE			
COMMERCIAL TOLL-FREE NUMBER (Acea Ato 5 - Frosinone and provincial districts)			
Total calls received	no.	132,479	190,510
Total calls answered	no.	102,899	160,995
Service level (% of answers on calls received)	%	78%	84.5%
Average waiting time before answer	min. s	2'43''	1'10''
Average conversation time	min. s	3'32''	4'02''
FAULT TOLL-FREE NUMBER (Acea Ato 5 - Frosinone and provincial districts)			
Total calls received	no.	74,726	103,214
Total calls answered	no.	67,486	90,872
Service level (% of answers on calls received)	%	90%	88%
Average waiting time before answer	min. s	0'34''	0'42''
Average conversation time	min. s	2'34''	2'48''

HELPDESK COUNTERS

ELECTRICITY SERVICE			
ACEA ENERGIA – HELPDESK COUNTER FOR ENHANCED PROTECTION MARKET			
Tickets issued	no.	163,546	148,951
Customers served	no.	151,233	120,559
Service level (% of customers served/tickets issued)	%	92%	81%
Average waiting time	min. s	48'43"	1h5'28"
Average service time	min. s	12'53"	14'42"
ACEA ENERGIA - FREE MARKET HELPDESK COUNTER (energy, gas and offers)			
Tickets issued	no.	61,986	62,364
Customers served	no.	56,948	48,061
Service level (% of customers served/tickets issued)	%	92%	77%
Average waiting time	min. s	47'21"	1h18'35"
Average service time	min. s	14'23"	17'31"
WATER SERVICE			
ACEA ATO 2 (Rome - headoffice helpdesk counter)			
Tickets issued	no.	49,594	51,152
Customers served	no.	48,484	50,088
Service level (% of customers served/tickets issued)	%	98%	98%
Average waiting time	min. s	17'07"	34'15"
Average service time	min. s	8'55"	10'28"
ACEA ATO 5 (4 helpdesk counters in Frosinone and provincial districts) (**)			
Tickets issued	no.	42,066	87,341
Customers served	no.	40,782	85,191
Service level (% of customers served/tickets issued)	%	97%	98%
Average waiting time	min. s	49'54"	1h11'09"
Average service time	min. s	7'54"	7'03"

(*) Calls handled by the automatic system or terminated by the customer during navigation within the interactive voice responder (IVR) are also considered as answers.
(**) 2014 figures of Acea Ato 5 pertain to the second half of the year only.

COMMUNICATION, EVENTS AND SOLIDARITY

Acea per Roma
THE INITIATIVES SUGGESTED BY THE CITIZENS WERE COMPLETED ACROSS THE TERRITORY
(about 38,000 accesses to the dedicated web plataform)

THE ***Golden Legend***
LIGHT EFFECTS AND FANTASY PROJECTIONS ON THE COLOSSEUM

1,100 students AND **100 teachers** INVOLVED IN ***Roma città d'acqua,***
A PROJECT DESIGNED FOR SCHOOLS

ACEA'S DIGITAL INNOVATION AT
Maker Faire Rome

MORE THAN **1.1 million** VISITS TO THE www.acea.it WEBSITE
(connections through mobile devices exceeded 21%)

800 boys and girls
TURNED OUT AT THE
Acea Olympic Camp

Roma frizzante
A COMMUNICATION CAMPAIGN FOR THE WATER HOUSES

1,687 people
VISITED ACEA FACILITIES

Communication

Acea deals with external communications - **web, press office, communication campaigns, events, sponsorships**, etc. - through the **External Relations and Communications Function** of the parent company, who defines the *corporate identity* and operates in conjunction with other Group companies.
In addition, at the end of 2014 a new Function was set up called **Special Projects of Communications and Relations with the Local Community**, whose duty in particular is to carry out projects aimed at **strengthening the bond** between the Acea Group and the local community, such as in the area of environmental education and solidarity or through ethical initiatives and active citizenship aimed at **enhancing the reputational capital** of the Group in the eyes of customers and citizens alike.

The **corporate website**, www.acea.it, managed by the **Web, Social and Content Unit**, is available in Italian and English and **reflects the Group's corporate communications**. The site is divided into **themed sections**, complete with constantly updated information and contents on subject such as **corporate governance**, the **Code of Ethics, sustainability**, **quality and safety**, **economic and financial documents**, **stock performance on the Exchange** and **price-sensitive statements** and presentations, in accordance with Consob recommendations for listed companies.
The Web, Social and Content Unit is tasked with (i) developing Acea's communication on the main social networks (presently in the start-up phase), (ii) redefining the **web identity**, including a graphic restyling of the website, the responsive versions of the websites and the mobile apps, and (iii) redesigning **user experience**. Following an initial **website restyling** in December 2014, which involved the homepage, **in 2015 additional changes were made to improve the functionality of the internal pages of the website**, also implementing the reporting section. More specifically, the website **showcased the initiatives undertaken during the year by the Special Projects of Communications and Relations with the Local Community Function**, supplementing the section devoted to "Communication" with additional contents, **including multimedia and social contents**, on major projects such as the ***listening campaign: Acea per Roma***, **whereby citizens** were invited to recommend **initiatives to be launched in the 15 districts of Rome** (see details in *Corporate Identity*, *Stakeholders and their involvement*); the ***Golden Legend***, an Acea event held at the Coliseum under the patronage of the Municipality of Rome **to celebrate the International Year of Light** (see relevant box) and ***Roma città d'acqua***, an initiative designed for schools in conjunction with Group companies Acea Ato 2 and Acea Elabori, involving 1,100 students (see box). To support the *listening campaign called Acea per Roma*, **an online technological platform was built** to enable the citizens and associations who took part in the project to input their data. During the two months within which initiatives could be submitted, the system recorded more than 15,000 accesses, reaching almost 38,000 accesses at the end of the year.

GOLDEN LEGEND: LIGHT EFFECTS AND VISIONS ON THE COLOSSEUM

Thousands of people turned out on the evening of Sunday 11 October 2015 to watch the event **sponsored and staged by Acea** under the patronage of the Municipality of Rome to celebrate the **International Year of Light**. It was an **open-air show** held in the Planet's most suggestive theatre, the **Colosseum**: a sequence of magical and dreamlike visions accompanied by exciting music, light effects and colour dances. An enchanted evening during which the audience was able to admire the outstanding **performance of lights and visual mapping projected directly on the Flavian Amphitheatre facade** to tell an old story embellished with fantasy contents.
Dancers hanging in the air provided a surprise ending as they danced in tune with the music and as the plot was narrated in Italian and then in English. A real journey through history inspired by the Golden Legend, an astonishing spectacle involving fantasy, arts and acrobatics where special effects triumphed in an unreal atmosphere. The event was also promoted through Facebook and YouTube social media. A full version of the video is available on www.acea.it website.

ROMA CITTÀ D'ACQUA: ACEA'S INITIATIVE DEDICATED TO THE SCHOOLS OF THE CAPITAL

Roma Città d'Acqua is a project developed as a result of a collaboration between Acea and the Municipality of Rome, and it is dedicated to the schools of the Capital. A five-day training session was organised at Acea headoffice in piazzale Ostiense and at the corporate conference hall La Fornace, in the Tor di Valle area. Attending the event were **around 1,100 students and 100 teachers from approximately twenty Rome-based schools.** The recreational and educational project designed for students of the second cycle of primary schools and students of lower secondary schools for **the 2014-2015 school year**, focused on the **water theme** as portrayed in the different activities carried out by the company, who has been operating the water service of the city for about 80 years. Water as an educational and study topic as well as a basis for developing drawings, compositions with photos and paper cuttings. This was the task "assigned" to the students who chose, together with the teachers, one of the three topics: "***Springs and aqueducts that convey water to Rome*** (in the past and at present)", "***Quality and control of Rome water and its distribution***" and "***Importance of water savings and wastewater treatment***". Out of forty papers submitted, five were selected by a qualified panel and the winning classes were awarded a one-thousand euro prize and a mini tablet. Following the project, Acea and the Rome Department of Culture launched another recreational and educational initiative designed for students who took part in the training sessions. The new initiative called "***Io e la mia fontana***" (My fountain and I) aims to raise awareness among the students and spread the knowledge of Rome historical fountains (information is available on the www.acea.it website, under Communications, Acea for the schools).
Roma Città d'Acqua proved most successful and turned out to be the project most sought after by schools after the Memorial Day. The Department of Education, therefore, **included it in the educational planning for the 2015-2016 school year**, in respect of which Acea recommended the theme called "L'Ambiente che voglio da grande" (The environment I want when I grow up).

Again in 2015, a section of the website dedicated to ***Water Houses*** was developed, featuring the free plain and sparkling water distribution points that Acea is gradually installing in central and suburban areas of the city (also see *Quality of Water area*, where the properties of the water distributed by each "Water House", tutorials and video clips can be viewed. The section recorded about 27,000 visits during the year, including videos.

Among the reports published on the website, special emphasis was placed on Acea's participation in ***Maker Faire*** in October, the world's most important innovation showcase (see relevant box). Moreover, Acea decided to express its heartfelt sympathy for the brutal attack that hit Paris on the night of 13 November 2015 by posting the **French flag**.

2015 MAKER FAIRE: A PREVIEW OF SOME OF ACEA'S DIGITAL SERVICES

Large turnout at *Maker Faire Rome* held from 16 to 18 October 2015 at La Sapienza University area. It is the most important European innovation showcase: an event where creativity and resourcefulness flow aplenty, reflecting the #makers movement. More than 100,000 visitors reached the place where they could meet "digital artisans" and enthusiasts of all ages to present projects and share discoveries and experiences, with more than 300 exhibition stands. In its capacity as silver sponsor, Acea had its own stand within the pavilion dedicated to cultural heritage where **Design Thinking** sessions were held in conjunction with Sap, involving university students and visitors. Acea presented prototypes of new apps as well as some innovative projects, including an **augmented reality interactive multimedia helmet** - instrumental in performing maintenance work - that the visitors were able to wear, testing first-hand the prototype's functions and potential.

From the homepage of the corporate website users can also navigate to the "Contacts" sections, containing all the information about remote channels available to customers, and to the Energy, Water and Environment business areas. This section contains information about the companies operating in the energy and water sectors as well as links to the operating companies, together with "online helpdesk counters" for commercial operations (for more information, see *Customer Care*).

ACEA 2.0

Banners with notices to customers were also published on the website during the migration of Acea Ato 2 services to the new digital platform, and the ***Acea cambia insieme a te*** (Acea changes as you change) campaign was promoted with the launch of the **Acea2.0** programme.

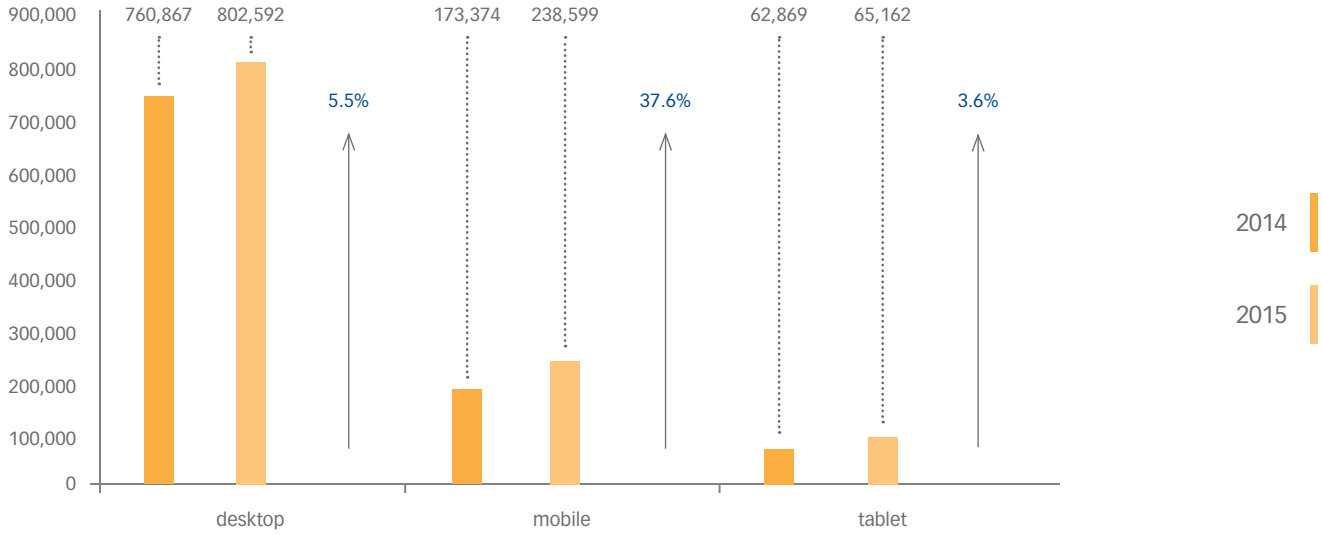
On the occasion of the **presentation of the 2015-2019 Business Plan to the financial analysts** in June 2015, the "Shareholders" section featured the first **Webcast** and the related link was placed on the website. The same feature was replicated for the *Half Year Financial Report* and *Interim Report on Operations at 30 September* presentations.
A number of changes were also made in the "Suppliers" section of the website in the area dedicated to Qualification, where a clearer and simpler map was designed to provide guidance.
The **News** section available on the site features news and initiatives related to company endeavours regarding innovative technologies, energy savings, eco-sustainability, environmental impact reduction, protection of local areas, etc.
Consistent with its **focus on sustainability**, A.R.I.A. (Acea Risorse e Impianti per l'Ambiente) provides **online access to the emissions** - monitored in real time - released by the two WTE plants, while water companies provide online access to **key data on water quality**.

During the year, the **contents** of the **website section** (in Italian and English) on "**Sustainability**" were updated, the section being implemented and enhanced through "sustainable news" updated on a regular basis.
Finally, as was the case in previous years, **interactive websites dedicated to Reports** - Consolidated and Sustainability Reports - were developed and published in Italian and English, featuring open data and multimedia contents.

During the year, **visits on the website** of Acea totalled **1,106,353**, **up by almost 11%** compared with the 997,110 visits scored in 2014, of which about 71% were "new visits" (source: Google Analytics). Details such as **pages visited do not show significant difference** compared with the previous year. Therefore, the most viewed pages included again: homepage (24.96%), Contacts (6.50%), Energy Area (4.31%), Water Area (3.76%) and the Communication (2.52%), Suppliers (2.30%) and Work for us (2.19%) sections, the latter featuring a new form for the submission of resumes.
In 2015 **web connections** occurred through desktops (72.5%), *mobile devices* (21.5%) and *tablets* (6%) (see chart 23). **On the other hand, devices used to connect** to the web **showed significant changes in absolute terms**, with special reference to the use of ***mobile devices***, increasing by 37.6% over 2014.
Gender and age data also proved of interest: about **46% of the visitors were women and 54% were men**, while the age of **61%** of total visitors ranged **between 18 and 34 years**.

The websites of the operating companies engaging in both the energy and water sectors also showed **very significant increases in terms of visitors** (see *Customer Care*).

CHART 23
ACEA WEBSITE: ACCESS METHODS (2014-2015)



Relations with the media are handled by the **Press Office** Unit, whose daily tasks include (i) **preparing a press review of the main national newspapers** and some local newspapers, making it available to colleagues **on the corporate intranet**, (ii) monitoring press agencies, singling out topics of interest, and (iii) preparing an **end-of-day focus** on the main national and international events. **External users** are also provided **with accurate and up-to-date information** through a selection of the main press review available on the website.

Reports published on the newspapers regarding the different services managed by the Group are timely **handled by the Press Office**. This activity is carried out in close cooperation with the relevant operating companies and in conjunction with the editorial staff of the newspapers willing to publish the company's replies. Other reports are submitted by email, fax and direct phone calls and are likewise promptly dealt with.

In 2015, in conjunction with the Jubilee Year the Press Office **placed special emphasis on the Group's social initiatives** by conveying messages of corporate presence, commitment and solidarity across the territory and **providing information about the company's endeavours that had a strong impact on the citizens**. Such endeavours included the aforementioned listening campaign called *Acea per Roma*, aiming at completing projects of "small urban quality" in the Capital; the inauguration of "Water Houses" in different areas of the city and in provincial districts; **the launch of the LED Plan** in suburban areas; **the LED lighting system** designed by Vittorio Storaro **and deployed by Acea in the archaeological site of the Imperial Forums**, with special reference to the Forum of Trajan, Forum of Nerva and Forum of Augustus; the "*Golden Legend*" public event featuring a futuristic lighting system with **special effects projected on the Colosseum**; the major lighting and water maintenance work performed on the **Trevi Fountain** towards the end of the year; and, in conjunction with the start of the Jubilee Year, the deployment of a new LED technology lighting system for **St. Peter's Square** and **via della Conciliazione**.

Newspapers also placed emphasis on major events intended for young people, such as "***Acea Olympic Camp***", a summer sports camp where about 800 boys and girls aged between 6 and 16 turned out, or particularly symbolic initiatives, such as the company's participation in the **Rome Pride** event and the staging of the second edition of the "***Mai Più***" (Never Again) event held at the Macro Museum in Rome **against any form of discrimination**, or, finally, initiatives that were highly meaningful for the company, such as the **innovation and digitalisation process** being implemented in the Acea Group known as Acea2.0 for the purpose of improving the management processes and the quality of the services provided.

As usual, **press releases** were issued to disclose the **most important corporate events of the year** and, in **conjunction with the Investors Relations Divisions**, **economic and financial reporting** was handled following general meetings and meetings of Boards of Directors or on the occasion of financial disclosures.

Finally, using information sheets circulated by the media or posted on the corporate website, the Press Office illustrated the main conferences and cultural, sports, social and environmental events in which Acea participated as a sponsor by fitting exhibition spaces or providing its own speakers (see *Events and Solidarity* below).

In 2015, Acea contributed to the project for the installation of "Water Houses" by launching a **communication campaign** portraying a "sparkling" Colosseum together with a claim stating "**Starting from today, Rome has a new masterpiece**" to highlight the main innovation of the new "nose-shaped hi-tech fountains", namely the **free distribution of sparkling water**. Advertising tools used to launch the campaign between the beginning of September and the end of October 2015 included: (dynamic and static) billposting, media (major local newspapers and free press) and the web (websites of major newspapers and a dedicated section on www.acea.it). Each installation featured an inauguration event staged with the involvement of Acea's employees and citizens.

In 2015, the Web Social and Content Unit extended and continued its news update activities on www.ambientandoci.it, the environmental portal dedicated to schools. Emphasis was placed on initiatives promoted by Acea on topics such as the development of renewable energy sources, protection of water resources, environmental sustainability, and on a number of events aimed at promoting young talents and sustainability in schools.

Every year, Acea allows a diverse audience to visit its own facilities, from schoolchildren to industry operators, relying on the support and expertise of its own employees: **in 2015, during 33 visits Acea played host to as many as 1,687 people** coming from different parts of Italy and abroad. In particular, more than 1,500 boys and girls were able to visit Acea facilities thanks to projects that involved schools.

Events and Solidarity

The **economic value allocated to the community** in 2015 stood at **3.2 million euros**[59] (3,4 million euros in 2014), of which about 2.7 million was used to sponsor cultural, social and sports events. Provisions for donations to social associations and non-profit organisations strongly increased compared to the previous year, reaching 360,000 euros (155,000 euros in 2014).

Acea provides its services through "technical sponsorships", such as the **supply of water and electricity or public lighting servicing on the occasion of cultural and sports events that attract large turnouts** or in special situations of a solidarity or symbolic nature. "**Technical sponsorships**" provided in **2015** for many events as part of the Estate Romana (Roman Summer) project as well as many social initiatives generated **an overall economic countervalue of about 156,000 euros**.

With regard the many events sponsored or supported by Acea during 2015, some of which have been already described in the previous section, emphasis is placed on the sponsorship of the two main national events on water and energy matters, the ***Water Festival*** and ***Energy Festival*** and Europe's major event dedicated to technological innovation: ***Maker Faire Rome***.

Acea also sponsored major exhibitions such as ***Il Principe dei sogni. Giuseppe negli Arazzi medicei di Pontormo e Bronzino*** *(The Prince of Dreams. Joseph in the Medicean Tapestries by Pontormo and Bronzino)*, which led to the exhibition - in Rome, Milan and Florence - of the series of 16th century tapestries that Cosimo I de' Medici commissioned to the two artists, the solo exhibition dedicated to

[59] This item also included costs incurred for "trade shows and conventions" but did not include "technical" sponsorships.

the Bolognese artist ***Giorgio Morandi*** and the exhibition on ***Impressionism*** that showcased 60 works from the Musée d'Orsay in Paris. Sponsorship was also extended to several music shows staged in the Capital, including the ***Luglio suona bene*** (July Sounds Good) festival and the ***Roma Jazz Festival*** as well as events supported in other areas in which Acea operates, such as ***Cento Città in Musica*** (100 Cities Playing Music) in the Lazio area, or the ***Umbria Jazz Festival***, now reaching its 42nd edition, and ***Umbria Jazz Winter.*** As always, major support was extended to **sports events** through projects dedicated to boys and girls, such as the traditional **Rome Marathons**, featuring large international turnouts, as well as sponsorships for major national sports teams (see relevant boxes).

Every year the company makes the **hall of its headoffice** in Rome available to associations engaging in social endeavours, enabling them to stage **fund raising initiatives to support their undertakings**. In 2015, the company played host to the following organisations:

- Fondazione ANT Italia Onlus - an association that provides free-of-charge social support and healthcare for people affected by cancer and carries out oncology prevention projects - for the sale of cyclamens on 7 October 2015 and poinsettias on 17 December 2015;
- ROMAIL Onlus for the sale of Easter Eggs on 18 March 2015 and the sale of poinsettias on 3 December 2015. ROMAIL Onlus is the Italian association against leukaemia, lymphomas and myelomas which supports scientific research and home care;
- UNITALSI - a catholic association providing homecare for sick people and arranging their transportation for pilgrimage to Italian and international sanctuaries - for the sale of olive tree bonsais on 5 March 2015.

The company also supported a number of initiatives of a social and humanitarian nature, such as the activities carried out by the *Bee Free* social co-operative on **violence against women** and a *Water Photography Award* organised by *La Gabbianella* Onlus for the purpose of promoting **remote support** activities; projects for the enhancement of suburbs, such as *Oltre le mura di Roma* (Beyond the Walls of Rome), a photography contest dedicated to Rome suburbs staged by *Global Shapers Rome Hub - an association engaging in social promotion*. The company further underscored its commitment (i) during events such as **national prevention campaigns dedicated to women** - Nastro Rosa e Ottobre Rosa (Pink Ribbon and Pink October), (ii) through technical sponsorships by providing lighting for the Coliseum and the Building of the Lazio Regional Authorities, and (iii) on the occasion of the *Race for the Cure* happening held at Circo Massimo by supplying water and energy.
Finally, as in previous years, Acea - in conjunction with the Sant'Egidio Community - offered social meals to the homeless during Easter festivities at its own corporate recreational centre and staged other solidarity initiatives carried out with the direct involvement of its own employees (see *Human Resources*, *Human resource empowerment and communications*).

The following boxes show the **main events supported by the Acea Group in 2015** through sponsorships or donations. The events have been grouped based on their purpose, with company participation also being stated.

2015: ACEA'S SUPPORT TO THE ENVIRONMENT AND YOUNG PEOPLE

- Gigawatt sponsor of the 2015 edition of the ***Energy Festival***, the main national event gathering representatives from science, academic, institutional and economic circles for the purpose of **developing a debate on energy matters** and promoting a new energy culture in the country. The event was held in Milan at the EXPO 2015 complex from 28 to 30 May 2015 (ALLEA Srl).
- Silver sponsor of the Water Festival on "*Nutrire il pianeta, energia per la vita*" (Feeding the planet, energy for life): more than 200 speakers, 32 conferences, 12 seminars and workshops and learning events held from 5 to 9 October 2015 (Federazione delle Imprese Energetiche e Idriche).
- Contribution to the ***Differenzio anch'io*** (I separate, too) initiative, involving fourth and fifth grade classes of primary schools in the Municipality of Aprilia (about 1,300 pupils) for the 2014/2015 school year on the topic of environmental education.
- Main sponsor of the 1st edition of the ***Acea Olympic Camp*** intended for students from Rome-based school centres aged between 6 and 16 selected with the support of the Department for School, Sport, Youth Policy and participation of Roma Capitale for the purpose of raising awareness of 8 sports disciplines. The event was held in Rome between June and July 2015 (Beside Management Srl).
- Sponsor of ***Educare giocando*** (Teaching through play), a three-year educational, recreational and sports project designed to bring young people closer to sports values by having them play basketball in the primary schools of the X District of Rome (Honey Sport City - HSC).
- Sponsor of the educational project known as ***Sulle vie della parità*** (On the path to equality) designed for the secondary schools of Rome and promoted by the Department for Equal Opportunities of Roma Capitale (MP Mirabilia Servizi Srl).
- Title sponsor of the 2015 edition of the ***Torneo Volley Scuola– Trofeo Acea*** (School Volleyball Tournament – Acea Trophy) restricted to **upper secondary schools in Rome and its provincial districts**. It was organised by Fipav Lazio with the participation of more than 150 boys' and girls' teams representing 94 schools (Fipav Lazio).
- Contribution to the ***I Giardini di Betty*** (Betty's Gardens) project designed to create spaces for children using recycled fall arrest equipment (Associazione GoGreen Onlus).
- Contribute to the contest called ***Il Tevere: scorre la vita dei romani tra le sue sponde*** (The Tiber: the Romans' life flowing through its banks) aimed at raising young people's awareness of the historical, artistic and architectural heritage related to the river, as well as the value of water and proper use of water resources (FAI - Comitato di Roma).

2015: ACEA'S SUPPORT TO CULTURE AND SPORT

- Silver partner of the 3rd edition of ***Maker Faire***, Europe's most important event dedicated to digital manufacturing held in Rome in October 2015 (Azienda Speciale Asset Camera).
- Sponsor of the 6th edition of ***Digitalife*** as part of the Romaeuropa Festival, where works presented ranged from arts to technological experimentation, with light being the main theme. The event was held in Rome between October and December 2015 at the MACRO Museum (Fondazione Romaeuropa Arte e Cultura).
- Sponsor of the ***Il principe dei sogni. Giuseppe negli Arazzi medicei di Pontormo e Bronzino*** (The Prince of Dreams. Joseph in the Medicean Tapestries by Pontormo and Bronzino) held in Rome at Palazzo del Quirinale, in Milan at Palazzo Reale and in Florence at Palazzo Vecchio between February 2015 and February 2016 (Comunicare Organizzando Srl).
- Sponsor of three major exhibitions held in Rome at the Victorian Complex between February 2015 and February 2016: the **solo exhibition dedicated to *Giorgio Morandi***, the ***Treccani 1925-2015 - 90 anni di cultura italiana*** (Treccani 1925-2015 90 years of Italian culture) exhibition and the exhibition on ***Impressionism. I protagonisti*** (The main characters), with more than 60 works from the Musée d'Orsay in Parigi (Comunicare Organizzando Srl).
- Sponsor of the ***Umbria Jazz Winter*** event staged in Orvieto from December 2015 to early January 2016 where leading national and international artists turned out (Associazione Teatro Mancinelli-TeMa).
- Sponsor of the 42th edition of the ***Umbria Jazz Festival*** held in Perugia in July 2015 where an international playbill was presented (Fondazione di Partecipazione Umbria Jazz).
- Sponsor of the 13th edition of the ***Luglio suona bene*** (July Sounds Good) Festival, featuring a number of events staged in Rome from June to July 2015 at the Auditorium Parco della Musica (Music Park Auditorium) (Fondazione Musica per Roma).
- Sponsor of the ***Roma Jazz Festival 2015*** on the theme "Jazz and Food", with concerts held in Rome by leading international artists at the Music Park Auditorium in November 2015 (Fondazione Musica per Roma).
- Sponsor of the ***Cento Città in Musica*** (100 Cities Playing Music), an event held in the province of Rome between July and December 2015 aimed at stating free-of-charge or cut-price cultural and entertainment events across the area (Associazione Culturale Europa Musica).
- Sponsor partner of ***Alice nella Città 2015*** (Alice in the City 2015), an independent and parallel section of the Festival del Cinema di Roma, now reaching its 13th edition, designed to help promote the movie industry among new generations; the films and events were presented in October at the Music Park Auditorium and additional ten shows were run in a hall located in the Pigneto district (Associazione Culturale Play Town).
- Contribute to the ***Oltre le Mura di Roma*** (Beyond the Wall of Rome) project, a photojournalism event dedicated to the Capital's suburbs (Global Shapers Rome Hub - Associazione di promozione sociale).
- Main sponsor of the ***Gay Village 2015***, an event held at the Parco del Ninfeo dell'EUR in Rome from June to September, staging initiatives of various kind: cinema, theatre, sport, concerts (Gavi E20 Srl).
- Title sponsor of the 2015 edition of the traditional sports event known as ***Maratona della città di Roma – Trofeo Acea,*** (Rome Marathon - Acea Trophy), the most attended Italian sports event held on 22 March starting from via dei Fori Imperiali (Atielle Roma Srl), and major sponsor of ***Maratonina Roma-Ostia*** (Rome-Ostia Marathon) held on 1th March 2015 (Roma Ostia Srl), both events certified with the "IAAF Road Race Gold Label".
- Title sponsor of ***Acea Roma basketball team*** for the Serie A 2015-2016 season (Virtus Pallacanestro S.S.Dil.ar.l Unipersonale).
- "Official supplier" sponsor of ***A.S. Roma and S.S. Lazio for the Serie A championship*** , 2015-2016 season (Soccer SAS di Brand Management Srl. e Infornt Italy Srl).

2015: ACEA'S SUPPORT TO SOLIDARITY ENDEAVOURS

- Contribute to scholarships, Conservatory activities and the event called ***Perché la memoria si faccia impegno - Un evento per le vittime di ieri e di oggi*** (So that memory makes a commitment - An event for yesterday's and today's victims) (Conservatorio Statale di Musica Alfredo Casella).
- Contribute to the Co-operative's endeavours in the fight against violence against women (Bee Free Coop. Sociale).
- Contribute to the organisation of a water photography award designed to promote remote support activities (La Gabbianella - Coordinamento Nazionale per il Sostegno a distanza - Onlus).
- Technical sponsorship during the international day ***Cities for Life***, "Città per la Vita, Città contro la pena di morte" (Cities for Life, Cities against Capital Punishment) in memory of the anniversary of the first statutory abolishment of capital punishment by decision of a European state (Comunità di Sant'Egidio).
- Technical sponsorship for the ***Race for the cure*** project, a three-day sport and health event staged from 13 to 18 May 2015 at Circo Massimo in Rome. About 70,000 people attended the 5-km celebrated race and solidarity walk organised by Susan G. Komen Italia to support the fight against breast cancer and promote women's health).
- Technical sponsorship was granted by having the Lazio Regional Authority Building illuminated with pink lights throughout the month of October 2015. This was the hallmark of the "***Ottobre rosa***" (Pink October) initiative aimed at encouraging women participate in breast cancer prevention schemes (Lazio Regional Authority).
- Technical sponsorship was granted by having the Coliseum illuminated with pink lights as part of the ***Nastro rosa 2015*** (Pink ribbon) initiatives (LILT – Lega Italiana per la lotto contro i tumori).

SUPPLIERS

CONTRACT VALUE IN 2015 WAS **906 million** EUROS

72% OF TOTAL PROCUREMENTS WERE AWARDED THROUGH CALLS FOR TENDER

ABOUT **3,000** CONTRACTS ENTERED INTO WITH MORE THAN **1,450** SUPPLIERS

VALUE OF ORDERS FOR GOODS/ SERVICES IN LAZIO REACHED **36%** WHILE VALUE OF ORDERS FOR WORKS REACHED **42%**

Single Contracts AWARDED FOR MAINTENANCE OF WATER (in Lazio) AND ELECTRICITY NETWORKS

1,052 REGISTRATION REQUESTS TO LISTS/ QUALIFICATION SYSTEMS WERE APPROVED

689 OPERATORS WERE QUALIFIED

TenP Questionnaire AND **QAS Questionnaire:** MANDATORY REQUIREMENTS FOR REGISTERING WITH QUALIFICATION SYSTEMS

CONSOLIDATED EXTERNAL COSTS

In 2015, the Group's **consolidated external costs** totalled **2 billion euros** approximately, showing a decrease compared to 2.40 billion euros in 2014 (-5.1%). The main costs, amounting to 1.61 billion euros approximately (1.75 billion euros in 2014), pertained to the purchasing of **energy, gas and fuels**, down by approximately 134 million euros (-7.7% over 2014), followed by the costs incurred for **services**, totalling 228.4 million euros.

The rest of this section shows the **procurement of goods, services and works** that the **Purchasing and Logistics** Corporate Division manages for several companies of the Group. In 2015, procurement totalled **906 million euros approximately**.

PURCHASING POLICIES

The task of the **Purchasing and Logistics Function** of Acea SpA is to: "*ensure the **definition of policies and guidelines** and **centralised management of the procurement of goods, services and works** for the Group*." Its main goals include **rationalising the procurement process** and **increasing its efficiency** by (i) enhancing the buyers' technical expertise (an approach based on the management of product categories), (ii) promoting a close cooperation with the Group Companies/Divisions requesting the supplies ("internal customers") and (iii) ensuring transparent dealings with suppliers. In 2015, the Unit responsible for suppliers' qualification was merged into the Purchasing and Logistics Function.
The supervision of the supply process is ensured by the **Planning, Control and Purchasing Marketing Unit**, whose duties include (i) recommending **purchasing strategies** that are instrumental in achieving group-wise goals, (ii) performing a **review of the needs of the Companies/ Divisions and preparing the Group's procurement plan,** (iii) monitoring changes in the suppliers' market, trends in prices and technological innovations.
The **Logistics Unit** is responsible for the management of the **Group's central warehouse** as well as **district warehouses** of the main operating companies**.** In 2015, logistics costs decreased by 15% over the previous year as a result of (i) the new organisational structure, whereby all warehouses are managed directly by Acea, and (ii) a constant process optimisation.

ACEA 2.0

At the beginning of the year, procedures started successfully to migrate the first companies of the Group **to the new SAP management platform, where logistics processes are managed according to a new** centrally-defined single model applicable to all companies alike, thereby ensuring process consistency, data traceability and streamlined control. During the year, procedures were also launched successfully for managing Acea Ato 2's operating activities according to the WFM model, ensuring an integrated management of water metering systems between commercial and management systems and maximum traceability of the meters along the entire supply chain. This method will then be extended to all water companies of the Group.

Dealings with suppliers and procurement management

The ***Code of Ethics* of the Group**[60] covers dealings between Acea e its suppliers under **Article 16, paragraphs 1-7**, requiring the contracting authority, contractors and subcontractors to behave according to the **principles of fairness**, **transparency** and **fair competition**.

[60] The *Code of Ethics of the Group* (2012 edition) is available online on the corporate website (Rules and Values section).

Moreover, the *Code of Ethics* must be **signed and acknowledged** as part of the **due diligence requirements to be met in order to be eligible for participation in tendering proceedings for the award of works, goods and services**; in the event of violation of the principles set forth in the *Code*, offenders shall, subject to prior investigation, be **banned from bidding procedures or forfeit any contract awarded** (Article 16, paragraphs 6 and 7).

CODE OF ETHICS OF THE GROUP (2012 EDITION): PROTECTION OF ETHICAL ASPECTS IN SUPPLIES

Under Article 16, paragraph 2 of the Code of Ethics of Acea Group:
«As part of its procurement activities, Acea undertakes to promote compliance with the protection and safety conditions of its employees, a focus on the quality of goods and services, respect for the environment and the pursuit of energy savings, in accordance with the principles as laid down in this Code of Ethics and by law. In supply contracts entered with at-risk countries, as defined by recognised organisations, terms and conditions have been introduced whereby: the supplier is required to issue a statement certifying compliance with specific social obligations (e.g. provisions that guarantee the observance of employees' fundamental rights, the principles of equal treatment and non-discrimination, protection against child labour); audits may be performed at the production units or operating sites of the supplying firm in order to verify the fulfilment of these requirements».

The **procurement management process** is conducted by resorting to calls for tender as the main way of identifying suppliers, basing award procedures on transparency standards and ensuring a centralised management of tenders. To this end, in accordance with the requirements of the National Anti-corruption Authority (ANAC, Autorità Nazionale Anticorruzione) and the "Anti-corruption Act" (190/2012), the Purchasing Function - on behalf of all Group companies - complies with the obligation to **disclose on the corporate site** of Acea (www.acea.it) the documents containing **all information pertaining to purchases completed in pursuance of the Procurement Code**[61].
In 2015, about **72% of total procurements** were awarded through **calls for tender**.
Operators who are interested in participating in tenders **can access directly and free of charge** the **portal hosting the qualification systems** and the portal hosting **online procurement** – in the "Suppliers" section of the company website at www.acea.it, where the required forms and information are available. The web portal enabling tenders to be managed online – the **Pleiade** platform – is based on the same operational procedure as traditional tenders: it checks the adequacy of the supporting documents, acknowledges eligibility, discloses the bids and displays the ranking.
All tenders for the award of works and a considerable number of tenders for the purchase of goods and services **require UNI EN ISO 9001 certification** as a **prerequisite for participation**, while **UNI EN ISO 14001 certification** is needed for certain product categories (such as waste management). Furthermore, for some of the tenders awarded on the basis of the most economically advantageous tender, the score is also impacted by the **SA8000 certification**.
As to tenders for works, goods and services that fall within **special water and energy business areas**, open, restricted or negotiated procedures among companies registered with qualification systems will apply, as laid down by law provisions[62]. With regard to tenders for special business areas **involving amounts below the Community threshold**, which is set every two years according to EC Regulations - Acea adopts **Internal Regulations** in accordance with the principles set forth in the EC Treaty for the protection of competition. With regard to awards pertaining to ordinary business areas, **open, restricted or negotiated procedures** are discharged pursuant to applicable law provisions[63]. Moreover, even though the selection procedures adopted for tenders that do not fall under the *Procurement Code* (e.g. private tenders or tenders that do not fall under community directives or legislation) are not governed by Legislative Decree No. 163/2006, they comply at any rate with the **principles of free competition, equal treatment, non-discrimination, transparency and proportionality**.

During the course of 2015, the Acea Group companies under review entered into approximately **3,000 contracts** with **more than 1,450 suppliers** (see table 27 at the bottom of section). The above figures are lower compared with the previous year despite a **significant increase in the annual amount ordered**. This is due to several reasons. Indeed, in 2015 **3 of the 5 lots pertaining to 3 Single Contracts for the maintenance of water networks operated by Acea Ato 2 and Acea Ato 5 across the Lazio region** and electricity **networks operated by Acea Distribuzione in Rome and Formello were launched and awarded. These contracts are financially significant**, with almost 300 million euros already awarded at present, **extend over a** long-term time span (three years with one-year extension and renewal for an additional year) and **are formally awarded to the 3 successful bidders**. In fact, they qualify as **joint ventures consisting of about 50 firms** including principals, agents and ancillaries, with a workforce estimated in the region of 500 employees and with many other subcontractors joining in over time.
In addition, during the year purchasing procedures relating to minor expenditure (OPS), urgent purchases and/or purchases that cannot be subject to negotiation (URG and OAL) were completed on a decentralised basis by the requesting Units in order to make the procurement process faster and more efficient. These POs (Purchase Orders) are no longer processed by the Purchasing Function and, as a result, are not considered in the calculations herein.
Finally, the purchasing rationalisation and planning process continued to be developed, the purpose being to collect and group the needs of the different Group companies so as to unify procurement procedures.

[61] Legislative Decree No. 163 dated 12 April 2006 - Code of public contracts involving works, services and goods implementing Community Directives 2004/17/EC and 2004/18/EC.
[62] Part III of the Procurement Code - Legislative Decree No. 163/ 2006.
[63] Part II of the Procurement Code - Legislative Decree No. 163/ 2006.

ACEA 2.0

In 2015, the migration of all Group companies to the new SAP ARES system reached completion, and the Datawarehouse (DWH) for managing the purchase-related reporting system was implemented. Moreover, the project for the implementation of the **new SAP Supplier Relationship Management/ Supplier Lifecycle Management** (SAP SRM/SLM) **procurement platform** was launched as part of the Acea2.0, consistent with the choices made in the past based on a rationale of integration with group central systems. The SAP SRM/ SLM will manage all procurement and suppliers' qualification processes, integrating with the corporate SAP system and ensuring the gradual decomissioning of the the existing (non-integrated) suppliers' qualification, tendering and procurement systems on the catalogue. This process is expected to lead, among other things, to a general efficiency increase in procurement operations, a reduction in paper-based procedures relating to currently non-SAP processes, and a better interaction with suppliers.

Green procurement

Where possible, Acea arranged for **tender specifications** to include the **regulatory references to** the Minimum Environmental Criteria **(Criteri Ambientali Minimi** - CAM) as binding standards, such criteria being adopted pursuant to Decree of the Ministry for Environment and Protection of Land and Sea, consistent with the provisions under the **Action plan for the environmental sustainability of consumption in the Public Administration sector** (i.e. the National Action Plan on Green Public Procurement **NAP GPP**)[64]. This is in line with the recommendations submitted by the company in the **Position Paper drafted as part of the CSR Manager Network** on the occasion of the legislative activities relating to the implementation of European Directives 23/24/25 of 2014 on public procurement contract reformation (tenders and concessions).

During the course of 2015, the tender for stationery supplies included an *ad hoc* lot for the purchase of paper of different size for printers and copying machines based on technical specifications as referred to under the relevant CAM. Basically, starting from 2016 only certified ecological paper (PEFC or FSC) that has not been bleached with chlorine will be purchased. As part of the same tender, new ecologically certified consumer goods were introduced (pens, pencils, etc.). As was the case in previous years, **compliance with the relevant CAM** was also sought for the hiring of **multifunction printers**, while the Minimum Environmental Criteria continued to act as a benchmark **in tenders for the replacement of lighting fixtures for public streets and for green areas in Rome**. In the near future, consideration is being given to introducing CAM also in the technical specifications pertaining to office furniture. Finally, following compliance with the new European Regulation 548/2014, since 2015 Acea has been purchasing **high environmental performance MV/LV transformers** as they generate very low energy losses (both under loaded and unloaded conditions).

PROCUREMENT OF GOODS, SERVICES AND WORKS

REFERENCE BOUNDARY

The information contained in the paragraph pertains to the following Group companies: Acea SpA, Acea Distribuzione, Acea Reti e Servizi Energetici, Ecogena, Acea Illuminazione Pubblica, Acea Ato 2, Acea Elabori, Acea Ato 5, Acea Gori Servizi, Sarnese Vesuviano, Crea, Crea Gestioni, Acea8cento, A.R.I.A., SAO, Aquaser, Kyklos, Solemme, I.S.A., Samace, Acea Energia, Acea Produzione and **Elgasud**.

Note: companies whose tenders were managed for the first time in 2015 are shown in boldface.

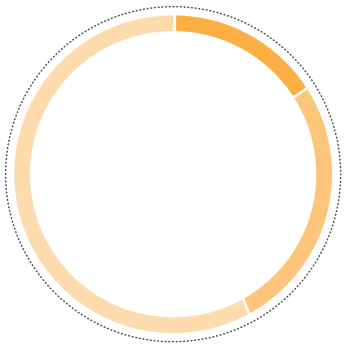
Tenders for the supply of **goods**, **services** and **works** were managed at a centralised level for the companies listed in the *Reference Boundary*.

The **overall economic values** of the contracts awarded during the year totalled **906 million euros**[65], compared with 533 million euros of 2014 **up by 70% approximately**. As mentioned earlier, **this rise was due to the award of three lots out of five** pertaining to **the Single Contracts for network maintenance**, causing in fact most of the amounts relating to maintenance work performed over a three-year period to impact chiefly 2015. Indeed, the amounts awarded, including the purchase of some capital equipment and ancillary services for maintenance operations, resulted in an increase in the "works" item (up more than 200% compared with the previous year), exceeding 500 euros in 2015 (for a three-year comparison, see table 27 at the bottom of the section and chart 24). Such a high amount of work is also expected in 2016, during which the remaining lots of the Single Contracts will be awarded. By contrast, a downtrend is foreseen for the next three-year period, during which the Group companies involved will benefit from the contracts already open.

[64] The GPP NAP was recommended by the European Commission in 2003 and adopted by Italy with Law No. 296/2006, Article 1 paragraph 1126 and Ministerial Decree dated 11 April 2008 (MATTM). The Ministry for Environment defines the "Criteri Ambientali Minimi" (CAM) (Minimum Environmental Criteria), which act as a national benchmark for Green Public Procurement; they may be used by the contracting authorities to enable the Action Plan on the Green Public Procurement to maximise economic and environmental benefits. The "GPP" (Green Public Procurement) is defined by the European Commission as «(...) *the approach by which Public Authorities integrate environmental criteria into all stages of their procurement process, thus encouraging the spread of environmental technologies and the development of environmentally sound products, by seeking and choosing outcomes and solutions that have the least possible impact on the environment throughout their whole life-period*».

[65] The amount refers to tenders awarded during the year, without any distinction between investments and operating cost, annual and multiannual contracts. Almost all commodity purchases are excluded.

CHART 24
VALUE OF PROCUREMENT OF GOODS, SERVICES AND WORKS AND PERCENTAGE ON TOTAL (2015)

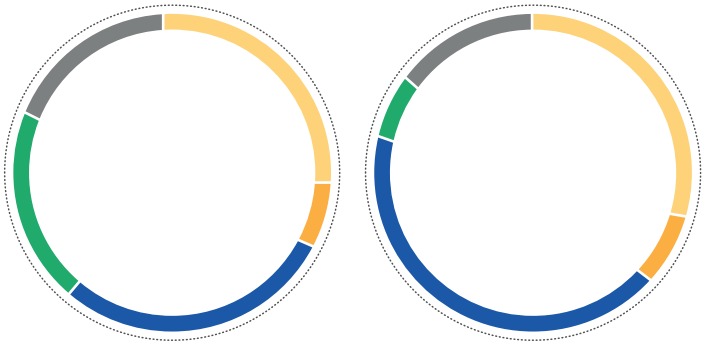


Goods	15% -	€/m 133
Services	28% -	€/m 254
Works	57% -	€/m 519

Note: figures are rounded off to the nearest unit.

The amount of procurements relating to the four business macro-areas, i.e. **energy** (networks and market), **water**, **environment** (WtE and environmental services) and **corporate** shows a significant difference **compared with the previous year** regarding total order for the Water area (+155% compared with 2014) and Energy area (+91% combining networks and energy), i.e. the two areas impacted by the Single Contracts for network maintenance. By contrast, total orders for the Environment area dropped by 51% compared with the previous year, the main reason being that 2014 figures were impacted by the award of major works on a WtE plant.

CHART 25
TOTAL ORDERS (GOODS, SERVICES, WORKS) BY BUSINESS AREA (2014-2015)



	2014	2015
Energy -networks	€/m 132	€/m 251
Energy - generation	€/m 37	€/m 72
Water	€/m 158	€/m 408
Environment	€/m 118	€/m 58
Corporate	€/m 88	€/m 122

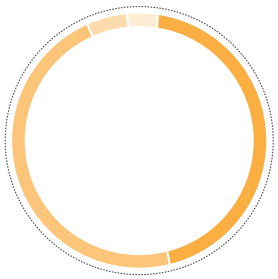
Note: figures are rounded off to the nearest unit. The **energy network business** includes companies engaging in distribution, public lighting and added-value energy services: Acea Distribuzione, Acea Reti e Servizi Energetici, Ecogena and Acea Illuminazione Pubblica. The **energy generation and sale** business includes the companies engaging in the production and sale of energy (Acea Energia, Acea Produzione), whose purchases are partially managed by the Purchasing and Logistics Division of Acea SpA. The **Water** area comprises the following companies: Acea Ato 2, Acea Ato 5, Acea Elabori, Acea Gori Servizi, Sarnese Vesuviano, Crea and Crea Gestioni. The **Environment** area includes the following companies: A.R.I.A., SAO, Kyklos, Solemme, Samace, ISA and Aquaser. The **Corporate** area, as part of group-wise services, includes Acea SpA and Acea8cento.

In 2015, the **Purchasing and Logistics Division followed the procurement process relating to the requests made** by the Group companies/units, **processing 2,978 purchase orders**, of which about 91% involved contract values below the Community threshold. The **first ten suppliers of goods and services** used up together roughly one-third of the total value of the goods and services purchased (in line with previous years). The percentage of the **top ten suppliers of works** rose from 50% to 69% **of the total value of work contracts awarded (about 358 million euros out of a total of 519 million euros), again as a result of the Single Contracts for maintenance**.

The **geographical distribution of the suppliers was in line with previous years,** with **more than 90% being concentrated in the central-northern area**. Even though the data shows an overall downtrend, suppliers in the Lazio area remained at 47% compared to total suppliers (52% in 2014), with 683 suppliers out of 1,456 (see table 28).
The **geographical distribution of** the **amounts used up** for the procurement of **goods and services** and the procurement of **works** during the year**, including north, centre, south and islands, in Italy and abroad** - did not show any significant changes with regard to goods and services, either compared with the previous year or in terms of ab-

solute values - except for a slight increase in total orders - or in terms of percentage weight on orders. On the other hand, while **the percentage weight of the amounts allocated to the different geographical areas regarding the works component concentrated again in the northern and central areas of Italy**, both standing at 45% of total orders (35% and 58% in the previous year, respectively), in absolute terms such amounts showed a considerable change (from 58 million to 234 million euros and from 96 million to 235 million euros in central Italy) once again as a result of the aforesaid Single Contracts, inasmuch as the leading companies of the successful bidders were from Lazio and Emilia-Romagna. It should be stressed, however, that the above figures did not reflect the actual operating scenario, as a great number of local small and medium-sized firms later joined the companies acting as principals and, above all, subcontractors. Lazio continued to have a strong impact in terms of purchases of goods and services, reaching 36% of total orders of goods/services and 42% of total orders of works.

CHART 26
GEOGRAPHICAL DISTRIBUTION OF THE AMOUNTS USED FOR THE PURCHASE OF GOODS AND SERVICES IN ITALY AND ABROAD (2015)



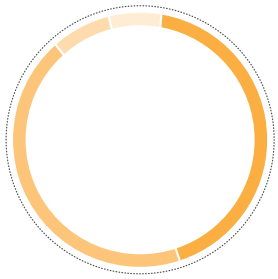
Value of orders northern Italy — 47% - €/m 183

Value of orders central Italy — 47% - €/m 183

Value of orders southern Italy and islands — 4% - €/m 14

Value of orders abroad — 2% - €/m 7

CHART 27
GEOGRAPHICAL DISTRIBUTION OF THE AMOUNTS OF WORKS AWARDED IN ITALY AND ABROAD (2015)



Value of orders northern Italy — 45% - €/m 234

Value of orders central Italy — 45% - €/m 235

Value of orders southern Italy and islands — 5% - €/m 26,5

Value of orders abroad — 5% - €/m 23,5

TABLE 27
SOCIAL INDICATORS: PROCUREMENT DATA (2013-2015)

	u. m.	2013	2014	2015	Δ % 2015/2014
VALUE OF CONTRACTS					
goods	€/m	92	89	133	49%
services	€/m	274	279	254	-9%
works	€/m	173	165	519	215%
total	**€/m**	**539**	**533**	**906**	**70%**
GOODS, SERVICES AND WORKS AS A PERCENTAGE OF TOTAL ORDERS					
goods	%	17	17	15	-2%
services	%	51	52	28	-24%
works	%	32	31	57	26%
VALUE OF ORDERS BY BUSINESS AREA					
Energy	€/m	157	169	323	91%
Networks	€/m	*120*	*132*	*251*	*90%*
Generation	€/m	*37*	*37*	*72*	*95%*
Water	€/m	239	158	403	155%
Environment	€/m	42	118	58	-51%
Corporate	€/m	101	88	122	39%
NUMBER OF PURCHASE ORDERS MANAGED					
POs for goods, services and works	no.	4,050	3,545	2,978	-16%

Note: all the figures shown in the table are rounded off to the nearest unit.

TABLE 28
SOCIAL INDICATORS: PROCUREMENT ACROSS THE TERRITORY (2013-2015)

	u. m.	2013	as % of total/year	2014	as % of total/year	2015	as % of total/year
NUMBER OF SUPPLIERS OF GOODS, SERVICES AND WORKS ACROSS THE TERRITORY							
suppliers in northern Italy	no.	488	24%	490	27%	453	31%
suppliers in central Italy	no.	1,428	70%	1,186	66%	873	60%
suppliers in Lazio	*no.*	*1,191*	*58%*	*933*	*52%*	*683*	*47%*
suppliers in southern Italy and islands	no.	108	5%	96	5%	102	7%
suppliers abroad	no.	26	1%	29	2%	28	2%
total suppliers	**no.**	**2,050**	**100**	**1,801**	**100**	**1,456**	**100**
TOP 10 SUPPLIERS OF GOODS, SERVICES AND WORKS (amounts awarded)							
TOP 10 suppliers of goods	€/m	34	37% (on total amount of goods 2013)	34	38% (on total amount of goods 2014)	47	35% (on total amount of goods 2015)
TOP 10 suppliers of services	€/m	94	34% (on total amount of services 2013)	106	38% (on total amount of services 2014)	96	38% (on total amount of services 2015)
TOP 10 suppliers of works	€/m	62	36% (on total amount of works 2013)	82	50% (on total amount of works 2014)	358	69% (on total amount of works 2015)
GEOGRAPHICAL BREAKDOWN OF AMOUNTS FOR GOODS AND SERVICES							
value of orders northern Italy	€/m	117	32%	181	49%	183	47%
value of orders central Italy	€/m	226	62%	169	46%	183	47%
value of orders Lazio	*€/m*	*197*	*54%*	*136*	*37%*	*138*	*36%*
value of orders southern Italy and islands	€/m	15	4%	13	4%	14	4%
value of orders abroad	€/m	8	2%	5	1%	7	2%
total value of orders for goods and services	**€/m**	**366**	**100**	**368**	**100**	**387**	**100**
GEOGRAPHICAL BREAKDOWN OF AMOUNTS FOR WORKS							
value of orders northern Italy	*€/m*	*15*	*9%*	*58*	*35%*	*234*	*45%*
Value of orders central Italy	€/m	143	82%	96	58%	235	45%
value of orders Lazio	*€/m*	*137*	*79%*	*93*	*56%*	*219*	*42%*
value of orders southern Italy and islands	€/m	15	9%	11	7%	26.5	5%
value of orders abroad	€/m	-	-	-	-	23.5	5%
total value of orders for works	**€/m**	**173**	**100**	**165**	**100**	**519**	**100**

Note: all the figures shown in the table are rounded off to the nearest unit. The "northern Italy" geographical distribution includes Valle d'Aosta, Piedmont, Lombardy, Veneto, Trentino-Alto Adige, Friuli Venezia Giulia, Emilia-Romagna and Liguria; "central Italy" includes Tuscany, Umbria, Marche, Lazio, Abruzzo, Molise; "southern Italy and islands" includes Campania, Basilicata, Puglia, Calabria, Sicily and Sardinia.

SELECTION AND EVALUATION OF SUPPLIERS

Acea relies on several **Qualification systems for suppliers of works, goods and services** that are updated on a regular basis. In 2015, the Group's **suppliers' qualification and evaluation process** was attributed to the Purchasing and Logistics Function of the parent company, continuing to hold an independent and neutral position with respect to the tasks carried out by the Units that dispatch award procedures when selecting successful bidders.
Consistent with the principles of **fair competition and equal treatment**, the Unit responsible for **Suppliers' Qualification** establishes **Qualification Systems** of European magnitude[66] and **Suppliers' Lists** for "below-threshold" or private tenders, coordinating workgroups to **identify qualification requirements** and drawing up appropriate **Qualification Regulations**. The Unit is also responsible for processing the individual qualification applications, checking - either directly or with the aid of experts - compliance with the criteria for inclusion in the individual Lists/Qualification Systems and managing notices to be provided to the suppliers with regard to criteria for eligibility, rejection or suspension from Registers. Finally, the Unit's tasks also entail **monitoring** suppliers by performing audits itself and/or with the support of qualified auditors.

During the year, a project was launched to revise and optimise the existing product groups, sharing with the other Group companies **a single product tree** (currently comprising 446 product groups vs. 376 in previous years). Fol-

[66] In accordance with Article 232 of Legislative Decree No. 163/2006 as amended.

lowing the definition of the new product tree of the Group, a **review of the existing Lists/Qualification Systems was completed in order to rationalise them** - chiefly based on the number of contracts put out to tenders during the years - and keep only those that are deemed as most significant in terms of contract value volumes or procurement strategic importance. As a result, virtually all "below-threshold" Suppliers' Lists were disabled (dropping from 204 to 6), while Qualification Systems decreased from 104 to 69.
At 31 December 2015, 75 Suppliers' Lists were active, while the percentage of product groups in respect of which a Register/Qualification System is in place following the rationalisation process was 17%.
Companies who wish to qualify **must submit their application online** to **seek qualification** for the group of goods they are interested in, in compliance with the relevant Regulations, by accessing the **Vendor Management Portal** directly from **Acea's corporate website** (www.acea.it, Suppliers section).
Applicants seeking **registration with Qualification Systems** must meet **standard requirements**, such as the **moral requirements laid down by industry regulations** as well as **specific requirements** applicable with reference to the product group(s) pertaining to the individual Suppliers' Lists.
Prerequisites are classified on the basis of the **following criteria: technical, environmental and safety reliability;** commercial **reliability;** financial and contributory **reliability; assessment of counterparty credit risk** (in accordance with the auditing principles set forth in the *Organisation, management and control model* under Legislative Decree No. 231/01).
In some cases, **specific requirements** include holding special Authorisations and/or Certifications, such as:

- Holding the UNI EN ISO 9001 Certification (a binding requirement for all "works" product groups and, as of January 2016, for "goods and services" Qualification Systems as well);
- Holding the ISO 14001 Certification (e.g. for registering with the Qualification System pertaining to the Cleaning Service);
- Registration with the Albo Nazionale Gestori Ambientali (National Register of Environmental Operators) or being authorised to operate a waste disposal/recovery plant (e.g. Registration with Waste Treatment Systems);
- Holding the OHSAS 18001 Certification (e.g. for registration with the Qualification System for the electromechanic maintenance of industrial plants).

With specific reference to sustainability matters, starting from January 2015, the **completion of the TenP Questionnaire** will be a **requirement for registering with "works" Qualification Systems**, **such requirement** being also reflected in the new Qualification System Regulations governing **"goods and services"**, effective **as of January 2016** (see relevant box). During the year, Acea also prepared an ***ad hoc*** questionnaire that was **administered to 60 key suppliers** of the Acea Group for the purpose of **gaining insights on the level of awareness and the ability to deal with some environmental and social sustainability matters** (see box).
Following the introduction of the new Qualification Systems for water and electricity works, starting from January 2015 suppliers were required to complete the **QAS Questionnaire** (Quality, Environment and Safety), again as a **mandatory requirement for registration**.

Finally, in order to be eligible for **Community-wide** Qualification Systems, **applicants are required to allow**, if appropriate, **audits to be performed at their administrative offices** so that document adequacy and accuracy may be checked. Likewise, they must be willing to have audits performed at their **operational facilities** or warehouses in order to assess the implementation and application of the management systems in place (more information below about audits performed in 2015).

Following the aforementioned rationalisation of the number of Lists/Qualification Systems, in 2015 **1,052 applications were approved as a whole**, totalling **689 qualified operators** registered with the Qualification Systems.
In detail, current Suppliers' Lists[67] include:

- **395** qualification applications approved for "works" Qualification Systems;
- **657** qualification applications approved for "good and services" Qualification Systems.

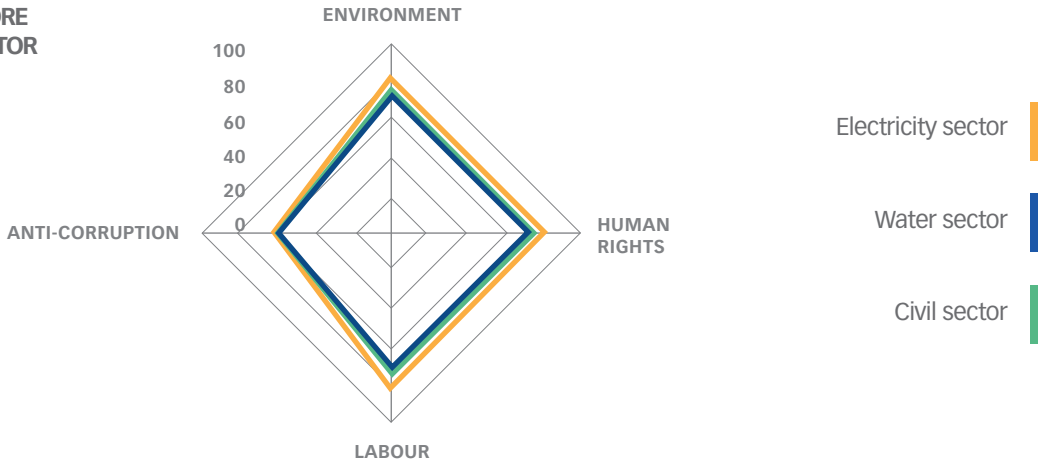
THE TENP PLATFORM

In 2015, the Suppliers' Qualification Unit, in conjunction with the Corporate Social Responsibility and Sustainability Unit, continued to contribute to the **Sustainable Supply Chain Workgroup** established as part of **Global Compact Network Italy**.
Following up endeavours in 2014, during which (i) a **suppliers' self-assessment questionnaire was defined** based on the **ten principles of the Global Compact** of the United Nations (TenP) and most significant international standards regarding corporate sustainability, and (ii) an **IT platform was implemented** for the collection and sharing of information about suppliers' sustainability practices, effective from **January 2015 the completion of the TenP Questionnaire** became **mandatory for the purposes of registration with the Acea Qualification Systems applicable to water, electromechanic and electrical works**. Moreover, as of 1 January 2016, compliance with this requirement will also be required for registration with the new Qualification Systems for goods and services.
The questionnaire addresses major topics such as Human Rights, Labour, Environment and Fight against Corruption and was designed in such a way as to allow companies engaging in any industry and based in any geographical area to complete it.
Upon registering, suppliers must complete the online TenP Questionnaire on the Global Compact portal and, as a proof of completion, they must upload the result (assessment sheet) on the Acea Vendor Management platform. In 2015, about 200 questionnaires were completed. On average, the results (score 1-100) by sector were as follows: 74/100 for the electricity sector (55 suppliers), 68/100 for the water sector (71 suppliers) and 67/100 for the civil sector (37 suppliers).

[67] Consideration should be given to the fact that (i) an operator may be registered with several Qualification Systems/Lists, resulting in the total number of operators being lower than the sum of operators entered in individual Lists and (ii) these figures do not take temporary suspension proceedings into account.

THE TENP PLATFORM

AVERAGE TENP SCORE PER AREA AND SECTOR



Note: 10 companies with extreme scores (0 or 100) and 42 companies that at 31 December 2015 had not yet completed qualification procedures were excluded from the process; some companies were registered with more sectors.

The *Sustainable Supply Chain* Workgroup will carry on the project with a view to pursuing integration with the partners' qualification systems, defining mechanisms to drive supplier sustainability performance and creating tools for checking the accuracy of the information entered in the TenP platform.

THE QAS SELF-ASSESSMENT QUESTIONNAIRE

For the purpose of increasingly raise the suppliers' awareness of topics such as quality, environment and safety, as of 1 January 2015 the completion of a QAS self-assessment questionnaire became a mandatory requirement for registration with qualification systems following the introduction of the new Qualification Systems for water and electrical works. The Suppliers' Qualification Unit receives the questionnaires, duly completed by the suppliers, from the Vendor Management platform, which can be accessed from Acea website and, with the support of the Certification Integrated System Unit, reviews their contents and assigns the relevant score, entering it in the Supplier Assessment database. Suppliers are provided with feedback on the QAS rating (reliable, adequate, partially adequate, critical, inadequate) resulting from the answers given. In 2015, **70 suppliers were reviewed**: in **most cases, 44 out 70 (63%),** the suppliers assessed **fell in the "adequate" range,** 3% were rated as "reliable", 21% "partially adequate" and 13% "critical".

SUSTAINABILITY ALONG THE SUPPLY CHAIN: AN *AD HOC* QUESTIONNAIRE

In 2015, Acea carried out an **in-depth review on the level of implementation of sustainability along the supply chain**, preparing an ad hoc questionnaire.
To this end, the company selected a sample representing the Group's main suppliers to whom it sent a **questionnaire for the collection of data on environmental topics**, such as energy consumption volumes, **and social topics**, such as the adoption of tools to promote ethics and integrity, employment protection and compliance with requirements governing health and safety at the workplace.
With reference to social topics, on a **sample involving 60 suppliers** (30 representing goods and services and 30 representing works), **28 firms** replied (10 for goods and services and 18 for works).
A review of the information provided by the 28 suppliers showed a satisfactory situation. In particular, with reference to **ethics and integrity**, it turned out that 64% of the suppliers adopt tools to promote virtuous behaviours, including the Code of Ethics, Organisation, Management and Control Model as under Legislative Decree 231/01 and anti-corruption guidelines. As regards **employment protection**, **85% of the staff employed with the supplying firms are hired under permanent contracts**, with trade unions being present in 61% of the firms surveyed. With respect to **health and safety at the workplace**, it turned out that (i) **81% of the suppliers rely on safety management systems (e.g. OHSAS 18001**) or follow the guidelines issued by INAIL (national institute for insurance against accidents at work), (ii) 75% delivered safety training courses to at least 50% of their workforce, (iii) 50% of the 18 suppliers who performed works for Acea in 2015 did not have any accident, while the remaining 50% did not exceed 3 accidents.

During the year, control and audit tasks pertaining to suppliers in the "works" category - managed by the Supplier Qualification Unit - underwent a general overhaul **in relation to the different "statuses" gradually acquired by suppliers within Acea**. When a supplier enters the "**qualification phase**", Acea acquires basic information about the degree of readiness of the supplier's management systems and awareness of sustainability matters by having the supplier complete both the **TenP** and the **Quality, Environment and Safety** (**QAS**) self-assessment questionnaire as described earlier. When a **supplier is** "**qualified**", it may be required to undergo a **II part QAS Audit to check on site the actual application of the certified Management Systems** or, at any rate, the methods used to manage Safety and Environment in the light of the applicable regulations. Finally, when a **supplier is awarded a contract, the work performed by such supplier on the construction site is checked** in order to acknowledge compliance of the documents available on-site, the quality of work as benchmarked against contract specifications and compliance with applicable Safety and Environment regulations.
In conjunction with the Certification Integrated System Unit of the Human Resource and Organisation Function, the Supplier Qualification Unit restarted - on full stream in October 2015 - QAS self-assessment and on-site QAS audit tasks and, in November, on-site audits by relying on the specialist's support of certified independent auditors.
In particular, **on-site QAS audits** are performed by **internal qualified auditors** who rely on a standard checklist to personally identify and assess the information provided in the self-assessment questionnaire completed by the firm during the qualification process. The checklists are fed into the system for further processing. The supplier is provided with feedback on the QAS assessment rating (reliable, adequate, partially adequate, crucial, inadequate) resulting from the audit, and a report showing strengths and areas for improvement/adjustment. An "inadequate" rating results in the supplier being **suspended from the Qualification System**. In 2015, **31 firms were assessed**, most of whom (21 out of 31) were rated as "adequate", 4 "reliable" and 6 "partially adequate".
With regard to **on-site audits**, which were partly performed by the operating companies themselves and, for the Single Contracts, by a dedicated team in Acea Elabori - the Suppler Qualification Unit of the parent company is responsible for performing checks on the contractors registered with the Qualification Systems for works.
More specifically, the on-site audits coordinated by the Supplier Qualification Unit of Acea SpA are performed by **Accredia Certified Auditors** through a **checklist to acknowledge** compliance with the quality of work and environment and safety provisions as set forth in contract documents. Any findings are reported to project management and notified directly to the suppliers by Acea. The latter will (i) require the suppliers to specify how any non-compliance will be addressed or settled and minor issues handled, and (ii) perform additional inspection visits. Without prejudice to any action taken by project management as part of the contract management, the detection of any **serious non-compliance** relating to failure to abide by applicable Environmental and/or Safety regulations **may result in a supplier being suspended from the Suppliers' Lists**. Audits are also performed with a view to assessing manpower and equipment available at the construction site at the time of the inspection.
In 2015, inspections pertained to contracts in the water sector: **out of a total of 621 issues detected** in 53 inspections, "**non-compliance**" cases totalled **86** (14%). In conjunction with the relevant Acea Ato 2 organisations, an on-site checklist was drawn up during the year to audit electromechanic work, with auditing activity coming on full stream as of January 2016, when audits are also expected to start with regard to additional types of work.

As mentioned, in additional to the parent company **auditing activity** is also **performed by the operating companies themselves**. With regard to **companies engaging in the Environment segment** (waste-to-energy and environmental services), in 2015 audits to ensure **compliance with environmental and safety regulations** were conducted **at the companies that provided the main technological components** for **revamping** works, still underway, at the **Line 1 of the waste-to-energy plant in San Vittore del Lazio** (A.R.I.A.), including inspections at production sites as well and checks on construction standards and compliance with design specifications. **The waste treatment facility** located in the **SAO set of plants in Orvieto** was gradually restarted following **revamping operations**. Again, all operational phases were **subject to ongoing audits and controls** performed by a specific testing panel who constantly monitored compliance of work progress with project documents. With regard to **leachate collection and transportation operations** at SAO plants, **two audits** were performed on the service providers to establish administrative compliance and proper execution of such operations, inasmuch as these operations are considered to be "environmentally sensitive" and are carried out by third parties. In **Aquaser**, **audits were performed on the firms supplying purification plant waste loading, transportation, recovery/treatment services** as well as on the **relevant plants of destination** dealing with waste treatment. In conjunction with the Supplier Qualification Unit of Acea SpA, **companies with contracts underway** were also identified within the active product groups as part of the "Waste Management" qualification system, the purpose being to **perform quality, environmental and safety audits** at their operating office ("QAS on-site audit"). In 2015, **8 audits** were conducted, with priority being given to the most important audits. At the same time, audits were performed on contractors at the plants in conjunction with the relevant parent company's Units. **352 audits** were carried out and the (quality and safety) checklist was supplemented with environmental data (e.g. the need for means of transport to be equipped with absorbent material in order to address environmental emergencies). Aquaser implemented an information system called "TESI Supplier Qualification" enabling suppliers' professional and technical requirements to be acquired, controlled and kept up-to-date over time.

As to the water sector, pursuant to the **Memorandum on Water Tender Contracts** signed in 2012 by Acea Ato 2 together with Acea SpA, federal unions and trade unions, several meetings were held in 2015 as part of the Joint Committee. During these meetings, the parties discussed about the **award and launch of the Single Contract** for the maintenance of networks and integrated water cycle services, and about the operating management related to the new organisation required under the Contract. Discussions were also held on topics such as the **management of safety at the workplace** and the need to identify **specific indicators** whereby **compliance with regulatory standards** and **quality of the service delivered** by the contractor can be checked.
During the year, **the internal audit team** of **Acea Ato 2** continued to perform its on-site auditing tasks, conducting **514**

inspection visits and auditing 7,575 parameters **in 38 firms**. Irregularities detected during the audits on the total parameters reviewed amounted to 186 (2.4%).
In 2015, **Acea Elabori** was entrusted with the **coordination of all activities pertaining to Safety during Execution** related to **the Single Contract for network maintenance and services of Acea Ato 2**. In 2016, these activities will also be extended to Acea Ato 5 and Acea Distribuzione (see relevant box).

"SAFETY TEAM" ESTABLISHED IN ACEA ELABORI TO PERFORM AUDITS ON SINGLE CONTRACTS

With a view **to ensuring compliance with the highest safety standards** and applicable regulations governing safety at the workplace[68], while checking compliance with the relevant documents produced during the tendering process[69], a **"Safety Team" was established in Acea Elabori** with the task of (i) **coordinating activities pertaining to Safety during Execution** in relation to **the Single Contract** of network maintenance and services of Acea Ato 2 and (ii) gradually extending such activities in relation to the launch of new Single Contracts. The "Safety Team" discharges its duties by relying on several **Safety Coordinators during Execution (locally known as CSE, "Coordinatori in fase di Esecuzione") to be appointed from time to time at specific construction sites.** All such Coordinators attended the statutory 120 hour training course. Activities are differentiated depending on whether works need Coordination or the safety standard of works that has been adopted needs to be assessed and checked through random audits. **For each lot** of the Single Contract a **Safety Manager** is appointed to coordinate the activities of all CSEs. The latter, with the support of Site Inspectors, **conduct periodic workplace inspections** and record compliance or non-compliance with the applicable regulations based on four criteria: compliant or not applicable, minor, medium and serious infringement. **Serious infringement may result in works being suspended**. In 2015, the firms carrying out the works were subject to **professional technical audits** with respect to lots already awarded, while **on-site audits** were conducted in connection with the start of operations. As a whole, **technical audits were performed in 44 firms** (11 contractors and 33 subcontractors), while **102 inspection audits were conducted on-site**. In December 2015, the Safety Team also held **a first meeting with the Heads of the Prevention and Protection Service of the firms carrying out the works, contractors and subcontractors**.

With a view to ensuring customer protection, in 2015 Acea Energia continued to monitor the **quality of the sales service performed by the Agencies for door to door selling and/or teleselling** on the "household" and "micro business" free market segments. The **Agency Agreement** requires **mandatory training for staff members** who operate on behalf and in the name of Acea to ensure that they provide accurate information to the customers, with **fines also being applicable** (starting from 1,000 euros) in the event that unfair commercial practices are identified. In pursuit of a constant improvement of the quality of the acquisition process and an increase in customer base, in 2015 the company rationalised the agency network to even a greater extent, delivering a **training programme to 525 salespeople**, **totalling 2,100 hours of training**. Following investigation, **4,810 complaints** filed by customers were reviewed and **4 misconducts were sanctioned against a total of 133,905 new (electricity and gas) contract supplies acquired**.

Finally, in 2015 Acea Distribuzione kept the **vendor rating** for works in the energy area focused on **142 quality, safety and environmental parameters**, such model being in place since 2008. The system contemplates **on-site inspections** and the drafting of **merit rankings based on the contractors' reputation** as well as the possibility to inflict penalties and suspend contractor's activity: **in 2015, 77 construction sites were suspended due to "non-compliance",** with **inspection visits totalling 1,369.** The system proved effective in increasing the operators' reliability, ensuring optimum performance levels and having a positive impact along the supply chain: the **average level of reputation** detected during the year **(95.95)** confirmed indeed the good levels now reached. In line with Acea Distribuzione's adoption of the Safety, Environment, Energy and Quality Integrated Management System, contractors are also **required to accept** the **Integrated System Policy, with special reference to the health and safety in the workplace and environment protection.**

DISPUTES WITH SUPPLIERS IN 2015

Disputes for **non-payment** of goods, works and services supplied and legal actions concerning **tender contracts** are the two main areas of litigation between the company and its suppliers.
It should be stressed, that the number of incidents decreased in 2015: with regard to the former, 13 incidents occurred (18 in 2014), mainly relating to notifications of invoices that were not paid due to formal reasons which, however, were quickly settled thereafter. With regard to legal actions concerning tender contracts, 12 proceedings were started (15 in 2014).
As a whole, legal disputes pending at 2015, including those started in previous years and less proceedings settled during the year, amounted to 82, basically in line with the previous year (84 in 2014), with 29 cases pertaining to appeals filed with the Regional Administrative Court in respect of awards, while the remaining 53 related to legal actions brought before ordinary courts of law in respect of reservations on the part of the contractors, contract terminations, etc.

[68] Legislative Decree 81/08 "Consolidated Act on Safety", as amended.
[69] Safety and coordination plan on construction site/ DUVRI/ Safety Operating Plan.

HUMAN RESOURCES

IN ACEA **99.5%**
OF THE WORKFORCE HAVE AN OPEN-ENDED EMPLOYMENT CONTRACT

ACCIDENTS IN 2015:
SEVERITY INDEX
1.31%
FREQUENCY INDEX
9.2%

36.4 hours
OF TRAINING PER PERSON,
MORE THAN **4,000**
EMPLOYEES TRAINED

136 persons
JOINED THE COMPANY IN 2015

24.2 %
OF CORPORATE GOVERNANCE BODY MEMBERS ARE WOMEN

ACEA'S EMPLOYEES

The Group workforce at 31.12.2015, consolidated by percentage, numbered 4,978. This was about 2.5% down on 2014 (5,105 employees), due mainly to a decline in overseas water management. There was another slight growth in the Environment area, and a fall for the parent company and Network area. Employee numbers rose in companies dedicated to the generation and sale of energy.

TABLE 29
HUMAN RESOURCES IN GROUP BY MACROAREA (2014-2015)
(year-end balance by consolidation percentage)

business area	2014 (no. employees)	2015 (no. employees)
water	**2,366** of which	**2,251** of which
Lazio - Campania	*1,792*	*1,812*
Tuscany - Umbria	-	-
Overseas and Acea Elabori	*574*	*439*
energy	**1,672** of which	**1,689** of which
networks	*1,335*	*1,315*
generation and sales	*337*	*374*
environment	**221**	**227**
corporate (Acea SpA+Acea8cento)	**846**	**811**
total	**5,105**	**4,978**

TABLE 30
GEOGRAPHIC LOCATION OF RESOURCES (2014-2015) (*)

	2014		2015	
location	no.	%	no.	%
centre north (Tuscany-Umbria)	198	3.9	236	4.7
centre south (Lazio-Campania-Puglia)	4,495	88	4,474	89.9
overseas	412	8.1	268	5.4

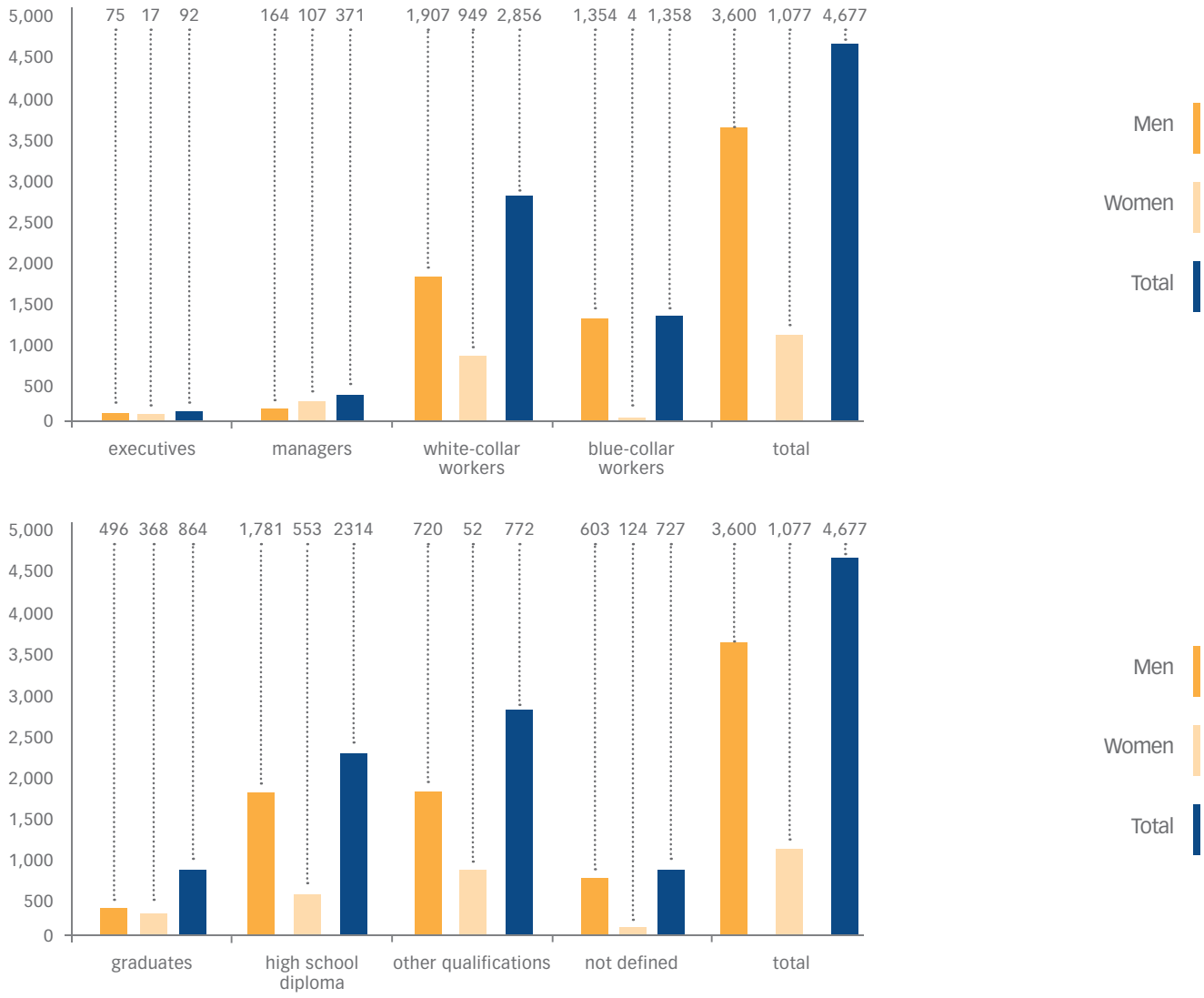
(*) for head office of the enterprise to which they belong.

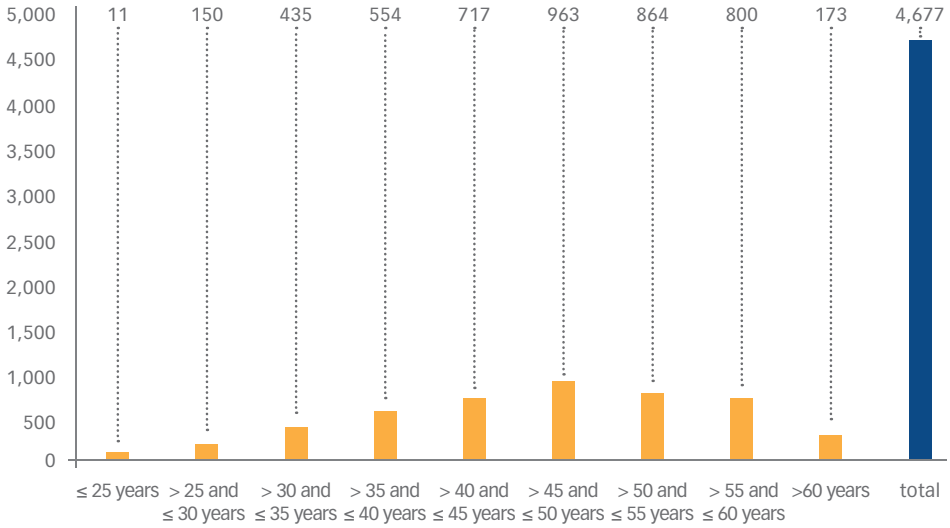
REFERENCE BOUNDARY

Le informazioni e i dati presentati in *Composizione e turnover* riguardano: Acea SpA, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Reti e Servizi Energetici, Acea Energia, Acea Produzione, Acea8cento, Acea Ato 2, Acea Ato 5, Acea Elabori, Acea Gori Servizi, Crea Gestioni, Gesesa, Solemme, A.R.I.A., SAO, Aquaser, Kyklos, Innovazione Sostenibilità Ambientale (ISA), S.A.MA.CE (merged with Solemme in July) ed Ecogena.

Acea SpA's Human Resources and Organisation Division sees to the **administrative management of human resources**, both for itself and on behalf of subsidiary companies. Subsidiaries entrust this management to the parent company or outsource the same to other companies on the market, to raise the efficiency of the process and rationalise costs.
In 2015 **4,677 people worked in the company** (compared with 4,682 in 2014), of whom **1,077 women** (1,081 in 2014): 61.1% white-collar, 29% blue-collar, 7.9% managers and 2% executives (see chart 28 and table 31).
With reference to the **level of education of human resources**, in 2015 there was an increase in the number of people with **university degrees and high-school diplomas**, rising respectively to **18.5%** and **49.5%** of the overall workforce (compared with 16.3% and 47.9% in 2014). The incidence of employees holding other educational qualifications remained steady at 16.5% (see chart 28 and table 31). The **age of employees** is in line with the previous year: 59.3% of personnel are over the age of 45, 36.5% are aged between 30 and 45, and 3.6% are 30 years old and below. The **average age remains** at 2014 levels, at 47 years old (see chart 28 and table 31).

CHART 28
THE COMPOSITION OF PERSONNEL: EMPLOYMENT CATEGORIES, GENDER, LEVEL OF EDUCATION AND AGE (2015)

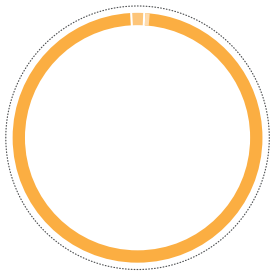




Note: the workforce total shown in the table differs, due to reporting boundaries, from the figure for the consolidation perimeter.

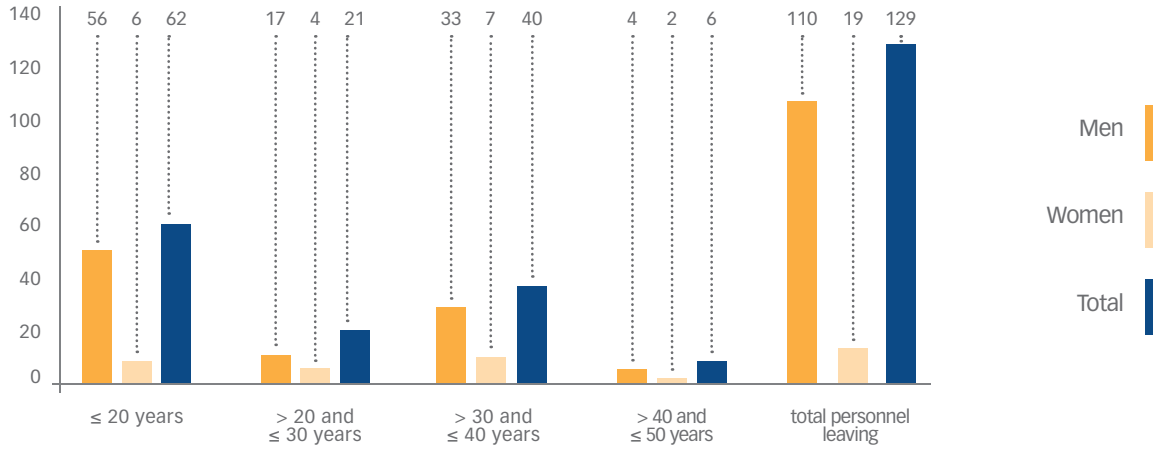
99.5% of Group personnel, or **4,653 human resources,** have **open-ended** contracts (the same as in 2014) (see chart 29 and table 31).
The **duration of the employment relationship**, referring to employees that leave the company each year, confirms the **stability of the workforce**: in 2015 48% of resources had been employed in the Group for up to 20 years, while 47% had served in the companies for between 20 and 40 years (see also chart 29 and table 32).
Looking solely at companies operating in the energy sector, 29% of leaving personnel have been employed in the Group for up to 20 years, while 64% have been working in the companies for between 20 and 40 years (see table 33).

CHART 29
CONTRACT TYPES AND DURATION OF EMPLOYMENT RELATIONSHIP (2015)



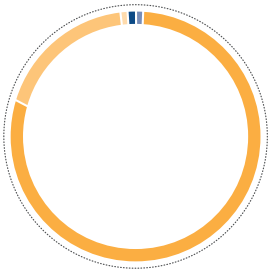
WORKFORCE: 4,677 EMPLOYEES

Unlimited duration 4,653
Fixed term 19
Professional apprenticeship 5



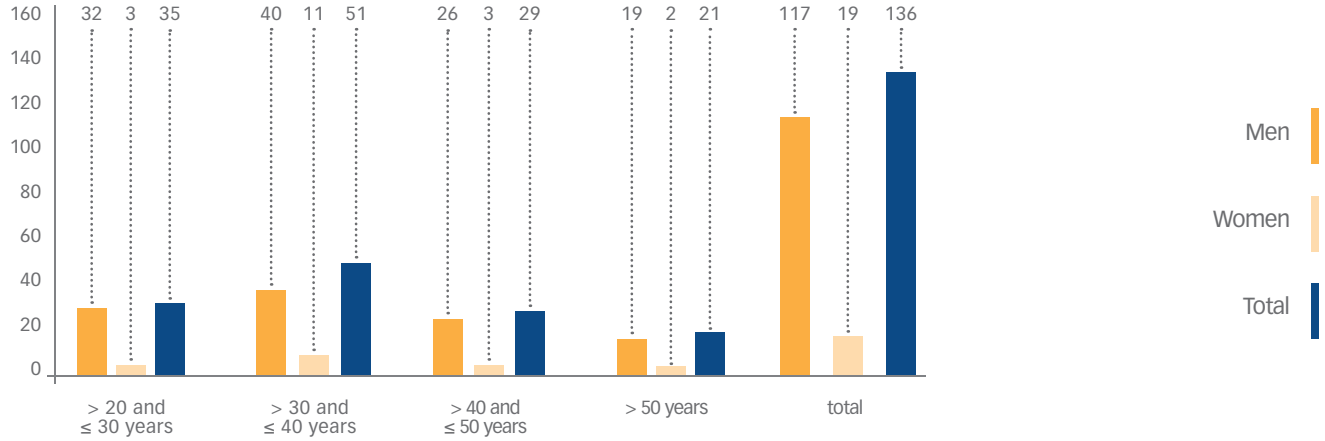
During the year the turnover of personnel entering and leaving the Group recorded significant changes.
Personnel entering the company grew by 70% compared with the previous year: **136 new recruits** (79 in 2014), of whom 117 men and 19 women, with 111 persons hired from the external labour market and 23 entering through the acquisition of business segments (see chart 30 and table 31).
The companies most affected by the entry of new recruits are Acea Ato 2, with 21 entries, Acea Ato 5 (21), Gesesa (19), Acea Energia (14), Acea SpA (11), Acea8cento (8) and Acea Distribuzione (8).
In 2015 **65.4% of new recruits were hired with open-ended contracts**.
63% of incoming personnel were aged between **20 and 40 years of age**.

CHART 30
REASONS FOR ENTERING AND AGE OF PERSONNEL (2015)



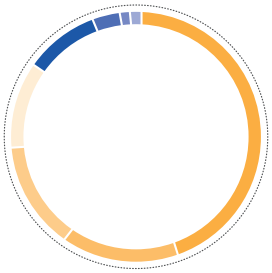
New working position 110
Acquisition from business segments 23
Substitution due to maternity 1
Litigations 1
Internship from local authority 1

136 TOTAL NEW ENTRIES



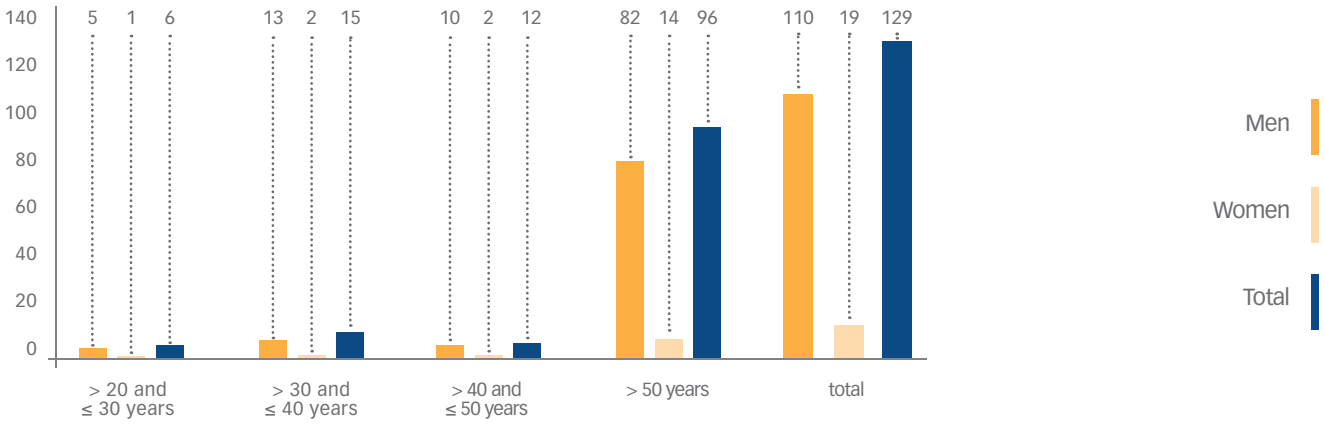
A total of **129 persons** left the company over the year (110 men and 19 women), **26% down** on 2014 (174). In greater detail: **58 employees were "placed in mobility", or laid off** - a form of subsidised and voluntary early retirement - 23 came from Acea Ato 2, 23 from Acea Distribuzione, 5 from Acea SpA, 4 from Acea Energia, 2 from Acea Produzione and 1 from Acea Illuminazione Pubblica. **13 human resources** were part of **facilitated voluntary redundancy plans**, with the voluntary and subsidised termination of their employment contract - 4 came from Acea SpA, 2 from Acea Distribuzione, 2 from Acea Ato 2, 2 from Solemme, 1 from Acea Illuminazione Pubblica, 1 from A.R.I.A. and 1 from Acea Gori Servizi - (see chart 31 and table 31).
Roughly **74%** of personnel exiting the company **were aged over 50 years old**.

CHART 31
TYPES OF EXIT AND AGE OF PERSONNEL (2015)



Mobility 58
Dismissal 20
Expiry of contract 17
Termination by mutual consent 13
Resignation 13
Death 6
Health reasons 1
Retirement 1

129 EMPLOYEES LEAVING THE COMPANY



The **turnover rate** is in line with the previous year, at a modest **5.7%** (6.3% for men, 3.5% for women). The recruitment rate rose by 1.2 percentage points vis-à-vis 2014 (3.2% for men, 1.8% for women), while the exit rate fell by almost one percentage point (3% for men, 1.8% for women) (see table 32).

Women in Acea

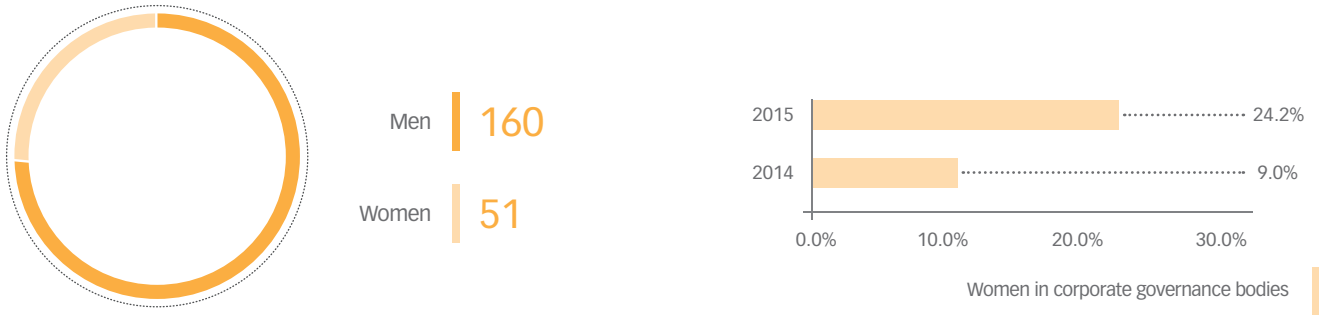
In 2015 **23% of the workforce**, or 1,077 people, were **women**, in line with the previous year (23.1% in 2014). The low percentage of women present in the Group compared with men depends on the operational nature of processes managed: in Italy technical and specialist professional roles are still covered chiefly by men (see chart 32).

CHART 32
BREAKDOWN OF PERSONNEL BY GENDER (2015)

WORKFORCE: 4,677 EMPLOYEES

During the year the number of women remained basically unchanged among executives (17 out of 92, 18.5%), managers (107 out of 264, 28.8%) and graduates (368 out of 864, 42.6%) while the presence of women in **corporate governance bodies rose significantly**, **reaching the figure of 51**, 24.2% of members (see chart 33).

CHART 33
PRESENCE OF WOMEN IN CORPORATE GOVERNANCE BODIES (2014-2015)



MEMBERS OF CORPORATE GOVERNANCE BODIES 2015: 211

Note: the figures shown in the chart do not include S.A.MA.CE, Lunigiana and Acea Gori Servizi.

The growing attention to gender representation, partly stimulated by current legislation, may be seen by the fact that the parent company not only has a **woman Chairman**, but also has **a Board of Directors with more women than men members**: 5 out of 9 (56%). The incidence of women is mirrored in Board committees – the Control and Risks Committee, Transactions with Related Parties Committee, Appointments and Remuneration Committee, Ethics Committee – for all of which the role of Chairman is taken up by a woman director.

TABLE 31
SOCIAL INDICATORS: GENERAL DATA REGARDING HUMAN RESOURCES (2013-2015)

	2013			2014			2015		
	men	women	total	men	women	total	men	women	total
COMPOSITION OF PERSONNEL (*)									
number									
senior managers	81	19	**100**	82	18	**100**	75	17	**92**
middle managers	272	110	**382**	268	107	**375**	264	107	**371**
white-collars	1,890	965	**2,855**	1,869	952	**2,821**	1,907	949	**2,856**
blue-collars	1,424	5	**1,429**	1,382	4	**1,386**	1,354	4	**1,358**
total	**3,667**	**1,099**	**4,766**	**3,601**	**1,081**	**4,682**	**3,600**	**1,077**	**4,677**
WOMEN IN ACEA									
%									
women out of total workforce			23.2%			23.1%			**23.0%**
women executives out of all executives			19.0%			18.0%			**18.5%**
women managers out of all managers			28.8%			28.5%			**28.8%**
women graduates out of all graduates			42.1%			41.6%			**42.6%**
LEVEL OF EDUCATION OF PERSONNEL									
number									
graduates	434	316	**750**	445	317	**762**	496	368	**864**
diploma holders	1,754	522	**2,276**	1,730	514	**2,244**	1,781	533	**2,314**
other qualifications	757	65	**822**	731	59	**790**	720	52	**772**
not defined	722	196	**918**	695	191	**886**	603	124	**727**
total	**3,667**	**1,099**	**4,766**	**3,601**	**1,081**	**4,682**	**3,600**	**1,077**	**4,677**
years									
AVERAGE AGE OF PERSONNEL (**)									
average age total	47.0	43.3	**46.2**	47.4	43.9	**46.6**	47.9	44.6	**47.1**
average age executives	51.2	49.5	**50.9**	52.0	50.4	**51.7**	52.6	50.5	**52.2**
average age managers	47.0	42.8	**45.6**	49.5	47.0	**48.8**	50.0	47.6	**49.3**
average age white-collar workers	46.6	54.6	**46.6**	47.4	43.4	**46.1**	47.9	44.0	**46.6**
average age blue-collar workers	48.7	46.3	**48.0**	46.7	54.5	**46.8**	47.3	55.3	**47.3**
AVERAGE SENIORITY OF PERSONNEL (**)									
average seniority workforce	15.2	12.3	**14.5**	15.9	13.2	**15.3**	18.7	15.4	**17.9**
average seniority executives	16.2	18.5	**16.6**	17.2	20.2	**17.7**	19.2	19.3	**19.2**
average seniority managers	16.1	11.8	**14.6**	16.8	12.7	**15.4**	20.5	17.8	**18.3**
average seniority white-collar workers	13.5	20.2	**13.6**	14.2	18.0	**14.3**	19.9	15.0	**16.7**
average seniority blue-collar workers	17.0	15.3	**16.5**	18.3	16.0	**17.6**	16.7	24.3	**19.7**
average seniority workforce	15.2	12.3	**14.5**	15.9	13.2	**15.3**	18.7	15.4	**17.9**
CONTRACT TYPE OF PERSONNEL									
number									
permanent workforce with open-ended contract	3,657	1,088	**4,745**	3,581	1,077	**4,658**	3,578	1,075	**4,653**
(of which) part-time personnel	*21*	*97*	***118***	*20*	*93*	***113***	*25*	*80*	***105***
personnel with fixed-term contracts	8	6	**14**	16	1	**17**	18	1	**19**
personnel with professional apprenticeship contracts	2	5	**7**	4	3	**7**	4	1	**5**
total	**3,667**	**1,099**	**4,766**	**3,601**	**1,081**	**4,682**	**3,600**	**1,077**	**4,677**

(*) the workforce total shown in the table differs, due to reporting boundaries, from the figure for the consolidation perimeter.
(**) in 2015 a new system for processing data has been used, therefore some values differ from the previous two-year period.

TABLE 32
SOCIAL INDICATORS: TURNOVER (2013-2015)

	2013			2014			2015		
number	men	women	**total**	men	women	**total**	men	women	**total**
ENTRIES: CONTRACT TYPE									
open-ended	33	21	**54**	42	13	**55**	73	16	**89**
fixed-term	19	5	**24**	19	3	**22**	20	1	**21**
professional apprenticeship	1	3	**4**	2	0	**2**	3	0	**3**
acquisition of business segment	32	11	**43**	0	0	**0**	21	2	**23**
total	**85**	**40**	**125**	**63**	**16**	**79**	**117**	**19**	**136**
(of which) acquisitions of personnel from Public Bodies	*5*	*1*	***6***	*9*	*0*	***9***	*1*	*0*	***1***
EXITS: REASONS									
mobility (lay-offs)	76	15	**91**	91	23	**114**	51	7	**58**
redundancies	12	2	**14**	6	0	**6**	11	2	**13**
retirements	0	0	**0**	2	0	**2**	1	-	**1**
dismissals	0	0	**0**	6	1	**7**	13	6	**19**
other reasons (*)	29	17	**46**	34	11	**45**	34	4	**38**
total	**117**	**34**	**151**	**139**	**35**	**174**	**110**	**19**	**129**
TURNOVER, RECRUITMENT AND EXIT RATES (**)									
%									
turnover rate			5.80			5.40			**5.70**
recruitment rate			2.60			1.70			**2.90**
exit rate			3.20			3.70			**2.80**

(*) includes: 13 resignations, 6 deaths, 17 contract expiries, 1 justified dismissal and 1 health-related.
(**) the turnover rate is the sum of workers entering and leaving the company during the year as a ratio of the workforce at year end; the companies to which the figures refer are situated chiefly in Lazio, the **2015 data broken down by gender are as follows**: turnover rate women 3.5%, men 6.3%; recruitment rate women 1.8%, men 13.2%; exit rate women 1.8%, men 3%.

TABLE 33
SOCIAL INDICATORS: AGE CLASSES, DURATION OF EMPLOYMENT RELATIONSHIP (2014-2015)

	2014			2015		
years	men	women	**total**	men	women	**total**
AGE CLASSES OF PERSONNEL						
≤ 25 years	10	6	**16**	9	2	**11**
> 25 and ≤ 30 years	111	73	**184**	102	58	**160**
> 30 and ≤ 35 years	286	161	**447**	278	157	**435**
> 35 and ≤ 40 years	411	168	**579**	396	158	**554**
> 40 and ≤ 45 years	569	177	**746**	533	184	**717**
> 45 and ≤ 50 years	752	204	**956**	747	216	**963**
> 50 and ≤ 55 years	708	179	**887**	694	170	**864**
> 55 and ≤ 60 years	645	97	**742**	693	107	**800**
>61 years	109	16	**125**	148	25	**173**
total	**3,601**	**1,081**	**4,682**	**3,600**	**1,077**	**4,677**
AGE CLASSES FOR PERSONNEL ENTERING						
≤ 20 years	0	0	**0**	0	0	**0**
> 20 and ≤ 30 years	21	8	**29**	32	3	**35**
> 30 and ≤ 40 years	22	7	**29**	40	11	**51**
> 40 and ≤ 50 years	10	1	**11**	26	3	**29**
>50 years	10	0	**10**	19	2	**21**
total	**63**	**16**	**79**	**117**	**19**	**136**

AGE CLASSES FOR PERSONNEL LEAVING						
≤ 20 years	0	0	**0**	0	0	**0**
> 20 and ≤ 30 years	7	5	**12**	5	1	**6**
> 30 and ≤ 40 years	10	6	**16**	13	2	**15**
> 40 and ≤ 50 years	7	0	**7**	10	2	**12**
>50 years	115	24	**139**	82	14	**96**
total	**139**	**35**	**174**	**110**	**19**	**129**
DURATION OF EMPLOYMENT RELATIONSHIP FOR PERSONNEL LEAVING						
≤ 20 years	75	22	**97**	56	6	**62**
> 20 and ≤ 30 years	25	4	**29**	17	4	**21**
> 30 and ≤ 40 years	38	9	**47**	33	7	**40**
> 40 and ≤ 50 years	1	0	**1**	4	2	**6**
total	**139**	**35**	**174**	**110**	**19**	**129**
COMPANIES IN ENERGY SECTOR: DURATION OF EMPLOYMENT RELATIONS FOR PERSONNEL LEAVING						
≤ 20 years	0	0	**0**	56	6	**13**
> 20 and ≤ 30 years	26	8	**34**	6	0	**6**
> 30 and ≤ 40 years	14	5	**19**	21	2	**23**
> 40 and ≤ 50 years	0	0	**0**	2	1	**3**
total	**40**	**13**	**53**	**40**	**5**	**45**

WORKING HOURS, SALARY AND PENSION FUNDS

REFERENCE BOUNDARY

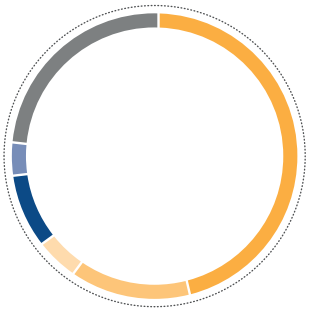
The information and data given in *Working hours, salari and pension funds* pertain to: Acea SpA, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Reti e Servizi Energetici, Acea Energia, Acea Produzione, Acea8cento, Acea Ato 2, Acea Ato 5, Acea Elabori, and as from 2015, Acea Gori Servizi, Crea Gestioni, Gesesa, Solemme, A.R.I.A, SAO, Aquaser, Kyklos, Innovazione Sostenibilità Ambientale (ISA), S.A. MA.CE (merged with Solemme in July) and Ecogena.

Hours worked in Acea

In 2015, excluding executives, a **total of 7,584,223 hours were worked**, 79.4% of which by men.

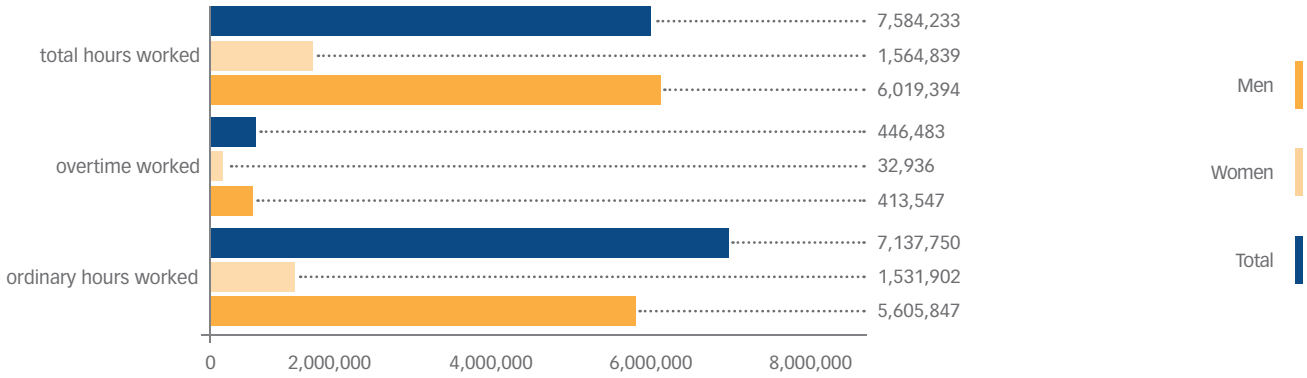
There were a total of **82,769 days of absence** from work, due in the main to illness, permits (study, health, etc.) and maternity/paternity leave (see chart 34 and table 34).

CHART 34
ACEA EMPLOYEES: HOURS WORKED AND ABSENCES (2015)



Illness	37,749	Trade union leave	6,718
Maternity/partenity	14,093	Time off work	2,509
Strike	1,950	various leaves (study, health, mourning, etc.)	19,750

TOTAL DAYS ABSENCE: 82,769



Employees may be granted different types of leave, and the company makes available various **forms of flexibility**: the use of **part-time** work, for example, which in 2015 applied to **2.2% of employees**, **trust-based** working hours for managers and 3rd rank white-collar workers, enabling the "personalised management" of work time, providing the work requirements set forth in the employment contract are met, and **flexitime** for starting and finishing work for 1st, 2nd and 3rd rank white-collar workers; finally white-collar and blue-collar workers have a **monthly number of hours of leave** to be recovered within the same month.

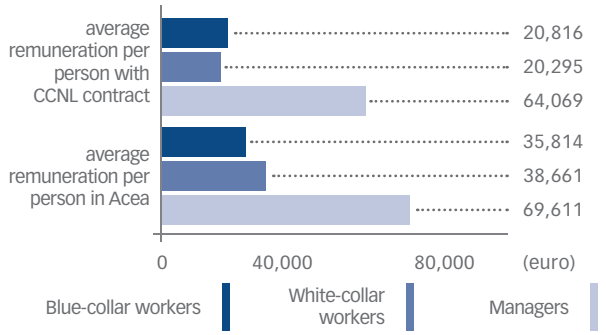
Remuneration

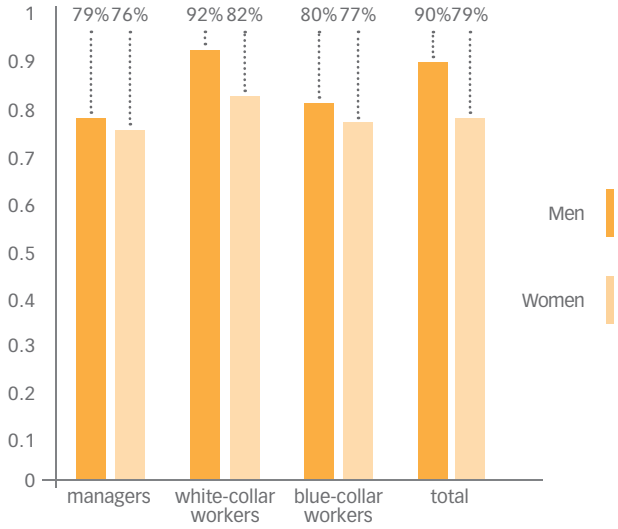
The pay policy adopted by Acea is centred on a growing application of a merit-based system and the selectivity of remuneration measures, both fixed and variable.

Employees' **remuneration** is based on the application of **National Collective Labour Contracts**, with the exception of executives and top management.

Average gross remuneration per employee increased in 2015 only for managers (+1% vis-à-vis 2014), while for white-collar workers and blue-collar workers there were falls of 2.3% and 2.9% respectively. **Gross average remuneration per employee** fell by 2.9%, to **40,300 euro** (41,500 euro in 2014); if one includes executives the figure is **42,700 euro** (44,000 euro in 2014) (see table 34 below).

CHART 35
AVERAGE REMUNERATION AND RATIO OF BASE SALARY TO REMUNERATION (2015)





Looking in gender terms at **the ratio of "base salary" to gross effective remuneration** – i.e. considering the presence of "fixed" and "additional" elements in the total salary – in **2015 this ratio was 90% for women** (91% in 2014) **and 79% for men** (80% in 2014). The difference between the two values can be explained by the fact that activities compensated by higher additional pay, such as on-call, shift work, allowances, overtime, are often covered by men (e.g. work performed emergency technical service workers, involving shifts to cover 24-hour periods).

Defined contribution pension funds

The main supplementary pension funds for Acea employees are **Previndai**, reserved for executives, and **Pegaso**, for non-executive personnel employed under the CCNLs undersigned by Utilitalia for public utility companies in the electricity, gas and water sectors.

The Pegaso fund is managed jointly by Utilitalia – the national organisation created through the merger of Federutility and Federambiente, which represents local public utility companies operating in the water, electricity, gas and environment sectors – and by trade union organisations Filctem-Cgil, Femca-Cisl, Uiltec-Uil, which helped to create it.

In 2015 Group **employees**[70] **belonging to the Pegaso**

[70] For the companies: Acea SpA, Acea8cento, Acea Ato 2, Acea Ato 5, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Energia, Acea Produzione, Acea Elabori, Crea Gestioni, Sogea, Gesesa, Solemme, Acea Gori Servizi, A.R.I.A, Aquaser and SAO.

fund numbered 2,547 (2,517 in 2014). Acea paid in to the Pegaso fund approximately 4.4 million euro in employee leaving indemnity (TFR) and 1.24 million euro as a supplementary company contribution. Looking at the distribution of Acea's Pegaso Fund population by gender, there is an **incidence of 78.8% men** and **21.2% women**, basically unchanged vis-à-vis last year.

Net Pegaso fund assets designated for benefits reached 840 million euro in 2015 (777 million euro in 2014), about 8.1% up. The ***Balanced, Dynamic and Guaranteed*** segments all closed the year positively, by 2.30%, 3.35% and 0.88% respectively. The return on TFR, considered as a benchmark for the Guaranteed segment, was 1.25% in 2014 (Pegaso data for 2015).

PEGASO FUND BENEFITS FOR ACEA GROUP EMPLOYEES

In the **first 16 years of the Pegaso Fund**'s existence benefits (redemptions, pensions, advance payments and transfers) to Acea employees totalled **20 million euro**, of which **3.9 million euro in 2015 alone**, a year in which the maximum amount paid out in a year was reached (+61% vis-à-vis 2014). Looking at the figures for 2015, advance payments (basically motivated by personal needs, in addition to routine cases for medical expenses, purchasing or restructuring one's home for oneself or one's children) reached 2.2 million euro, in response to 227 requests, redemptions/benefits of 1.5 million euro, further to 67 requests, and finally 151,000 euro for 6 transfer requests.

At 31/12/2015 the **total assets managed by the Fund** on behalf of Acea members was roughly **75.6 million euro** (6.5% up on the 71 million euro at the end of 2014). The analysis of asset allocation among the various segments of the Pegaso Fund shows that about **83% of Acea members chose the Balanced profile (in terms of resources 87%)**, with an investment portfolio consisting of bonds (30%) and shares (70%).

It is noted that supplementary pensions were the object of major **novelties introduced in the 2015 Stability Law**. These include the possibility of receiving TFR directly in one's pay packet for the period from March 2015 to June 2018, instead of its payment into a pension fund or its being kept by the company. This possibility was practically ignored by members due to the heavy fiscal burden attached to it. There was also a general shake-up (and increase) in the taxation regime for supplementary pension payments (from 11% to 20%), the revaluation of TFR (from 11% to 17%), TFR taxation in the pay packet (going from separate taxation to ordinary progressive personal income tax, Irpef).

Looking at the pension fund, from 2015 onwards the position can be divided into two investment segments.

Source: drafted in collaboration with Andrea Mariani, CEO of Fondo Pegaso

TABLE 34
SOCIAL INDICATORS: HOURS WORKED, DAYS OF ABSENCE, REMUNERATION AND SUPPLEMENTARY PENSION FUND MEMBERS (2013-2015)

	2013			2014			2015		
	men	women	total	men	women	total	men	women	total
ACEA EMPLOYEES' HOURS WORKED									
hours									
ordinary	5,092,460	1,423,769	**6,516,228**	5,208,923	1,467,127	**6,676,050**	5,605,847	1,531,902	**7,137,750**
overtime	379,724	24,049	**403,773**	393,345	28,039	**421,384**	413,547	32,936	**446,483**
total hours worked	**5,472,184**	**1,447,817**	**6,920,001**	**5,602,268**	**1,495,166**	**7,097,434**	**6,019,394**	**1,564,839**	**7,584,233**
TYPE OF ABSENCE									
days									
illness	26,662	12,095	**38,757**	25,155	10,679	**35,834**	26,466	11,283	**37,749**
maternity/ paternity	983	13,834	**14,817**	782	12,993	**13,775**	775	13,318	**14,093**
strike action	566	134	**700**	481	109	**590**	1,562	388	**1,950**
trade union leave	5,533	1,081	**6,614**	5,511	1,014	**6,525**	5,834	884	**6,718**
sabbatical leave	3,868	2,232	**6,100**	1,282	555	**1,837**	1,874	635	**2,509**
various leaves (study, health, mourning, generic)	11,981	5,201	**17,182**	12,875	6,407	**19,282**	12,981	6,770	**19,750**
total days of absence (excluding holiday entitlement, accident and injury)	**49,593**	**34,577**	**84,170**	**46,086**	**31,757**	**77,843**	**49,492**	**33,277**	**82,769**

AVERAGE GROSS REMUNERATION BY GRADE

euro	2013	2014	2015
managers	65,900	68,900	**69,500**
white-collar workers	38,300	39,600	**38,700**
blue-collar workers	37,000	38,000	**35,800**

AGE CLASSES AND GENDER OF ACEA EMPLOYEES REGISTERED WITH PEGASO FUND

	2013			2014			2015		
years	men	women	**total**	men	women	**total**	men	women	**total**
≤ 25 years	1	1	**2**	1	0	**1**	3	0	**3**
> 25 and ≤ 30 years	42	21	**63**	28	12	**40**	35	11	**46**
> 30 and ≤ 35 years	115	42	**157**	99	36	**135**	102	39	**141**
> 35 and ≤ 40 years	188	59	**247**	182	50	**232**	188	53	**241**
> 40 and ≤ 45 years	324	117	**441**	253	75	**328**	262	76	**338**
> 45 and ≤ 50 years	431	123	**554**	427	133	**560**	433	132	**565**
> 50 and ≤ 55 years	387	132	**519**	413	120	**533**	420	114	**534**
> 55 and ≤ 60 years	405	84	**489**	443	88	**531**	438	90	**528**
>61 years	68	13	**81**	129	28	**157**	125	26	**151**
total	**1,961**	**592**	2,553	**1,975**	**542**	2,517	**2,006**	**541**	2,547

INDUSTRIAL RELATIONS

REFERENCE BOUNDARY

The information and data presented in the paragraph Industrial Relations relate to Acea SpA, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Reti e Servizi Energetici, Acea Energia, Acea Produzione, Acea8cento, Acea Ato 2, Acea Elabori, A.R.I.A., SAO, Crea Gestioni and Aquaser.

Acea's industrial relations system operates within the framework of rules and provisions defined for the sector by the national collective labour contract (CCNL), with a second bargaining level in place between the company and in-house worker representation, through which agreements can be reached based on particular company needs.

Acea applies the **Consolidated agreement for the electricity sector**, **Consolidated agreement for the gas-water sector** and, within Acea8cento, an *ad hoc* contract specifically drawn up with pertinent national associations. **All employees** are accordingly covered by **collective bargaining agreements**.

In 2015 the level of unionisation **was 75.3%**, in line with the 2014 figure (75.6%); **300** employees had roles as **union representatives or executives**, **17** of whom were **Workers' Safety Representatives** (RLS), designated through a union agreement.

During the year the **Industrial Relations Unit** and the **Trade Unions** discussed and defined all areas of worker-employer dialogue: regulatory, economic and work organisation.

ACEA 2.0

During the course of the year, in line with the ongoing business transformation process and in order to adopt rules in keeping with the changing organisational and technological context, two important agreements were reached regarding new **working hours** and management flexibility tools with reference to the **mobility of personnel** (see box).
Again with reference to working hours, during the course of the year the first **Group policy on part-time work was defined,** with the introduction of new timetable types based on professional profiles (administrative, front-end, sales, etc.).

ACEA 2.0

THE NEW WORKING HOURS SYSTEM

In 2015, at the end of complex negotiations between Acea and Trade Union organisations, an **Agreement to define the Group's new working hours system** was reached, ratified after consultations and voting by workers.
The main characteristics of the new system are:

- **working hours schemes** with 6 hour types (administrative, daily operations, semi-shift operations, commercial, dispatcher and continuous shifts);
- **flexitime for starting work, leave to be recovered, compensated rest days, missed public holidays, national half-day holidays and the working hours account**;
- **patron saint**, with the choosing of 29 June (St Peter and St Paul) as holiday for all companies signing the Agreement.

ACEA 2.0

THE "MOBILITY" OF PERSONNEL

In July Acea and trade unions undersigned a Framework Agreement on the subject of **personnel mobility** with a view to bringing the need for operational flexibility into line with the need to enhance human resources.
The agreement provides definitions for **mobility within single companies and within the group,** including the need to **retrain human resources**, and identifies future actions to be performed to make the most of professional skills and experiences present in the Group.

Other **agreements reached during the year** related to **the performance bonus** and the **value of meal vouchers**. With regard to **the performance bonus**, for companies in the areas Environment, A.R.I.A., SAO, Water, Crea Gestioni, the **mechanism already adopted by the Group** has been introduced, entailing: the introduction of technical indicators for measuring the actual contribution of workers to the goals fixed by the company and calculating the corresponding economic value; the reformulation of Profitability and Productivity/Quality factors, with a reduction for the former and increase for the latter when calculating the result bonus; and the introduction of the **Individual Assessment factor**, taking into account the individual performance of each employee for the attainment of set goals and acting as an incremental or decremental coefficient for the bonus to be granted.

In the sphere of **training,** the various companies that have participated in the **Training programme promoted by the FOR.TE Fund**, valid for the period 2014-2015, have agreed on the general approach with Trade union organisations (see *Training and development of human resources*).

Finally, during the year, within the Joint Committee for the **Water Tender Contract Memorandum** signed in 2012 by Acea SpA, Acea Ato 2, federal trade unions and industry associations, some meetings were held regarding the start-up of the Unified Tender Contract for the maintenance of networks and services in the integrated water cycle (see also the chapter *Suppliers*).

With regard to **the prior disclosure to employees regarding possible organisational changes or corporate restructurings having a possible impact on employment relations**, the company acted according to the following cases:

1. **organisational changes**: in the event of the creation of new Units or mission changes, the Parent Company's Human Resources and Organisation Division will issue the Organisational provision and transmit the disclosure to the relevant offices, which will publish it on the bulletin boards and company intranet. Usually, for changes affecting workers, union representatives are given the pertinent information; if changes affect single employees (e.g. changes to place of work, working hours, etc.) these will receive a specific communication;
2. **corporate restructurings**: in the event of restructurings resulting from significant organisational and production changes, having an impact on working conditions and employment, the disclosure of information to employees and their Trade Union organisations is governed by the CCNLs implemented within the Group and by Industrial relations protocols;
3. **Company transformations** (e.g. transfers, mergers, takeovers, transfer of business segments): in the case of company transformations, disclosure to employees is governed by current legislation[71], which includes the duties of informing worker representatives, so as to enable them to gauge the industrial reasons for such operations, the adoption of correct procedures and the impact they will have on employment relations.

[71] Art. 2112 of the Civil Code and art. 47 of law 428/90, as amended, implemented following legislative decree 276/2003.

DISPUTES WITH EMPLOYEES AND WITH TRADE UNIONS

Disputes lodged by employees against Acea mainly relate to **grade reviews, remuneration differences, indemnities not received** (e.g. hourly rate of shift workers), but also to **demotion and mobbing**.
In 2015 there were 102 active disputes (93 in 2014), 26 of which opened during the year, in line with 2014 figures.
With regard to the 4 collective causes opened in the previous year by 71 employees for the maintenance of subsidised electricity rates, the case ended favourably for Acea in the court of first instance.
The dispute with the last 6 workers of the former COS (Almaviva Contact) remains unsettled, since Acea has appealed to the Court of Cassation against the ruling of the Court of Appeal of Rome, which rejected the appeal lodged by the company.
Three cases were initiated with the Court of Rome, regarding the former Chairman and two former directors of Acea SpA, with a claim for damages resulting from the early termination of their respective offices decided by the Shareholders' Meeting in 2014.
Finally, a case was brought by a former project-based collaborator for the recognition *ab origine* of a subordinate employment relationship at an executive level, while 3 cases were brought by workers transferred to Acea8Cento for reinstatement to the positions previously occupied and, for some, the recognition of damages brought about by demotion.

SAFEGUARDING HEALTH AND SAFETY IN THE WORKPLACE

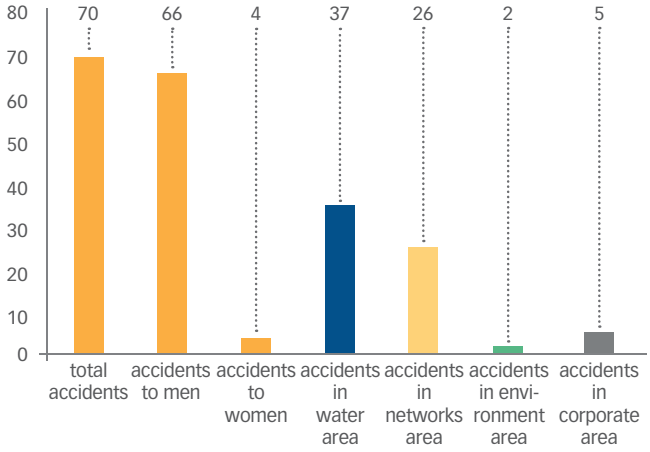
REFERENCE BOUNDARY

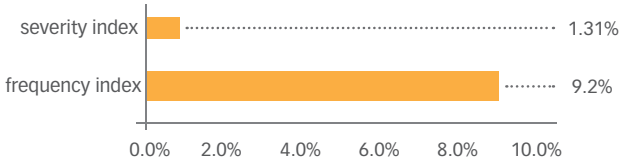
The information and data present in the paragraph *Worker protection: health and safety in the workplace* relate to: Acea SpA, Acea Reti e Servizi Energetici, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Ato 2, Acea Ato 5, Acea Elabori, Acea Energia, Acea Produzione, Umbria Energy, Acea8cento, Crea Gestioni, Gesesa, Aquaser, Kyklos, Solemme, A.R.I.A., SAO, Innovazione Sostenibilità Ambientale (ISA), S.A.MA.CE (merged with Solemme in July) and Ecogena.

Each company in the Group, in compliance with existing legislation (Leg. Dec. 81/08, as amended), **is directly responsible for the management of safety aspects**.
Coordination and policy activities are the responsibility of the **Human Resources and Organisation Division** of the parent company, which has the task of monitoring companies to ensure compliance with guidelines and policies issued and with current legislation.
Most Group companies have implemented **Certified management systems** (OHSAS 18001) **in the area of occupational health and safety** (see also *Corporate identity*, chapter *Corporate governance and management systems*).

With regard to the process of evaluating **worker risks** and **monitoring accidents and injuries**, each company shall act in accordance with existing legislation, drafting the **Risk Assessment Document** (DVR). Following these independent activities, the **Health, Safety and Asset Protection Unit,** under the Human Resources and Organisation Division, **draws up at a central level** each year the **accident report** for Group companies. The method adopted to analyse accidents complies with the **Guidelines for classifying accidents**, drafted by Federutility, and with standard **UNI 7249/95**, with reference to INAIL criteria and ESAW (European Statistics of Accidents at Work) recommendations.
In 2015 **accidents** occurring during the performance of working activity numbered **70** (63 in 2014), 27 occurred while travelling (i.e. while commuting between home and workplace) (34 in 2014). One accident caused the death of a blue-collar worker from the company Acea Ato 2, working on the closure of an underground water pipeline.
Due to this fatal accident, the number of **days absence for the year** rose to **9,974** (2,786 in 2014), corresponding to the number of days of actual absence, 2,474, plus 7,500 days referring to the fatal accident.
Frequency and severity indexes both rose vis-à-vis 2014, by almost one percentage point (see chart 36 and table 35).

CHART 36
ACCIDENTS AND INDICES (2015)





Looking at **the breakdown of accidents by gender** (excluding those sustained while travelling) it emerged that **66 accidents** involved blue-collar men workers (59 in 2014), 94% of the total, causing **9,804 days of absence** (2,036 in 2014). A total of **4 accidents** happened to white-collar **women** workers (4 in 2014), 6% of the total, leading to **170 days of absence from work** (97 in 2014).
Looking at the **breakdown of accidents by company** – grouped by business area, in line with the organisation of the company - compared with 2014 there was an **increase in accidents in the networks area** (16 accidents in 2014), **stability in the water area** (37 in 2015 and in 2014) **and a fall in corporate** (7 in 2014) and **environment areas** (3 in 2014) (see chart 36).
The largest number of accidents occurred in Acea Ato 2 (30 accidents) and Acea Distribuzione (25 accidents): the Group's two largest companies operating in areas that are inherently exposed to the risk of accidents due to the type of work performed.

During the year regular advisory meetings were held with **Workers' Safety Representatives** (RLS), ensuring the involvement of workers, in accordance with the provisions of art. 35 of legislative decree 81/08.

Acea is alert to evaluating and managing the risks associated with work-related stress. In 2015 a representative sample of employees were the subjects of a survey on possible stress factors associated with the performance of work, entailing the compilation of a questionnaire and attendance of specific focus groups.

Acea8cento, following the results of the **evaluation of work-related stress**, carried out improvement plans regarding criticalities detected in the area of communication. It accordingly organised forums, open to all employees of the company, regardless of the company role covered, aimed at defining new and more effective ways of communicating.

TABLE 35
SOCIAL INDICATORS: HEALTH AND SAFETY (2013–2015)

number	2013	2014	2015
BREAKDOWN OF ACCIDENTS BY BUSINESS AREA AND GEOGRAPHIC AREA			
water (Lazio, Molise and Campania)	66	37	**37**
networks (Lazio)	35	16	**26**
energy (Lazio, Abruzzo and Umbria)	4	0	**0**
environment (Lazio, Umbria and Tuscany)	2	3	**2**
corporate and services (Lazio)	3	7	**5**
total	**110**	**63**	**70**
FREQUENCY AND SEVERITY INDICES			
total days of absence (*)	4,189	2,786	9,974
frequency index (FI) (no. acc. x 1,000,000/h work.)	**14.97**	**8.31**	**9.2**
severity index (SI) (days absence x 1,000/h work.)	**0.57**	**0.37**	**1.31 (**)**

Note: the water area includes 4 companies, the network area 3, energy area 5, environment area 7 and corporate and services area 2. In 2015 the company Acea Reti e Servizi Energetici (networks), the companies A.R.I.A., Aquaser, Kyklos, ISA (environment) and the entire energy area did not record any accidents. Table data do not include accidents occurring while travelling to and from work.
(*) Figures include days of absence due to the continuing or returning effects of accidents occurring in previous years.
(**) The higher severity index is due to the fatal accident, resulting in 7,500 extra days absence.

Health monitoring

REFERENCE BOUNDARY

The information and data presented in the paragraph *Health monitoring* relate to: Acea SpA, Acea Reti e Servizi Energetici, Acea Distribuzione, Acea Ato 2, Acea Elabori, Acea Energia, Acea Produzione, Acea8cento, Aquaser, Solemme, A.R.I.A., SAO, Crea Gestioni and Ecogena.

Beyond regulatory compliance, Acea sets out to **raise employee awareness of the culture of occupational safety and wellbeing at work,** providing **specific training courses** (see also the paragraph *Internal Communication* and *Training and development of human resources*) or **specific initiatives**. In the "Quality, Environment, Safety and Energy" **section of the company intranet** human resources are given appropriate information about procedures, legislative documentation and in-depth studies.
Health monitoring is managed by an **internal structure** that operates in compliance with existing legislation (art. 41 of legislative decree 81/08) and **in collaboration with external professionals**. Workers' health is monitored with the assistance of formally-appointed qualified physicians,

who subject employees to the following types of medical examinations:

- pre-employment;
- preventive or following changes to work duties;
- regular, based on the risk assessment plan;
- at the worker's request;
- in the event of termination of the employment relationship, if required by existing legislation;
- prior to resuming work, following a period of absence for health reasons of longer than sixty consecutive days.

Furthermore, for workers exposed to specific risks, there is a **targeted programme of medical check-ups**.
As part of activities to safeguard the psychological and physical health of workers, **qualified physicians work** with **employers** and with **Protection and Prevention Service Officers to assess the risks** to which workers are exposed. This activity is **necessary for drawing up the health monitoring plan**.
In 2015 **a total of 2,249 check-ups were carried out**; relative costs[72] amounted to **approximately 220,000 euro**.

The company also maintains a **First-aid medical centre**, providing company employees and visitors with first aid in the event of ailments not requiring hospital treatment.
Health monitoring activities also include the **preventive management of occupational diseases,** which the worker may contract while working, due to prolonged exposure to risks present in the workplace.
As part of activities performed by Group companies, to which Acea provides the health monitoring service, there are no risk profiles such as to be able to cause occupational pathologies.
In any case the competent medical officer will define, in agreement with the employer, preventive measures and health protocols for the risk profiles associated with specific work duties, and will monitor potential harm to worker health.
The competent medical officer, furthermore, in issuing the suitability assessment, shall apply if necessary limitations and obligations to prevent possible occupational illnesses.
In 2015 no suspected occupational illnesses were reported in Acea.

HUMAN RESOURCE EMPOWERMENT AND COMMUNICATION

REFERENCE BOUNDARY

The information and data presented in the paragraph *Human resources empowerment and communication* relate to: Acea SpA, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Reti e Servizi Energetici, Acea Ato 2, Acea Ato 5, Acea Gori Servizi, Crea Gestioni, Gesesa, Acea Elabori, Acea Energia, Acea Produzione, Acea8cento, Aquaser, Kyklos, Solemme, A.R.I.A., SAO, Innovazione Sostenibilità Ambientale (ISA), SA.MA.CE. (merged with Solemme in July) and Ecogena.

Human capital, consisting of the knowledge and skills of the persons working in Acea, lies at the centre of the ongoing *change management* process. The company is seeking to innovate the **organisational culture** by enhancing the role of each employee and adopting a model of change, open and reticular, **promoting the active participation of human resources**.

ACEA 2.0

The Acea2.0 programme, which involves **main Group's companies** with the coordination of an ad hoc **structure**, entails support for personnel through specific development, training and *engagement* plans, and their active participation in the realisation of ***La Grande Opportunità (the Great Opportunity)*** (see the paragraph *The Acea2.0 programme* in *Corporate identity*).
Each employee can contribute to the planning and realisation of projects to improve corporate processes, taking part in special working groups (acceleration team, local action team and Steering Coalition team).

Within the ***change management*** **process**, the programme's governance structure has undertaken numerous ***people engagement*** initiatives to involve persons in ongoing changes, provide updates on the state of progress of technical activities and indications regarding the support needed to implement the programme, thanks in part to the creation of an ad hoc intranet portal for all Group companies (see also *Internal communication*).

Training and development of human resources

REFERENCE BOUNDARY

The information and data presented in the paragraph Human resources empowerment and communication relate to: Acea SpA, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Reti e Servizi Energetici, Acea Ato 2, Acea Ato 5, Acea Gori Servizi, Crea Gestioni, Gesesa, Acea Elabori, Acea Energia, Acea Produzione, Acea8cento, Aquaser, Kyklos, Solemme, A.R.I.A., SAO, Innovazione Sostenibilità Ambientale (ISA), SA.MA.CE. (merged with Solemme in July) and Ecogena.

[72] Costs of pre-employment and regular check-ups refer to the reference boundary of the paragraph.

Acea's competitiveness is very much dependent on the quality and **professionalism of its human capital**, accordingly **training**, designed to raise personal skill levels, **is a key element** for improving the performance of the company and its ability to be competitive in the market.
Training provided to human resources is financed in part through membership of **inter-professional bodies for continuing education**. The Group's core companies in particular (Acea SpA, Acea Distribuzione, Acea Reti e Servizi Energetici, Acea Ato 2, Acea Ato 5, Acea Elabori, Acea Energia, Acea Produzione) **are members of the FOR.TE Fund** (National Inter-Professional Joint Fund for Continuing Education in the Service Sector), which provides financing for the development of employee competences and the competitiveness of enterprises.
Acea SpA's **Human Resources and Organisation** Division draws up the parent company's annual training programme, oversees the attainment of general training goals, defines **policies, guidelines and tools** for Group companies, manages **managerial training** at a central level, creating training courses aimed at top and middle management, constructs paths for **advanced cross training,** centring on topics of common interest to all Group areas, with highly specialised content, organised with highly specialist partners, including universities.
Operating companies have independent responsibility for training in safety matters, prevention of risks arising from technical-operational work and legislative obligations. Individual companies are also responsible for **technical-specialist training** to develop special competences and skills in the reference business area. Both types of training come under the annual Group training plan, and complement the parent company's training programme.

The **training process** originates from the **study of educational needs,** carried out **digitally** on the Pianetacea platform. This entails the definition **of the population involved and contents of training**, **identification of the training supplier**, the staging of **courses** with the assistance of suitably chosen study tools and materials, depending on the teaching method adopted, which may be **traditional** – in the classroom with face-to-face or "side-by-side" teaching, **experiential** – through experiences that might be acquired outside the workplace, or **online**, via the **Pianetacea** platform, in e-learning mode. The process concludes with the **evaluation** of the learner's **level of satisfaction** concerning the event organisation and teaching quality, and **regular internal reporting** on participation in training.

ACEA 2.0

During the course of the year training activity was performed in line with the Acea2.0 programme, making it possible to achieve significant goals in relation to a **change of culture** and **development of cross-section, technical skills,** related to the introduction of innovative systems and working tools (SAP-HANA, CRM, Workforce Management etc.) and to new professional profiles.
In greater detail, with reference to technical training for professionals, a modular training approach was developed, with classroom courses given based on the Acea2.0 programme, training sessions aimed at *key-users* inside the company, modules to supplement course contents with aspects relating to the operational management of in-field activity (*train the trainer)* and web sessions, by means of *e-learning* courses, *help on line* for operatives, and so on.

ACEA 2.0

NEW PROFESSIONAL FIGURES: THE DISPATCHER

The introduction of Workforce Management (WFM) has made it necessary to define new professional profiles, including the role of *Dispatcher*. This figure **coordinates the activities of field operatives**, seeing to their needs and ensuring operational assistance, and manages the job orders agenda, assigned to operatives over a given district (division of a Territorial Macro Area, divided into 3 sectors: Networks, Water Systems and Wastewater Treatment Plants). The *Dispatcher* collaborates with other figures: the *HR Planning Dispatcher*, responsible for managing shifts, overtime, on-call, attendance, leaves, training courses and medical check-ups; and the *Service Dispatcher*, responsible for the procurement of work equipment and materials for operatives, protective equipment and service vehicles.
The creation of new professional figures not only modernises the system of worker skills, within the reorganisation of the Acea2.0 programme, but also causes employees to reassess their role and mobility in the Group and their growth prospects.

ACEA 2.0

Again as part of the Acea2.0 programme, experiential training courses have been staged for the human resources of operational companies, including:

- **a *team coaching* course**, dedicated to executives, managers and *key users*, with the involvement of about 50 people, preceded by an *Ice Breaking* day, centring on the subject of change and leadership. The aim was to create among these persons favourable conditions for change, thinking outside the box, looking at the importance of being leaders, and not "bosses", and being able to steer activities in which group dynamics are involved;
- training in *outdoor* mode, associated with **Workforce Management (WFM)**.

ACEA 2.0

WORKFORCE MANAGEMENT (WFM) TRAINING

Training courses associated with the introduction of Workforce Management (WFM) have been devised to help the personnel of operational companies with the application and adoption of an **innovative working method** entailing the use of tablets connected via the web to corporate information systems (SAP WFM, SAP ISU, SAP CRM etc.).
In 2015 3 training courses were held.
Make Future With…Acea, involving 200 Acea Ato 2 personnel who, through the metaphor of cooking, looked at a new way of organising work, operating independently but also in an interconnected manner, ensuring excellent performance.
The same format was proposed within Acea Distribuzione, with the training course called ***Acea Food Distribution***, which will conclude in early 2016, involving about 250 people.
Finally, ***Ato2.0…ready, steady, go!,*** involving about 300 people from Acea Ato 2, adopted a more practical approach. During experiential initiatives operational dynamics were re-created among the various figures involved in Workforce Management (WFM), through the use of tablets.
The classroom discussion was of particular importance, providing participants with a greater awareness of their role in the new organisation and of how technology is an empowering tool, capable of raising their level of professionalism.

Training also centred on the new applications SAP CRM, SAP/ISU, SAP HCM TIME MANAGEMENT – the latter introduces a new way of managing personnel work attendance, **online** and **autonomously**, allowing each employee to directly manage their profile – and on techniques to improve customer relations.

ACEA 2.0

INTEGRATION, INCLUSION: THEATRICAL TEAM SPIRIT

Theatrical Team Spirit is a training course involving about 300 employees from the companies Acea8cento, Acea Energia and Acea Ato 2, coming into daily contact with customers, using theatrical role-playing techniques.
Theatrical techniques are used to offer employees a fun way of developing **communication techniques and managing relations with customers.** The course entailed a **Theatre Workshop**, a space-time zone isolated from daily duties, to explore different ways of thinking, perceiving, moving and above all interacting. The course ended in the staging of a play.

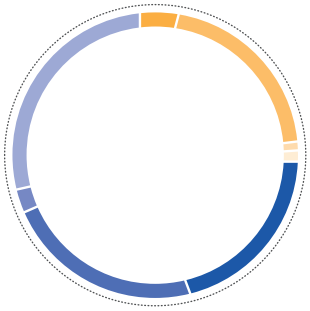
Further **training initiatives** were undertaken in the areas of:
- **safety in the workplace** (refresher courses for workers' safety representatives, first aid officers, fire prevention officers, safe driving, etc.) and relative **management systems**: a course was organised for employees requiring simplified communication for the understanding of contents; course tutorship was provided by internal resources;
- **integrated Quality, Environment, Safety and Energy management systems (QASE);**
- **legislation on tender contracts** and the **environment**;
- **general accounting** and budget analysis;
- the **new purchasing procedure**;
- **reform of labour law** introduced by the ***Jobs Act***;
- training in the area of the **environment (ISO 14001, ISO 50001, waste management, remediation, etc.)** in Acea Ato 2;
- qualifications needed for the **maintenance of Water Houses**;
- **individual coaching** courses.

With the assistance of the Group's multimedia platform - Pianetacea – online training courses were held on the subject of the Administrative Responsibility of Organisations (L.D. 231/01), *Privacy* Law (L.D. 196/03) and the Group's Code of Ethics. In addition to this activity, "mobile" training modules were organised on the *Privacy Law* and *Code of Ethics* **for blue-collar workers unable to follow online training courses;** a course was organised to make personnel aware of the questions of *privacy* through the company intranet.
The Group's ethical values and company regulations are also disclosed by means of publication on the company's intranet and official website. With reference to newly hired personnel, as part of entry training, modules are always dedicated to the corporate mission, *Code of Ethics* and *Privacy Law.*
In 2015 **577 traditional** and **experiential training courses were provided** (443 in 2014), in **1,439 sessions** (1,008 in 2014), with **3,991 trained employees** (3,455 in 2014), of whom **20.5%** were **women**. The **e-learning platform** provided a further **8 courses,** with the participation of **281 employees, 36.1%** of whom were **women**. Overall, this represents a **total of 170,117 hours of training in 2015**, a rise of **107.7%** compared to the 81,898 hours provided in 2014. This increase came from **classroom or experiential learning** amounting to **169,335** hours (79,022 hours in 2014) and e-training, totalling **782** hours (**2,876** hours in 2014) (see chart 37 and table 36).
The **overall hours of training *per employee*[73] rose to 36.4 hours** (17.5 hours in 2014). Furthermore, analysing the figures by gender, the number of training hours for men totalled 36.3, those for women 36.7.

The **costs borne** for providing courses, net of the cost of planning training and equipping course locations, amounted to **1,444,649 euro** in 2015 (compared with 1,138,700 euro in 2014) (see table 36).

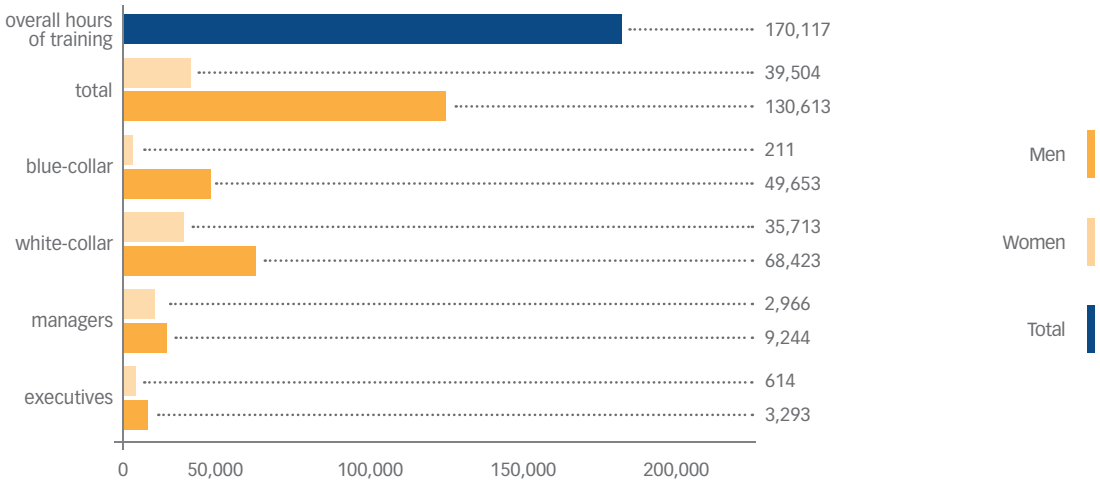
[73] The indicator was costruita s a ratio of the number of hours attended (170,117 in 2015) to the overall number of employees (4.677 in 2015).

CHART 37
TRAINING HOURS: BREAKDOWN BY TYPE OF TRAINING AND GRADE (*) (2015)



TOTAL HOURS OF TRAINING: 170,117

Advanced training	6,850	Technical-specialist	33,812
IT	32,416	Managerial	41,133
New recruits	1,047	Administrative managerial	3,959
Languages	1,164	Safety	49,734



Note: the hours of training by role for the companies SAO and A.R.I.A. are estimated.
(*) The breakdown of training hours by grade is as follows: 42 hours for executives, 33 for managers, 36 for white-collar workers and 37 for blue-collar workers.

TABLE 36
SOCIAL INDICATORS: TRAINING (2014-2015)

TRADITIONAL AND EXPERIENTIAL TRAINING COURSES AND COSTS

course type	courses (no.)		sessions (no.)		training (hours)		costs (euro)	
	2014	2015	2014	2015	2014	2015	2014	2015
Advanced training	9	8	9	16	6,738	6,696	103,672	65,274
Computer technology	41	87	96	296	4,674	32,416	8,319	21,652
New recruits (*)	6	13	7	15	252	1,047	2,080	520
Languages	4	9	8	14	1,544	1,164	8,887	10,200
Technical-specialist	172	212	317	357	19,194	33,397	163,839	226,902
Managerial	26	28	91	118	15,612	41,122	648,567	762,865
Administrative-operational (*)	14	6	46	9	1,847	3,959	11,140	21,570
Safety	171	214	434	614	29,161	49,534	180,096	321,066
total	**443**	**577**	**1,008**	**1,439**	**79,022**	**169,335**	**1,126,600**	**1,430,049**

COURSES AND COSTS OF TRAINING PROVIDED WITH PIANETACEA E-LEARNING PLATFORM

course type	courses (no.)		training (hours)		costs (euro)	
	2014	2015	2014	2015	2014	2015
Advanced training	1	1	341	154	400	2,086
Managerial	1	1	74	13	400	2,086
Safety	2	2	475	200	800	2,086
Privacy code (L.D. 196/03)	1	1	331	138	400	2,086
Code of Ethics	1	1	251	113	400	2,086
Administrative responsibility of public agencies (L.D. 231/01)	1	1	161	110	400	2,086
Unbundling	1	1	1,243	54	9,300	2,086
total	**8**	**8**	**2,876**	**782**	**12,100**	**14,600**

BREAKDOWN OF TRAINING HOURS BY GRADE AND GENDER

grade/position	2014			2015		
	men	women	total	men	women	total
executives	1,442	410	**1,852**	3,293	614	**3,907**
managers	7,478	2,671	**10,149**	9,244	2,966	**12,210**
white-collar workers	35,598	16,288	**51,886**	68,423	35,713	**104,136**
blue-collar workers	17,966	45	**18,011**	49,653	211	**49,864**
total	**62,484**	**19,414**	**81,898**	**130,613**	**39,504**	**170,117**

(*) Training provided to new recruits and administrative-operational training is usually given through teaching provided by resources within the group.

Note: for some companies the figure on trained employees is an estimate.

Collaboration with universities and high schools

Acea develops **partnerships and collaboration with universities**, takes part in study and research activities, makes itself available for **encounters between companies and students**, and enters into **agreements** for the promotion of university and high-school work experience.
In 2015 Acea collaborated with universities and higher education by meeting newly formed graduates and young students, offering individual career guidance and advice on studies completed or ongoing.
The main initiatives undertaken during the year were as follows:

- **19th edition of Luiss University Career Day, "Youngsters and work"**, an initiative to match supply and demand in the labour market, providing students with the tools they need to mesh the knowledge from their university programmes with actual opportunities in the labour market;
- **Job Meeting Rome 2015**, organised at the faculty of engineering of La Sapienza University in Rome and aimed at graduates and undergraduates from all disciplines, a chance for youngsters to come into contact with leading exponents of the worlds of work, training and career guidance. Some youngsters took part in the Acea Business Game, finding out about the innovative Acea2.0 programme;
- **HRC Academy Talent Days: Career Guidance Project,** a project geared towards youngsters aged from 19 to 26, near the end of their high school or university studies or already graduates. The project provides "workshops" for guidance and training, involving in-depth meetings with companies invited as "guests for the day". The programme promotes an inclusive professional guidance culture, transmitting the message that "all of us have hidden talents". Acea participated in the initiative through two days of guidance for the children of employees from Group companies belonging to the *HR Network Community*, a business community focusing on human resource topics.

In addition to meetings with youngsters, structured selection interviews were organised to select youngsters for work experience periods in the company, in the various process streams defined in the Acea2.0 programme.
Cooperation continued with the University of Cassino and leading industrial actors in the surrounding region in the UniClamOrienta placement project, organised to guide youngsters in their choices of future employment and allow the company to meet suitable candidates for work experience initiatives.

In 2015 Acea made a financial contribution to the **masters course in Management and corporate social responsibility** given by the Faculty of Social Sciences of St Thomas Pontifical University (Angelicum), granting two scholarships, covering the enrolment fee, and offering this opportunity to the children of employees in the Group's companies. The company also makes available **the professional expertise** of its personnel for university and postgraduate courses, also helping students to draft their final dissertations, and as part of **technical projects** conducted in the areas of energy-environment and water resources.
In greater detail, in 2015, expert **company personnel** lectured or acted as testimonials for university **masters courses** in the areas of **corporate social responsibility**, **innovation in the sphere of urban lighting**, **cyber security**, **electric mobility** and **smart grids**.
Finally, company personnel acted as lecturers for courses organised by the **Scuola Superiore Sant'Anna di Pisa** to illustrate the project regarding the introduction of **Workforce Management (WFM)**.

Group companies initiated a total of **19 apprenticeships** for **high school, university or postgraduate students,** and **13 internships**.
Corroboration of the real opportunities offered by the company to new generations may be seen by the fact that during the year **Acea took on 6 youngsters** who had previously been employed under "atypical" contracts (e.g. collaboration, project-based) as apprentices or interns.

Incentive systems and evaluation of human resources

As at 31.12.2015 the amount of the balance sheet liabilities for severance indemnities (TFR) and other defined-benefit plans amounted to 108.6 million euro, 9.4 million euro down vis-à-vis 2014. The change in absolute terms derives principally from lower risk provisions for TFR of roughly 5 million euro, and from a reduction in tariff conventions reserved for personnel, totalling 3.8 million euro.

The remuneration policy adopted by Acea in 2015 seeks to consolidate the company's decision to increasingly apply a merit-based system when assessing personnel, and consequently to seek the selectivity of remuneration measures, both fixed and variable. Many assessment systems are used, defined in line with this policy and following on from the review of management tools undertaken in previous years, and are defined in relation to company profiles.

For the **chief executive officer and top management**, made up of **executives with strategic responsibilities**, **mid- to long-term incentive systems** are used: the ***Long Term Incentive Plan*** **(LTIP)** is a long-term monetary incentive, currently for the period **2013-2015**, commensurate with gross annual pay and dependent on the achievement of set objectives – **economic and financial**, established by the Appointments and Remuneration Committee, **share value** (*Total Shareholder Return* – a measure of changing value of the Acea stock compared with a basket of comparable companies), and **quality performance**, linked to **customer satisfaction** and to the constant raising of efficiency of processes governing the supply of services.
At the **conclusion of each three-year period** a ***bonus*** may be handed out, depending on the extent to which economic, financial and profitability objectives (a measure of company performance for the three-year period) have been achieved. This choice sets out to ensure the continuity of company results, **steering management action in the mid- to long-term**, thus triggering mechanisms for the steady creation of value for shareholders.

Management by Objectives **(MBO)** is an incentive system aimed at **all executives and managers**, in order to achieve ever better results. The system entails **variable remuneration,** calculated in proportion to the extent to which **objectives and targets (individual, company and Group)**, set yearly, are achieved, also taking into account an evaluation of **behaviour** contained in the *Performance & Leadership* Model. The MBO mechanism entails, for the granting of the bonus, a system of "access gates" consisting of Group objectives. The introduction in the system of **performance objectives and relative indicators *(KPI)* linked to *customer satisfaction*** has been a relevant novelty, showing the attention paid by the company to the constant improvement of processes aimed at customers.
All working personnel qualified as **middle manager, white-collar worker and blue-collar worker** – including those working part-time, with a fixed-term, placement and apprenticeship contract – receive a **result bonus** every year: a payment, based on specific parameters, made to employees as recognition for the good results achieved by the company.
During the course of 2015 Acea, in agreement with Trade Union organisations (see also the paragraph *Industrial Relations*), overhauled the incentive system in light of the application of merit-based criteria, introducing a **new assessment system based on a greater relevance of the professional and personal contribution of the individual employee to the achievement of company goals**. The new system will be applied in full in 2016.
In Acea8cento, the Group company dealing with customer telephone services, the incentive system takes into account quality indicators deriving from surveys conducted using the *mystery calling* technique, i.e. simulation of customers' telephone calls to Acea call centers.
Finally, in 2015 Acea Energia started up a specific incentive system aimed at front-end workers, entailing a financial bonus to the five persons having the best score, each quarter, from the drafting of an evaluation card.

Some **benefits** are also provided for employees, such as extra months' pay, meal vouchers, a discount on energy rates (only for persons recruited prior to 9 July 1996), favourable rates accorded by being a member of the Staff Recreational Association (CRA), supplementary health policy, Previndai Fund for executives and supplementary pension fund - Pegaso Fund – for other human resources. Executives have further benefits, such as the use of a company car and reimbursement of fuel expenses.

In 2015 the human resources management system was extended to all employees. This entails a **process of individual assessment** (**Performance Management)** to measure **performance** – i.e. the achievement of a set of objectives – and **leadership** – the ability to guide others and act in favour of change, respecting the reference system of values.
The process has the following aims:

- to create a culture increasingly based on merit, value and the involvement of persons working in the Group;
- to raise awareness of each person's role and contribution;
- to raise the motivation, drive and recognition of persons;
- to bring persons into line with corporate values, involving them in the targets set and results achieved.

To ensure its correct implementation, in 2015 special initiatives and tools were prepared, such as **guides for assessors and assessed**, **training sessions** aimed at employees to share objectives and procedures for the Group's set of values, a specific **communication and information campaign** and the **information system**, in support of the process, made available to assessor for the setting and monitoring of objectives, management of resulting activities and final reports.

THE HUMAN RESOURCES ASSESSMENT PROCESS

The **evaluation process** begins with the **manager and collaborator discussing what it is expected from the individual** during the year. This is a key moment in understanding and agreeing on the aims and benefits of the process and providing the person with a clear vision of the professional areas and values that he will be assessed on. During the year **the assessor and assessed will meet to monitor the progress being made with assigned activities and/or, if necessary, to alter activities being performed** (e.g. the person may have changed job, rendering assigned duties no longer coherent with the new position). **At the end of the year**, the assessor will take the elements gathered and express an **assessment** on the overall contribution made by the collaborator (ordinary work duties, "transversal" and methodological skills and compliance with the Group's set of values), which represents the **employee's level of adequacy in relation to the role covered during the year**. Upon completion of the evaluation process there will be a **feedback meeting**: a key moment when the assessor gives to the collaborator the results of the assessment, and has an open and transparent discussion of the **goals that have been achieved, any criticalities and possible improvement actions that can be taken**. The assessment represents a starting point for possible paths for professional development and growth and defining adequate training plans. To reinforce and give tangibility to the recognition of merit, **the individual assessment** is also important for the innovative **result bonus** system, acting as a **multiplier or de-multiplier for the financial bonus**.

Acea has also launched initiatives to **enhance and develop talent** present in the Group. One action is the ***Walk In Progress* project,** aimed at young employees in Group companies who, based on their aspirations, attitude to change, experience and performance may over time take on added responsibilities. The project has involved a group of 40 young white-collar workers. The first phase of the development path was participation in the **masters course on Multiutility General Management**, given by lecturers from the Scuola Superiore Sant'Anna of Pisa, concluding with the presentation of *project work* focusing on activities in which the Group is involved.
As part of this project, **internal study tours have been started up, called *"In the shoes of..."*** through which participants were able to acquire concrete experience in the various companies of the Group, a greater knowledge about Group businesses and a broader vision of activities performed. Upon the conclusion of this experience, participants compiled a *follow-up* document describing the activity performed, skills acquired, any weaknesses detected and possible solutions.
At the end of the year **external study tours** were also started, in excellent national and international companies, with the aim of encouraging dialogue and the sharing of experiences and strategic skills.

Internal communication

In Acea internal communication helps to develop among human resources a **knowledge of the Group and its objectives**, spread the **corporate culture**, promote and maintain a **good climate inside the Group** and develop among human resources a **sense of belonging to the company** and **closeness to its principles and values**.

ACEA 2.0

In 2015 the main objective of the **Internal Communication Unit** was to **promote cultural change**, key to fully implementing the **Acea2.0 programme**, and to support the initiative called ***The Great Opportunity*** was undertaken, designed to seek the direct support and engagement of human resources in the company's transformation process. At the same time, numerous information campaigns were aimed at human resources in Group companies (see also the paragraph *The Acea2.0 programme* in *Corporate Identity*).
The company has devoted specific space to the Acea2.0 programme and to *The Great Opportunity* on its **intranet and website**, and organised **events and initiatives** involving thousands of employees, some of whom engaged in projects to improve company processes. Initiatives have also been undertaken to support training for the launch of Work Force Management (WFM).
Communications aimed at **employees** are primarily conveyed via the company's **intranet**, a portal that **serves up daily news and communiqués** relevant to employees, using pop-ups and teasers to highlight the most important news, and also via **email**.
This year, to raise the effectiveness and impact of communications, more use has been made of videos, some of which seeing employees as protagonists.
Through the intranet it is possible to:

- obtain **basic information about Group companies and personnel**;
- access the internal telephone agenda;
- consult official documents (financial statements, *Code of Ethics*, policies, etc.);
- view company procedures and rules;
- access the organisational provisions of all Group companies;
- read the daily press review and press releases;
- download and view videos and photo galleries (teasers) regarding company events.

The intranet site also has numerous **in-depth sections** on Safety, Management Systems, Training, Computer technology, Reference Legislation (e.g. L.D. 231/01), Mobility Management, and so on.
In 2015 sections were added to the portal: **Diversity** and ***Com.***: the former, designed to promote and spread the culture of diversity in the company, offers the possibility of consulting the *Diversity Management Charter*, the composition of the Diversity Committee, finding out about events and initiatives promoted at Acea on this topic, gaining access to documents and clicking on relevant links, the latter brings together the main internal communication campaigns undertaken by the Group, and offer the possibility for users to download videos, photos and pop-ups.
During the course of the year **new contents** were added to the **Privacy section** to provide in-depth knowledge of the impact of evolving company changes in terms of the protection of personal data.
Initiatives in favour of **environmental protection** and to promote **solidarity aimed at employees and carried out with their direct involvement include**: **ACEA-AMA (LOVES) THE DIFFERENCES,** a personnel awareness campaign regarding separated waste collection, with the organisation of two days of cleaning up rubbish in areas surrounding the company's offices in piazzale Ostiense and via dell'Arte on the part of some employees, assisted by AMA workers; **DESIGN YOUR ISLAND**, an internal competition

rewarding the best project to embellish and improve waste recycling and collection points present on different floors of the central offices, and ***The more vouchers you give, the more you help***, an initiative conducted through the Lazio Onlus food bank, enabling employees to offer meal vouchers to people in need, with the help of charities operating in the Ostiense district.

DIVERSITY AND EQUAL OPPORTUNITIES

REFERENCE BOUNDARY

The information and data presented in the paragraph *Diversity and Equal Opportunities* relate to: Acea SpA, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Reti e Servizi Energetici, Acea Energia, Acea Produzione, Acea8cento, Acea Ato 2, Acea Ato 5, Acea Elabori, Acea Gori Servizi, Crea Gestioni, Gesesa, Lunigiana, Solemme, A.R.I.A, SAO, Aquaser, Kyklos, Innovazione Sostenibilità Ambientale (ISA), S.A.MA.CE. (merged with Solemme in July) and Ecogena.

Acea, in compliance with law provisions[74], includes and integrates in the company **personnel belonging to protected categories** (disabled persons, orphans etc.), providing, thanks in part to the activity of the National Association for Disabled and Invalid Civilians (ANMIC), support services, assistance and equipment, in order to facilitate the performance of their work duties. Personnel belonging to protected categories numbered **242 employees** at **31/12/2015** (153 men and 89 women).

There is an **Equal Opportunities Commission (CPO)** in the company, and *Rules to safeguard the dignity of men and women*. In 2015 a **Diversity Committee** was set up, in compliance with principles laid down in the *Code of Ethics* and with the contents of the ***Diversity Management Charter***, approved in 2014 by the Board of Directors (see box on this subject).

THE DIVERSITY COMMITTEE

When the Diversity Committee was set up, Acea initiated a **campaign to make human resources aware and involved** on the question of managing and enhancing diversity in the company, with the collection of specific proposals and projects, and self-candidatures from employees interested in being on the Committee.
The Diversity Committee is chaired by the **Chairman** of Acea SpA and is made up of **8 employees** representing the various parts of the Group. It will be possible to bring in further professional experience from the company for specific projects.
During the course of the year the Committee worked to make the company's organisational system aware of the numerous issues pertaining to diversity, and to the question of the *empowerment* of women. Working groups were created for specific aspects (monitoring of the dimension of diversity, preparation of projects proposed by employees in the initiative, etc.), and a feasibility programme was drawn up regarding policies, projects and actions designed to create a more inclusive work environment, increase wellbeing in the company and improve the work-life balance.

Acea has also promoted and supported numerous initiatives of social relevance.
In greater detail, to combat gender violence, it supported the **International Day of zero tolerance for Female Genital Mutilation,** expressed its **solidarity to the girl from Fortezza da Basso in Florence** following the acquittal of six youths convicted in the court of first instance for sexual violence and, on the eve of the International Day for the eradication of violence against women, organised by the UN, **organised the 2nd edition of the event *Never Again***, with which it **sought to continue making a contribution to combat all forms of discrimination, inequality and abuse**. In this second edition the results of the law against gender violence (Law 119 of 15 October 2013) were illustrated, providing figures on women murders and acts of persecution, in particular episodes of stalking reported without success.
Acea also took part in the parade "It's Human Pride - Roma Pride 2015" to demonstrate its position against all forms of prejudice, violence and discrimination and in favour of the rights of the LGBT community (Lesbians, Gays, Bisexuals and Transgenders).
Acea also supports **scientific research, with public awareness initiatives**, such as the pink lighting of the Colosseum and Headquarters of the Lazio Region on the occasion of cancer prevention campaigns in favour of women.
During the **humanitarian emergency** happening in June in the Capital, Acea cooperated with the Italian Red Cross and with local authorities, working to improve the hygienic and sanitary conditions of refugees and providing basic provisions to more than eight hundred immigrants camping out close to Tiburtina Station.
The company took part in institutional events **centring on gender issues**, such as the closing initiatives of the **European project Women Mean Business and Economic Growth – Promoting Gender Balance on Company Boards,** promoted by the Department for Equal Opportunities of the Prime Minister's Office in partnership with Università Commerciale Luigi Bocconi of Milan, in which Acea's Chief Executive Officer and a woman member of Acea's Board of Directors took part as speakers, and the workshop **Utilities: the pink quota remains – Presentation of the**

[74] Law 68/99.

Third Research on Women Managers in Public Utilities, during the course of which Acea's Chairman spoke about the question of women managers in the public utilities sector.

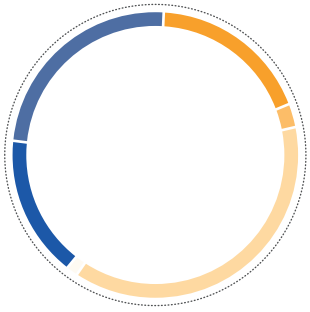
COMMUNITY LIFE IN ACEA

REFERENCE BOUNDARY

The information and data presented in the paragraph *Community life in Acea* relate to: Acea SpA, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Reti e Servizi Energetici, Acea Ato 2, Acea Ato 5, Acea Elabori, Acea8cento, Acea Energia and Acea Produzione.

The Staff Recreational Association (CRA), Gold Medal Association, National Association for Disabled and Invalid Civilians (ANMIC), and the Italian Christian Workers Association (ACLI) are the main organisations that perform social activities within the company, directly involving employees.
In 2015, there were **4,617** members of the **Staff recreational association**, including executives.
The CRA continues to manage the company's **day care service**, open to the children of employees and to residents in District I. In **2015 it cared for 42 infants** in the first half of the year and **36** in the second.
The Staff Recreational Association **proposes quality cultural, sporting, tourism, social well-being, economic and commercial initiatives** at modest prices for the purpose of offering leisure time benefits to members, without losing sight of social utility activities. One of the important tools for employee solidarity is the **Aid Fund,** an initiative in support of the families of employees that have died, retired, or may still be in service. Every employee can join through simple submission of a form to the Human Resources and Organisation Division or CRA. Members thus authorise a small pay-envelope deduction in order to contribute to the Fund.
The Staff Recreational Association is also responsible for agreements with institutions offering further services to employees, such as **healthcare, dentistry and legal advice services,** as well as commercial agreements, including the sale of tickets for sporting, theatre and music events, available online (www.cra-acea.it).
In 2015 CRA supported **social solidarity initiatives** in cooperation with the Community of Sant'Egidio, such as the offer of **meals to the homeless** during Easter and Christmas celebrations. Financial donations were also made to the Voluntary Association Gabriele Viti and non-profit Association Orchestra per la Vita, engaged in socially useful activities as well as medical research.

CHART 38
MEMBERS' USE OF CRA SERVICES (2015)



Members using tourism services	703	Members paying instalments on purchases	58
Children of members attending summer camps	125	Medical insurance reimbursements	909
Members enrolled in insurance schemes	1,731	Members benefiting from "Epiphany" gifts	740

The Acea branch of the Italian Christian Workers Association (ACLI) supports employees through initiatives such as regular visits by a Chaplain, whom employees can talk to, and the organisation of special events and encounters for parents and families. The Association also offers assistance in planning mortgages and loans, and financial support for children of personnel attending middle and high schools, as well as self-defence classes for women.

SHAREHOLDERS AND INVESTORS

Being a listed company, Acea pursues a strategy of relations with analysts and shareholders, both current and potential, coordinated through the **Investor Relations Division**, which coordinates relations with the various parties of the financial community, ensuring the provision of **timely, complete and transparent information,** and the **Legal and Corporate Affairs** Division**,** which manages flows of information between the company and the competent Supervisory Authorities (Consob and Borsa Italiana), as well as the fulfilment of corporate obligations for listed companies.

ECONOMIC FLOW TOWARDS SHAREHOLDERS AND INVESTORS

Shareholders received, partly as profit for 2015, **106.5 million euro in dividends** (vis-à-vis 95.8 million euro in 2014), corresponding to 50 euro cents per share, with a ***payout* of 59%** on the net profit. Profits accruing to third parties totalled 6.5 million euro.

At the close of the last trading session of 2015, the value of Acea shares was 14.20 euros (capitalisation 3,024.1 million euros), about 59% up on the previous year.

TABLE 37
ACEA SHARE VERSUS SHARE INDEX PERFORMANCE (2015)

	% change 31.12.15 (vis-à-vis 31.12.14)
Acea	**+58.8%**
FTSE Italia All Share	+15.4%
FTSE Mib	+12.7%
FTSE Italia Mid Cap	+38.2%

Investor stakeholders were allocated **111.3 million euro** (129.4 million euro in 2014). There were falls in short and mid-/long-term interests, affected by the early repayment of some loans and by market rate trends. The global "all in" average cost of Acea Group debt, at 31/12/2015 was 3.29%.

In 2015 too Acea was granted by the **European Investment Bank** (EIB), whose mission is to support at an economic level the sustainable development of member States, a 200 million euro loan for the realisation of a part of the infrastructures planned for in the **2015-2019 business plan**. This loan will be used to **upgrade the technologies of the power distribution network of Rome to make it a *smart city*** – through the development and replacement of HV/MV/LV lines, installation of new digital electricity meters and realisation and modernisation of new primary substations – and implementation of **Acea2.0** steps in the Networks business segment. This agreement between Acea and EIB was signed following detailed technical studies conducted by the European bank, which acknowledged the complete matching of plans for infrastructural improvements with the principles of social and environmental sustainability.

AGENCY RATINGS

A **rating** is a summary opinion on the credit worthiness of a party based on its ability to reimburse principal and interest within established deadlines. In its interactions with the financial markets, Acea voluntarily submits to independent assessments made by the leading international rating agencies.

TABLE 38
2015 RATINGS

agency	long term rating	short term rating	outlook
S&P's	BBB-	A-3	stable
Moody's	Baa2		stable
Fitch	BBB+		stable

Standard & Poor's kept the **overall opinion** of Acea for 2015 at **stable**. In its end-of-year media release the agency raised the company's liquidity profile from *adequate* to *strong* in view of the modest need to refinance operations over the next 24 months and the neutrality of projected cashflows after the payment of investments and dividends.
Moody's confirmed the rating of the previous year, indicating that the composition of Acea's activities show low risk profiles, thanks in part to the 80% EBITDA guaranteed under business regulations, with low exposure to price and volume risks. The agency also commented favourably on the development of adjustments in the integrated water system, which will allow stable group flows in the mid- to long-term.
Fitch confirmed Acea's rating and stressed that the development plan, concentrating on the digitalisation of activities, may reach 2019 targets thanks in part to the efficiency of operating costs.

FINANCIAL DISCLOSURE

During the course of 2015 **over 140 studies/notes on the Acea stock** were published. The Investor Relations Division held **around 170 meetings** with Italian and international equity investors, buy-side analysts, credit investors and analysts, Italian and international investors, as well as holding conference calls with the market at the moments of presenting the annual and intermediate results and the 2015-2019 Business Plan, and following the publication by AEEGSI of the Water Tariff Method for the regulatory period 2016-2019.
Economic-financial communications (price sensitive, credit ratings, share trends, highlights, etc.) regarding Acea were constantly updated in the Shareholders section of the company's **website**, by means of documents, information and presentations.
In the ***Webranking by comprend 2015-2016*** research, currently the most respected analysis on the quality and innovation of online corporate and financial communications of the main listed companies, Acea came in 52nd (55th in 2014) out of the 70 firms examined, with a score of 28.6/100 (23/100 in 2014).

SUSTAINABLE AND RESPONSIBLE FINANCE

Trends for sustainable and responsible investments

The 2015 edition of *Green, social and ethical funds in Europe*[75], edited by Vigeo, shows the **evolution of ethical retail funds in Europe** between June 2014 and June 2015. The figures not only confirm the signs of a recovery, begun in 2013, but also show a **marked growth in the number of active funds** and a rise in the **value of managed assets**.
In June 2015 there were **1,204 active SRI funds**, domiciled in Europe and destined for the broad market, **about 26%** up on the 957 active funds in the same period of 2014, when the recovery had been in the order of 4%. The biggest growth was posted in the Netherlands, going from 51 to 106 funds, and in France, where forms of responsible investment are common, going from 263 funds last time to 396. 58% of funds are cumulatively domiciled in France, Belgium and the Netherlands. The **value of assets managed has risen**, albeit more slowly than in the past, **by 7%**, rising to **approximately 136 billion euro, compared with 127 billion euro in 2014**.

ESG analysts evaluate Acea

Acea maintains a continuous strategy of cultivating relations with the ESG (Environmental, Social and Governance) sphere. In 2015 the company observed its position in analysts' assessments, ratings and benchmarks, as illustrated below.

The Acea stock was present in the **FTSE ECPI Italy SRI Benchmark index** until September 2015, when said index was closed. The index included the top 100 companies listed on MTA seen as having **notable ESG characteristics**, meaning a rating of at least *E+* (F/EEE scale).

According to **Kempen Capital Management,** which has monitored the Group since 2005, Acea continues to demonstrate commitment to corporate social responsibility, which justifies its inclusion in the *Sustainable Investment Universe* also in 2015.

In 2015 **Oekom Research** carried out a **complete update of the Acea ESG profile**. Following objections raised against Acea by AGCM at the end of the year, regarding some unfair business practices in the electricity sector, against which Acea has lodged an appeal, the agency lowered its rating to C+ (from last year's B-).

The **Carbon Disclosure Project** (CDP), an international organisation supported by over 800 investors, whose mission is to promote the transparent disclosure of data on the question of managing climate change by the world's biggest corporations, publishes each year a ranking of Italian companies working to achieve this goal. Acea has always participated in this survey, and in 2015 too posted notable performances (for details see the section *Environmental issues*, paragraph *Reduction of carbon dioxide emissions*.

Acea has also been chosen for inclusion in the *Ethibel Excellence investment register* since January 2015. The analyst states that: "this selection on the part of the Ethibel Forum indicates that the company is an above-average operator in its sector in terms of corporate social responsibility".

There were also other opportunities for encounters and interaction between Acea and operators in sustainable and responsible financing, stimulated by requests for deeper studies, and for support in development of benchmarks, ratings and investment evaluations, in particular from **Symphonia SGR** and **Vigeo**.

[75] The report *Green, social and ethical funds in Europe, 2015 Review*, presents an analysis of the trends of socially responsible retail funds (SRI) that use ethical, social and environmental selection criteria, operating at 30 June 2015 and domiciled in Europe. The scope includes: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Lithuania, Norway, Netherlands, Poland, United Kingdom, Slovenia, Spain, Sweden, Switzerland.

THE DECARBONISATION OF INVESTMENTS: THE CHOICE OF THE NORWEGIAN SOVEREIGN FUND

The question of climate change is increasingly being assessed due to the environmental and social impacts it has and to economic and financial consequences. The financial world is thus reflecting on investment policies adopted and on the allocation of financial portfolios. According to observers, if market leaders decide to move away from carbon, at the same time as a great shift in public opinion and the favourable evolution of national and international legislation, they will have the strength to make significant changes to global economic systems. An example, which echoed high and wide in the world of sustainability, happened on the evening of 27 May 2015. On that day, the Finance and Economic Affairs standing committee of the Norwegian Parliament made a decision that required the country's Sovereign Fund – one of the largest on the Planet, with assets invested in excess of 800 billion dollars according to the latest estimates – to **divest from companies generating over 30% of the their output or revenues from activities involving coal mines or coal-powered power stations**, or from mining companies or Utilities. It is estimated that equity interests of at least 4.5 billion dollars will be sold. Norges Bank Investment Management, which manages the Sovereign Fund, is a major shareholder of many Italian enterprises, including Acea, having at 31/12/2015 a relative shareholding in accordance with the Finance Consolidated Law. **In view of the new selection requirements for the Fund, Acea is not at risk of divestiture**.

PEGASO FUND'S ENGAGEMENT TO BANKS ON THE ISSUE OF CLIMATE CHANGE

Since 2014 the Pegaso Fund, a pension fund for the workers of public utility companies (energy-water-environment), is the second pension fund to have **undersigned the UN's PRI (Principles of Responsible Investment)**.
In 2015, together with 14 other pension funds, Pegaso undertook a **first engagement initiative, sending a request for sundry information to the world's 40 largest banks**, to understand their attitude to the question of climate change, such as: participation in sectoral initiatives regarding the issue; quantifying CO_2 emissions of their client portfolio; integrating *climate change* in the *risk management* process; offering products and services that reduce impact on the climate (e.g. energy transition loans); reporting to stakeholders and managing the direct impacts of *climate change*.
Replies were received from 23 of the 40 banks approached. The analysis of replies showed up a growing awareness of the issue. There remains room for improvement as regards communication of their exposure to sectors having the greatest impact on climate and measures adopted to reduce or curb such exposure. Something is however afoot: recent press reports suggest that banks such as Crédit Agricole, Bank of America, ING, BNP Paribas and Société Générale have announced divestments, some radical, in the coal industry. Pegaso, together with other funds, has recently sent a second letter to Italian banks Intesa Sanpaolo and Unicredit, asking them what measures they have taken to reduce their exposure in relations with the coal industry.
Initiatives such as this, which are growing in number and as regards the relevance of the promoters, **will cause entire economic and industrial sectors to reflect on the new opportunities and on risks emerging from the consideration of ESG elements in their operational and financial management**.

Source: drafted in collaboration with Andrea Mariani, CEO of Fondo Pegaso.

INSTITUTIONS AND THE COMPANY

APPROXIMATELY **64 million** EURO IN INNOVATION INITIATIVES AND **20** ONGOING **research project**

29 memberships OF RESEARCH CENTRES, STANDARDISATION BODIES AND INDUSTRY ASSOCIATIONS

APPROXIMATELY **429 million** EURO OF INVESTMENTS IN THE YEAR (+36.4% COMPARED TO 2014)

THE **Acea2.0** PROGRAMME AND INNOVATION OF INFORMATION SYSTEMS IN SUPPORT OF COMPANY PROCESSES

ACEA IS A PARTNER IN THE **RoMA project** FOR THE CREATION OF A RESILIENT METROPOLITAN SYSTEM IN THE CAPITAL

Acea interacts with the institutional and economic stakeholders across the areas in which it operates, adopting an engaging-oriented approach fostering a common dialogue for the purpose of creating benefits to be shared by all the parties involved, primarily for local communities and areas.

RELATIONS WITH INSTITUTIONS

Relations between Acea and government institutions concern both the economic dimension (duties and taxes) and the social dimension (dealings with local institutions and sectorial Authorities; dialogue with Consumer Associations and other representatives of the general public; professional and institutional cooperation). Acea conducts these affairs on a basis consistent with current legislation and the Group's *Code of Ethics*.

Taxes paid to **public administrations** in 2015 totalled **114.8 million euro** (120.9 million euro in 2014). The applicable tax rate was 38.7% (41.7% last year).
Acea regularly pays in contributions and membership fees to public and private bodies, such as chambers of commerce, independent administrative bodies, industry associations and representative organisations. In 2015 the overall amount of this item was approximately 2.2 million euro, down on the 3 million euro circa for the previous year. In greater detail, about 1.5 million euro was paid to regulatory authorities (AEEGSI, AGCM, Consob and other public service authorities), 52,000 euro as mandatory charges to chambers of commerce and 640,000 euro as contributions to confederate bodies and sundry membership fees (Federutility, Confservizi, Unione Industriali).

The **institutions** are a preferential partner in realising actions and **initiatives that produce positive outcomes for the regional social and economic fabric and the local quality of life**. Such relationships are further stressed by the essential nature of the Group's services and their significant impacts on the community (see *Customers and the Community*, *Human resources* and *Environmental issues*).

Acea interacts with the various institutional parties in observance of the principles and regulations stated in the Group's ***Code of Ethics***, which in **Article 19** defines the parameters of relations with government institutions, political parties and trade unions, establishing that:
«*Acea shall not contribute in any manner to the financing of parties, movements, committees and other political or labour organisations, even if an association or foundation essential to same, or their representatives or candidates.*
The relations between the company and political and trade union organisations, as regards issues of interest to the company, are based on mutual respect and cooperation.
Every relationship must be authorised by the competent structures, paying particular attention to avoid situations in which there may be conflicts of interest between Acea and the figure authorised to establish relations with the political or trade union organisation.
In any event, Acea shall abstain from conduct designed to exert pressure, either directly or indirectly, on political and trade union figures in order to obtain advantages».

Acea has defined a detailed organisational model for the proper management of its relations with the institutions, including indications of appointments and precise responsibilities of the various corporate divisions. In accordance with this model, **Acea SpA's Chairman** ensures the **legal representation** and the **definition of the institutional strategies**. The **Institutional Affairs Division** ensures the overall representation of the Group positions with the local, national and European bodies and institutions, monitors the developments in the legislative scenario pertinent to corporate businesses and coordinates, within the sphere of dealings with the Consumer Associations, the activities correlated to joint conciliation procedures. The **Legal and Corporate Affairs Division** provides its assistance for all legal issues cropping up during Acea SpA business activities and for the functioning of the Group. It also performs prevention actions by encouraging the creation and spread of a corporate culture that abides by relevant legislation and policies related to Group activities, and sees to communications and notifications

for the **Supervisory authorities** on companies and the stock market (Borsa and Consob). The **Regulatory Division** oversees dealings with the **Regulatory Authorities** in the reference sectors, representing the positions of the Group companies in the participative procedures for the formation of the regulations launched by authorities, bodies and institutions, and acts as coordinator and steering body for the implementation of Authority decisions in order to minimise exposure to regulatory risk.

Operating companies in the Group, working in concert with the parent company, manage the **"technical-specialist" aspects** of the water, electricity, public lighting and environmental services, in part through **consultations** with the various administrative, regulatory and control bodies.

REGULATORY AUTHORITIES AND ACEA: PRELIMINARY INVESTIGATIONS, AWARDS AND SANCTIONS

The **Italian Regulatory Authority for Electricity Gas and Water (AEEGSI)** establishes mechanisms of bonuses and penalties for companies operating in the electricity distribution for the duration of their monopoly licences, with the aim of improving their performance. The Authority sets yearly standards concerning the number of interruptions in service and their duration, as a basis for evaluation. In 2015, with reference to management performance in the previous year, AEEGSI awarded **Acea Distribuzione** a bonus of approximately 176,900 euro for improved service continuity for LV power users (from which about 122,600 euro was deducted for penalties accrued in the previous two years). Acea was also awarded 137,800 euro in bonuses for the reduction in the number of service interruptions for MV users. With regard to the continuity of the electricity service in 2014, Acea Distribuzione paid out about 1.1 million euros as **indemnity** to customers and **penalties** imposed by the Electrical Sector Equalization Fund with reference to prolonged interruptions, and about 140,000 euros for not meeting the standards set for HV users.

In November 2015 AEEGSI gave a positive opinion to the proposed commitments submitted by **Acea Distribuzione** regarding the proceeding initiated in 2013, regarding the investigation into some violations of procedure for the aggregation of measures, serving to regulate physical and economic items of the dispatching service (Resolution 300/2013/S/EEL).

With Resolution 111/2015/S/EEL, AEEGSI opened a proceeding against **Acea Energia** to investigate possible violations of the Integrated Quality of Sales Service text, in particular non-compliance with the terms for the granting of indemnities to applicant customers. The company submitted a letter of commitment deemed to be useful for better satisfying consumers' interests. These commitments were approved by the Authority, accordingly no sanctions were inflicted.

In February 2015 the **Antitrust Authority** (AGCM) initiated a preliminary proceeding (PS/9815) against **Acea Energia**, for possible breaches of the Consumer Code regarding the activation of non-request energy supplies and presence of obstacles regarding the right of withdrawal. The proceeding concluded with the inflicting of a penalty of 600,000 euro, against which Acea Energia has lodged an appeal with the TAR of Lazio. Another proceeding has been initiated against the same company (PS9354), and is ongoing, for possible breaches of the Consumer Code, through default notices, attempts at recovering debts and suspension of the energy supply.

AGCM has opened a proceeding against **Acea Ato 2** (PS9916) to investigate possible improper conduct in the following service phases: entry in a user subscription already open with overdue payments; reading of consumption and billing; detection of hidden losses; procedures and time frames for managing complaints and reimbursements. The final decision has not yet been notified.

Finally, **ANAC** began investigations in April 2015 regarding the assignment of the maintenance and repairs framework agreement for networks and water and sewerage plants in the ATO 2 Lazio territory.

In the sphere of **public lighting** the service performed in the Municipality of Rome was basically in line with that recorded in the previous year. The percentage of faults repaired beyond the maximum time limits established by the contract went from 1.2% in 2014 to 0.4% in 2015. By virtue of this result Acea was handed a total penalty of 19,900 euro, down on 2014 (29,300 euro), for the reduction of days on which repairs were delayed.

With regard to litigations or penalties over **environmental matters,** involving the relevant public authorities (Arpa, Forestry Corps, etc.) see the *Environmental issues* and *Environmental accounts*.

Cooperation to safeguard the common heritage

Acea works in concert with competent national institutions and research institutes undertaking **social, environmental and safety-related initiatives and projects, safeguarding the common heritage**.

With reference to **environmental protection**, in 2015 **Acea Ato 2** set up a **multi-institutional committee** with a view to cooperating in an organised and responsible manner with institutions engaged in various ways in the handling of ATO2 drinking water sources. One of the questions raised was the updating of mapping of the various threats detected in protected territories: unlawful disposal sites, productive activities, private wells, unlawful construction, etc. The initiative is the first phase of the process of implementing a *"Water Safety Plan"*, in keeping with European Directive 1787/2015, which redefines the way drinking water is controlled, turning it into a global system for managing risk in the entire water cycle, from collection to the final user.

With regard to **security** and the **prevention and management of emergencies**, Acea has participated in expert **Workgroups** for years, offering its particular skills. In 2015, Acea continued its contributions to the **Inter-Departmental Civil Defence Technical Commission (C.I.T.D.C – Ministry of the Interior**), for the identification and protection of **critical infrastructures**.

Acea, together with other member companies and institutions - including prestigious French and German Universities and the University of Rome Centre for Cyber-Intelligence and Information Security Research (CIS) of the University of Rome *La Sapienza* - has **developed** the **Panoptesec** collaborative project (FP7), financed by the EU, aimed at **increasing the level of surveillance against cyber-risks** and speeding up reaction times to critical situations. In greater detail, a prototype of the system that will be applied for the **protection of critical infrastructures, networks and sensitive data** and more efficient management of emergency situations was presented to the EU Auditors' Commission.

In **alarm situations,** Acea guarantees support to the competent Authorities for matters of public health, defence, civil protection and public security.

In 2015, as part of the EU's HORIZON 2020 platform, Acea submitted two projects: the first, called ***Ranger***, is aimed at creating secure communication systems from data management and control centres to smart meters, the second, called ***Griffin***, is designed to improve the reaction of critical

infrastructures to crisis situations.
With the objective of ensuring **maximum levels of security in the provision of company services,** Acea avails itself of operating instruments that permit rapid restoration of normal network and equipment functions in case of critical events (system breakdowns, severe weather conditions, etc.). In addition, each operating company maintains its own **Emergency response and intervention plans,** and through the relative **control centres, constantly monitors the state of networks and plants –** water, sewerage, electricity and public lighting – in cooperation with **Roma Capitale, national and other local Civil Protection Services**.
Acea Distribuzione has an **Emergency management plan** to deal with potential breakdowns and widespread failure in the network. It defines: the different states of activation (ordinary, alert, alarm and emergency), according to operational and environmental conditions, sets out **procedures** for activation and termination of these states, the **units involved** and their respective roles, the **material resources** necessary for the operational maintenance and recovery of systems and equipment, identifies the Emergency Management Chief and defines the specific resources to be dedicated to Security operations in the different cases foreseen. **Detailed Operational Plans** provide precise indications of methods for managing different types of exceptional situations (floods, fire, breakdown in remote-controlled systems, failures in power and supply systems for major utilities, etc.) with accompanying indications of management procedures, and necessary materials, equipment and resources. Operational documents indicate for example procedures to **restore the electrical system in the case of a blackout** of the National Transmission Grid (RTN), and procedures for **restoring power to strategic consumers** (e.g. houses of parliament, government offices, Vatican State, etc.). The Master Plan and detailed Operational Plans are available on the company intranet, **updated on a yearly basis** and accessible only via authorised personal passwords. Acea also tests the effectiveness of emergency response procedures and infrastructure through practice exercises: in October 2015 tests were again carried out to check the functionality of the backup system for the Central Control System of the power distribution network.
The **Emergency management plan drawn up by Acea Ato 2** takes a predefined and structured look at possible anomalous conditions that threaten the continuity and quality of the integrated water service and, according to the classification of emergency levels, describes the **preventive and corrective measures** needed to deal with different emergency types: damage to networks, pollution, water crisis, snow and sewerage and water purification service emergencies.
During the course of the year **Acea Ato 5** also drew up and adopted an **Emergency management plan,** taking into consideration possible anomalies regarding the supply of the service, with emergency scenarios envisaged (natural disasters, damage to supply sources, delivery and distribution infrastructures, water pollution, etc.) and a description for each scenario of **preventive and corrective measures**.

Some local development projects

The **partnership between Acea and local public administrations** sets out to undertake **innovative initiatives for local development** and to promote a model of growth based on the sustainable use of water and energy resources (see also the chapters *Customers and the community* and *Environmental issues*).
In 2015, Acea, in agreement with the Mayors of municipalities in the ATO 2 area and the Department for the Development of the Outskirts of the Municipality of Rome, installed **24 Water Houses** in the city and Province of Rome: these are technologically advanced water fountains offering free, cold "natural" or "sparkling" water to citizens and tourists (see chapter *Customers,* paragraph *The quality of supplied water*).
In the same year Acea Distribuzione, engaged in the development of **electric-based transport** in Rome, continued to work on the memorandum of understanding with Roma Capitale and Enel, in particular continuing procedures in order to obtain the permits needed to install 88 electric vehicle recharging stations in the Rome area.
Worthy of special mention is **Project RoMa (*Resilience enhancement of Metropolitan Area*)**, jointly funded by the Ministry of Education as part of actions in support of *Smart Cities and Communities*, intended to develop integrated technological systems to raise the resilience of large metropolitan systems. In 2015 Acea Distribuzione and Acea Ato 2, together with Universities, Research Institutes and enterprises working in the sphere of infrastructure management, including technologies and plants, made their contribution to the strategy of urban resilience in the Capital (see in-depth box).

THE RoMA (RESILIENCE ENHANCEMENT OF METROPOLITAN AREA) PROJECT

Over the next two years, the RoMA Project, aims to create **technological tools and advanced service models for increasing the resilience of the capital's metropolitan area,** by researching and testing **new forms of interaction between citizens and the public administration**.
Thanks to the development of resilience it will be possible to forecast how adverse events (natural events or manmade events) will pan out, generating crisis scenarios in order to analyse possible responses, interact with all actors involved in the management of resources (energy, technologies and services), and use in an effective manner collaborative instruments linking citizens with the Public Administration capable of supporting adaptive processes and managing critical situations.
A **Secure Rome Integrated System (SIRS)** will be defined, and a **Metropolitan Area Service Centre (CSAM) will be created** with a view to providing high quality services and managing numerous areas efficiently, such as the safety of citizens and infrastructures, use of essential services (mobility, health, etc.) and protection of the territory.
During the course of the year, Acea Distribuzione, project leader, defined and standardised a new type of secondary substation, called **cabina smart 2.0,** which seeks to simplify and re-engineer such substations and introduce latest-generation equipment, with standard communication protocols and non-customised functions, paving the way for *data mining* and algorithms useful for planning and analysing the criticalities of the electricity infrastructure.
Towards the end of the year Acea Ato 2 too became involved in the project in view of the relevance of the infrastructure and technologies of integrated water systems for the strategy of urban resilience.

Acea develops synergies with **enterprises** that are complementary or similar to its managed businesses, in the form of **cooperation** and **partnerships,** in order to make a proactive contribution to the evolution of the sectors it is operating in. In 2015 a new agreement was entered into with Telecom, Fastweb and Vodafone to extend and strengthen in the capital **ultra-broadband fibre-optic Internet connections;** works were carried out to power 4,582 street-level cabinets (see also the chapter *Customers and the community, Quality in the Energy area*).

The reference context

Acea works with **Research centres, Standardisation institutes and sector Associations,** promoting or making a contribution to specific study activities in the business areas it operates in.

2015 MEMBERSHIP OF RESEARCH CENTRES, STANDARDISATION BODIES AND INDUSTRY ASSOCIATIONS

In 2015 Acea renewed membership of or joined numerous organisations, including:

- National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA);
- AGICI - Business Finance;
- Accademia dei Lincei Friends Association;
- Luiss Friends Association;
- Italian Lighting Association (AIDI);
- Italian Association of Critical Infrastructure experts (AIIC);
- Italian Electrical Technology and Electronics Association (AEI);
- European Association of Electricity Distribution Companies;
- Italian Water Technologies Association (AII);
- National Association of Electronics Suppliers (Assodel);
- CIRED (Congrès International des Réseaux Eletricques de Distribution);
- Italian Electrical Technology Committee (CEI);
- CSR Manager Network Italy (Altis);
- National Technological Cluster for Energy S.c.ar.l.; (Di.T.NE.);
- Milan Polytechnic Energy and Strategy Group (ES-MIP);
- Federation of Environmental, Energy and Water Companies (Utilitalia);
- Italian Federation for Rational Energy Use (FIRE);
- Einaudi Foundation;
- Utilatis Foundation (Centre for Study and Research on Water, Energy and the Environment);
- Global Compact Network Italy;
- I-Com (Institute for Competitiveness);
- ISES Italia (International Solar Energy Society – Italian Section);
- European University Institute – Florence School of Regulation;
- Italian Unification Institute (UNI);
- Italian Association for Trenchless Technology (IATT);
- REF-Research: Laboratory for Local Public Services;
- REF-E: Energy Observatory;
- World Energy Council (WEC).

Acea also meets up with the **business world, scientific community and institutions** in order to discuss **current topics of national and international relevance**, and makes its own **specialist contribution in conferences, forums and workshops** on topics related to the businesses it works in. In 2015 Acea took part in the ***Festival of Water***, ***Festival of Energy***, ***International building industrialisation trade fair***, ***H_2O Bologna***, an exhibition of technologies for the purification and distribution of drinking water and the treatment of wastewater, the ***Energy and energy efficiency*** trade fair of Verona and ***Ecomondo***, the International trade fair of Rimini for the recycling/recovery of materials and energy and sustainable development, at which it presented research activities relating to micropollutants emerging in wastewater treatment plants.

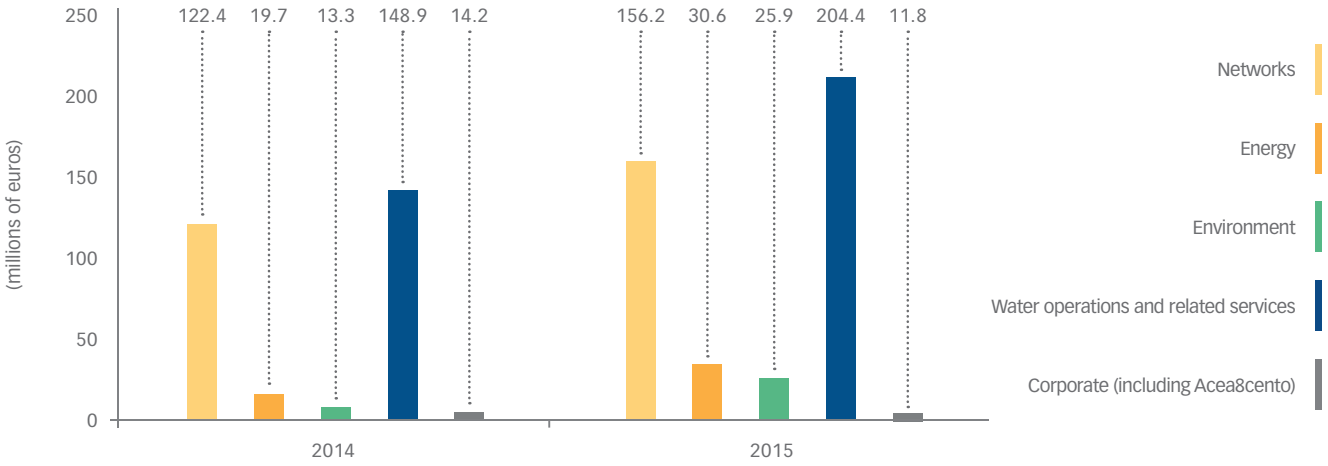
THE COMPANY AS A STAKEHOLDER

Management of company assets

Acea protects and makes the most of its tangible and intangible assets to achieve a stable financial position, **governing internal demands in an efficient and effective manner,** managing operations and growth prospects **in compliance with the aims set forth in the corporate mission and strategic plan**.

In **2015 investments** totalled **428.9 million euro**, confirming the company's greater commitment to developing its assets (318.6 million euro in 2014, 268.6 million euro in 2013). Allocations grew in all business areas: 25.9 million euro for the **Environment**, for the enhancement of plants; 30.6 million euro for **Energy**, in both the generation and sales sectors; about 204.4 million euro for **Water**, chiefly to Acea Ato 2, for reclamation works, expansion and maintenance of water and sewerage networks and water centres; 156.2 million euro for **Networks**, for operations on High/Medium/Low voltage grids and distribution substations, and finally investments of about 11.8 million euro for the **Corporate** area.

CHART 39
BREAKDOWN OF INVESTMENTS BY MACROAREA (2014-2015)



Amortisation, depreciation, provisions and write-downs amounted to **345.5 million euro** (+5.6% vis-à-vis 327.3 million euro in 2014). In greater detail, **amortisation and depreciation** amounted to 234 million euros(203.5 million euro in 2014), resulting from the growth in tangible and intangible fixed assets (information technology) in all Group areas. The **write-downs of receivables** amounted to 59 million, about 46% down on the figure of 110.2 million euro in 2014, the result of the reduction in debts. Finally, **provisions** totalled 52.5 million euro (13.6 million euro in 2014).

The parent company's **Health, Safety and Asset Protection Division**, part of the Human Resources and Organisation Division, supported by the Group's protection specialists, are responsible for the protection of **corporate assets, prevention of fraud,** and **adherence to legislation on security matters**, particularly for **protection** of **privacy and sensitive data** (Leg. Dec. 196/2003) and **workplace safety** (Leg. Dec. 81/2008).
The Division coordinates **measures to ensure an adequate degree of security in company property and workplaces.** Through the **Security Operations Room (SOS)**, it supervises **entry control, reception, guard services**, and **video surveillance, anti-intrusion and alarm systems**. Such systems are in operation in Piazzale Ostiense and at the various sites of Acea Energia, Acea Illuminazione Pubblica, Acea Produzione, Acea Distribuzione, Acea Elabori, Acea Ato 2, Acea Ato 5 and A.R.I.A.
In 2015 the **upgrading of the Security Operations Room** was completed, with more efficient and advanced technologies, and works were completed to improve **video surveillance and anti-intrusion systems**.
Acea manages numerous other **internal procedures** to guarantee the **protection of company assets**, such as **control of access to company sites,** access to recordings from the video-surveillance system, and destruction of confidential documents.

Acea **protects the Group's central and auxiliary information systems and communications infrastructure** with measures designed to preserve their integrity. In greater detail, the **Information and Communication Technology (ICT) Division** defines polices and operational standards for protecting the information, in keeping with the organisation's functional model, the legal requirements, and company objectives and policies. The entire Group has adopted **guidelines and procedures** for **information security** and for the **protection of corporate information assets**, including raw and processed data, that define the necessary behaviour for employees and third parties working with the company, the means of using computerised and telephone IT resources (for example, accessing Internet services, company e-mail, use of personal and portable computer drives), and the monitoring necessary to combat IT crime.
Initiatives to **update procedures** continued in 2015 to maintain conformity with legal obligations (Leg. Dec. 196/2003) and come into line with the ***best practices*** **set forth in standard ISO 27001**, an international standard governing the management of IT security.

ACEA 2.0

With regard to **obligations deriving from Leg. Dec. 196/2003 (*Privacy Law*) Acea ensured that its information systems conformed to Italy's Privacy Law, with special reference to technologies introduced by the Acea2.0 programme.**
More **detailed** information has also been added regarding the processing of personal data as a result of the activation of workforce dispatching over the territory (e.g. the geo-location of means and resources) following the adoption of the Workforce Management (WFM) system. The level of security of processed personal data has also been raised.

Research and innovation

Scientific and technological progress in the service of company processes is guaranteed by the presence of **ad hoc research and innovation structures** in the parent company and in Group companies, which seek to minimise the impact of industrial processes and improve the level of services supplied to customers.
The **ICT Division** has the task of **steering the progress of Acea's information systems**, ensuring consistency and the harmonisation of technological solutions adopted within Group companies.
Acea Elabori works on behalf of the Group's operating companies to develop applied research and technology transfer activities and projects in order to enhance and innovate processes.
Operating companies roll out specific innovation projects in the water, environment and energy sectors, working in

concert with research bodies and scientific-academic institutes and in some cases with the technical and scientific support of Acea Elabori.
In particular, **companies in the electricity sector** are busy rolling out technological development projects aimed at improving the continuity of the power distribution service, optimising the grid and keeping peak power output under control (see box).
With reference to **public lighting,** innovation relates to the development of LED technology for lighting installations present in the territories served by the company, which has a positive effect on the service and on power consumption (see box).
In **companies in the water sector** research and innovation activities are performed in areas of operational interest, such as the treatment of wastewater, monitoring of water infrastructures, reduction in leaks, raising of energy efficiency of water treatment plants, etc.

Finally, Group **companies** that work in the **waste-to-energy and composting** sectors are engaged in the development of innovative solutions to raise the efficiency of managed processes and keep the environmental impact of these activities under control.

In 2015 a total of approximately **64 million euro** was set aside for **research and innovation activities**.

ACEA 2.0

The largest amount of resources has been allocated to the **Acea2.0 programme** which, with reference to ICT innovation, sets out to **harmonise information systems that support company processes**, taking advantage of opportunities provided by the digital age.
In 2015 the **process to renew, standardise and centralise information systems**, launched last year, was fully completed, through the implementation of IT solutions based on the SAP platform and on some satellite systems that entail new application-based maps including billing, Customer Relationship Management (CRM), and Workforce Management (WFM) systems, for the scheduling and automatic assignment of jobs to operational units, through the use of *tablets* (see also *Corporate identity* and the chapters *Customers and the community* and *Human Resources*).
Acea has also established an ICT **Control Room,** to ensure coherent planning and development of ICT solutions in Group companies. The Control Room is responsible for coming up with standardised ICT solutions to facilitate internal synergies. Group companies have also undertaken further initiatives to supplement the developments of SAP, through new auxiliary systems integrated with the existing principal applications of IS-U, CRM, WFM and ERP, including: the Geographic Information System (GIS) 2.0 which, as part of network digitalisation plan, entails the **unification of territorial systems for all Group companies**; the Document Management System (DMS) 2.0 which extends the **documentation management system** already adopted in the energy segment; Business Intelligence (BI) 2.0, the new concept of **Datawarehousing and Business Analytics systems**; Human Capital Management (HCM), for the creation of the new **Human Resources Information System,** needed to support the reorganisation of processes for the management of human resources in the Group.
In the second half of the year the new systems IS-U, CRM, WFM and DMS were released in the company Acea Ato 2. The launch of the new platform made it possible to move beyond a multitude of "customised" local systems and to dematerialise some processes, such as the management of operations and drafting of quotes for works.

ACEA 2.0

As part of the application of Workforce Management (WFM) and integration of GIS and SAP systems, the activity performed by Acea Elabori, in collaboration with the ICT Department and the companies Acea Ato 2 and Acea Ato 5, has been particularly important in carrying out a **census of the Group's** water, sewerage and wastewater treatment infrastructures and for the **georeferencing of technical structures** using the GIS (Geographic Information System) platform.
This activity, which will be completed in 2016, will result in the availability of an up-to-date, practical and integrated instrument usable for both management purposes and for the development of maintenance and modelling applications.
Work continued with the **innovation of the documentation system**, with the **consolidation of the *Enterprise Resource Planning* (ERP) platform**, with which Acea manages some important company processes (administration, finance, etc.), with a view to unifying SAP platforms and creating a single platform integrated with Acea's documentation system.
As regards the **dematerialisation of documents**, in addition to the introduction of the WFM system and the consequent reduction in hard copy work sheets, the digitalisation of the billing process has been extended to all companies served by the new ERP platform, with the introduction of a *workflow* tool to support the registration of invoices.

INNOVATION IN ACEA ILLUMINAZIONE PUBBLICA

- **The dynamic data management system for the surveying and handling of LED equipment** present in the Municipality of Rome. The system is used to acquire and update the status of lighting points, by means of mobile devices connected online to servers that manage the system. Data are acquired and updated through the scanning of ad hoc QrCodes containing the data of the associated device, to which georeferencing data are added. The application therefore makes it possible to manage data using processes based on operational needs. The system is graduated, and designed to be integrated in the Workforce Management (WFM) system and, being already integrated with the remote control, makes it possible to know the current status of installations in real time.
- **The APP for reporting public lighting faults** will be released by the end of 2016, and will enable citizens to make reports directly from a smartphone, through geolocation.

INNOVATION IN ACEA DISTRIBUZIONE

- **The Smart Grid project**, relating to the development of innovative solutions for the integration of distributed generation and greater service continuity, entails: **the automation of the medium voltage (MV) network**, with the development of three advanced techniques for the automatic selection of the trunk failure to increase network resilience in the event of faults, **the monitoring of the medium and low voltage (MV/LV) networks**, thanks to advanced LV remote controlled solutions, **new criteria for managing the MV network** for the integrated acquisition of some measurements from MV network nodes and the minimisation of network losses within set parameters and constraints, and **e-car and storage**, implementing an integrated system consisting of a photovoltaic system, a system to store power and recharging stations for motor vehicles, having the job of minimising the consumption of power from the grid while recharging the vehicle, making use of the integrated system. Works relating to the pilot project ended in 2014, and in **2015 the monitoring phase began and ended**.
- **The Smart Network Management System (SnMS) project**, a technological advance for the management of the electrical distribution network which, by means of the Smart Grid Intelligence project, introduces data validation and integration technologies, improves the system for monitoring and analysing the MV and LV distribution network, and can detect in real time network weaknesses, directing actions and preventing service interruption events. Sub-projects carried on during the year thanks to further investments, include the **Optimisation of the Low Voltage Network (ORBT)**, the preparation of software to **optimise the LV network, and Smart Grid Intelligence (SGI)**, implementing a system for gathering data in a single point, shared by the whole of Acea Distribuzione, capable of **managing the acquisition and validation of large volumes of data** and helping to construct **Key Performance Indicators** to monitor the network. In 2015 the Ministry for Economic Development made an inspection to check the progress being made with the SnMS project, from both a technical and economic point of view, before freeing up funding, disbursing 80% of the planned contribution.
- Trials involving the use of **biodegradable oil in power transformers**, replacing the mineral oil used as a liquid sealant that presents environmental criticalities, being a by-product of petroleum. If it expands in the environment, biodegradable oil is practically non-contaminating, and its high flash point considerably reduces the risk of fire. In 2015 there were three working transformers using this type of oil.
- **The RoMA (Resilience Enhancement of Metropolitan Area)** Project, jointly funded by the Ministry of Education as part of actions to support "*Smart Cities and Communities*", for the creation of integrated technological systems capable of increasing the resilience of large metropolitan systems, in which Acea Distribuzione is the lead company (see also box in the paragraph *Acea and the Institutions*).

INNOVATION IN A.R.I.A. (WASTE TO ENERGY)

- **The project** to modify the process **for reducing NO_x, at the waste-to-energy plant of San Vittore del Lazio**, will entail a reduction in the use of ammonia solutions and methane (see *Environmental issues, Air Emissions and Mobility of the Group*).

INNOVATION IN ACEA ATO 2

- **The monitoring via satellite of protected areas**, entailing the use of an innovative technology based on the comparison of high-definition images taken at different times **from satellites orbiting the Earth, makes it possible to pinpoint changes**, even very small ones, on the surface of the Earth after a given length of time. In 2015 the preliminary study phase was completed, and the **operational phase got under way, with full-scale implementation**.
- The updating of **inflow and outflow models for sewerage systems**, in order to simulate the behaviour of urban drainage systems under particular conditions, such as rainstorms. In 2015 activities focused on the updating of the model for the city of Rome and the study of sewerage sub-basins in Ostia.
- The application of **precipitation techniques for the removal of phosphorous**, in order to include this process in the treatment line of large-sized plants and minimise impacts regarding the release of treated wastewater nutrients into the environment. The study sets out to analyse the effects of treatment in terms of the quantity and quality of sludge produced.
- **Wastewater treatment processes,** as part of which in 2015, in collaboration with CNR, a study was initiated to simplify procedures for selecting **polyelectrolytes** used for **sludge dewatering**. The research, based on Nuclear Magnetic Resonance (NMR) techniques and zeta potential measurements of sludge, sets out to develop a new simpler, more efficient method for checking the quality of the additive, and to make available an innovative instrument that allows a more effective use of the product in purification plants.
- Trials, conducted at the Roma Nord treatment plant, for the optimisation of the **nitrification process** with automated oxygenation control, also entails the evaluation of energy consumption to curb effects.
- The trialling of **«electronic noses» for monitoring odorous emissions** at wastewater treatment plants, in order to optimise and integrate methods currently being used (chemical or offline sensorial methods).
- The study, on a pilot scale, of **MBBR** (Membrane Biofilm Bioreactor) **technologies** in order to gauge their potential and performance for applications to upgrade large purification plants, in situations where space is limited.
- **The RoMA (Resiliene Enhancement of Metropolitan Area) Project**, jointly funded by the Ministry of Education as part of actions to support "*Smart Cities and Communities*", aimed at creating integrated technological systems capable of increasing the resilience of large metropolitan systems, in which Acea Ato 2 participated late in the year (see also the box in the paragraph *Acea and the Institutions*).

INNOVATION IN ACEA ATO 5

- Study of the **impact of water treatment facilities** discharging directly into significant surface water bodies.
- **Study of calco-carbonic equilibria of water in the catchment-distribution system in four municipalities of the Province of Frosinone**, to highlight existing criticalities, assess possible solutions and monitor the effects of mitigation actions.

OPERATIONS ABROAD

Acea operates in the water services sector abroad in Peru, Honduras and the Dominican Republic, serving **3.6 million** inhabitants. Activities abroad have a limited impact from an economic-financial standpoint, however their significant social relevance makes it important to provide a concise description.
Acea carries out activities abroad through special purpose companies created in partnership with local and international partners. The aim is to improve water services in situations where they are particularly lacking, with regard to technical and management aspects in particular.
Acea facilitates development through the training of human resources and transfer of know-how to the local business class.
In 2015 the contract of Consorcio Aguazul Bogotà – HCl (2.5 million inhabitants) was terminated, and a new contract for the management of the Trujillo aqueduct (serving about 800,000 inhabitants) was entered into.
This section offers a brief summary of the main features of the operating companies and their mission in the countries of reference, describing ongoing projects and social and environmental initiatives.

CONSORCIO AGUA AZUL SA

Consorcio Agua Azul was established with the mission of producing drinking water for the local public water company: SEDAPAL (Drinking water and sewerage service in Lima). The Consortium has built the infrastructures necessary for satisfying part of the drinking water needs in the **northern area of Lima**, **Peru**, drawing on the surface and ground water of the River Chillón. It will maintain operational responsibility for the same until 2027, when the services will be transferred to the State.
During 2015 45.9 mm^3 of drinking water was produced, 1.1% less than in 2014, due to the lesser availability of surface water. The figure did however exceed the contractually established volume.

CONSORCIO AGUA AZUL SA - MAIN CORPORATE AND OPERATIONAL DATA

Country (area)	Peru (Lima, northern zone - Cono Norte)
inhabitants served	839,000
customer	Sedapal (Drinking Water and Sewerage Service of Lima, a state-owned company)
source of funding	shareholders' equity and bonds issued on the Peruvian market
duration of contract	07.04.2000 – 18.06.2027
purpose of project	BOT (Build-Operate-Transfer) project for the construction and management of the drinking water supply system which exploits the water of the River Chillón and the underlying ground water
partners	Acea SpA 25.5%, Impregilo International Infrastructure N.V. 25.5%, Marubeni Co 29% , Inversiones Liquidas S.A.C 20%
no. of employees at 31.12.2015	33
business turnover (in thousands of Euro)	11,994

In 2015 Consorcio Agua Azul continued its **training programme** on **environmental and workplace safety topics,** for all internal personnel and personnel of contracting firms, and to personnel of the irrigation committee were given training on the use of fertilisers and introduction of organic farming. **A total of 2,772 hours of training were provided**.
Again this year, the company welcomed students, delegations of sectorial companies and regional institutions, for a total of 478 **visits to its plants and facilities**.
In October, the company staged **the regional course on the operation of rapid filtration plants,** organised in cooperation with the National Engineering University, aimed at graduates from a number of Latin American countries.
Consorcio Agua Azul **confirmed its support for state agencies** (such as the Policia Nacional, primary schools, the Ministries of Agriculture and Health, **non-profit foundations** (such as associations for drug addict rehabilitation), and **consumers' associations**.
In order to combat the widespread phenomenon of school dropout, the company **distributed teaching materials** (**1,416 kits**, compared with 1,283 in 2014) **to primary schools and nursery schools** in the area to make students and families aware of the correct use of resources. The rucksacks handed out to youngsters were created entirely from **recycled plastic,** and featured printed phrases that **promote the correct use of water resources and respect for the environment**.
At Christmas the company offered gifts of about 1,800 toys and sweets to children at schools in the surrounding area and to the children of local police forces and Municipal staff. Gifts and "restaurant" vouchers were also given to the children of Consorcio employees for families to eat out together.
During the course of the year an **internal atmosphere as-**

sessment was conducted within the company to gauge the level of satisfaction of employees as regards working conditions. Results from the questionnaire, compiled anonymously, showed a level of satisfaction of 100%.
Health care services continued, with check-ups for all personnel, as well as a vaccination campaign against tetanus and hepatitis A and B, extended to the whole family on a voluntary basis.
Just as in previous years, the Consorcio **hosted high-school and university students and newly formed graduates in its departments for workplace experience.**
As part of the annual monitoring programme, the evaluation by the Peruvian certification agency, SGS, renewed the certification for **Integrated Quality and Environmental Systems,** in keeping with standards **UNI EN ISO 9001:2008 and 14001:2004,** issuing the relative certificates, valid until 2017.
During the year the company continued to meet the legal and regulatory requirements concerning worker rights, safety and workplace health.

AGUAZUL BOGOTÀ SA ESP

Aguazul Bogotá, controlled by Acea SpA with 51% of shares, ended its contracted activities in Colombia at the close of 2012. The company remains in existence in order to participate in international initiatives, and **is present in Peru** through its 60% holding in ***Consorcio Aguazul Bogotà-HCI.***

CONSORCIO CONAZUL TRUJILLO

Aguazul Bogotà and Peruvian partners HCI and Ferconsac established Consorcio Conazul Trujillo to jointly manage the commercial management contract for Trujillo aqueduct. The contract is valid for one year, from 24 January 2015 to 24 January 2016. The company has sales revenue of about 1 million euro.
In addition to routine commercial management activities, the consortium performs cadastral and bill collection services in SEDALIB sales points, providing support and redirecting users to the competent offices.

CONSORCIO CONAZUL TRUJILLO – MAIN CORPORATE AND OPERATIONAL DATA

Country (area)	Peru (Trujillo)
inhabitants served	799,550
customer	SEDALIB S.A.
duration of contract	24.01.2015 – 24.01.2016
purpose of project	Commercial management of water service and bill collection in SEDALIB offices
partners	Aguazul Bogotà 58%, HCI Group 40%, Ferconsac (2%)
no. of employees at 31.12.2015	125
business turnover (in thousands of Euro)	750

Note: Acea SpA has a 51% equity interest in Aguazul Bogotà.

In 2015 the Consortium collaborated with SEDALIB on awareness building campaigns for the correct use of water and the consequences of its incorrect use as to its availability, stressing the importance of consumption metering.
As regards social measures within the firm, loans were granted to employees to encourage personal training and provide their families with a better education. University students were also brought into the company for their first paid job.
During the year the consortium continued to meet the legal and regulatory requirements concerning workplace safety and health.

AGUAS DE SAN PEDRO SA

Aguas de San Pedro (ASP) is the holder of the thirty-year contract for the management of the integrated water service for the city of **San Pedro de Sula, Honduras.** The company has launched an important work programme for increasing and improving the water service. The programme provides for total coverage of the city with a continual water service, and execution of works for catchment and treatment of sewer waters. The number of customers served in 2015 was 116,555, 74% of which are supplied with meters. The drinking water service continued to cover 99% of the population, while the sewerage service covered 83%. Water production, of which 54% from wells, amounted to 80.8 Mm^3, slightly up on 2014 (80.6 Mm^3) thanks to a greater production of surface water.

AGUAS DE SAN PEDRO SA – MAIN CORPORATE AND OPERATIONAL DATA

Country (area)	Honduras (San Pedro Sula)
inhabitants served	500,000
customer	municipal administration
source of funding	shareholders' equity and loans from commercial banks
duration of contract	01.02.2001 – 01.02.2031
purpose of project	concession of the integrated water service for the city of San Pedro de Sula
partners	Acea SpA 31%, IREN SpA 30%, Astaldi SpA 15%, Ghella SpA 15%, Three Comercial 5%, C.Lotti & Associati 4%
no. of employees at 31.12.2015	414
business turnover (in thousands of Euro)	28,046

In 2015, the company continued to **support social initiatives** and the **safeguarding of the environment**, continuing the programme for the conservation of the **El Merendon Nature Reserve**, declared a protected zone for the catchment of water for San Pedro Sula. Actions performed include the "Merendon" **reforestation,** with the involvement of 52 farm producers. Company personnel took an active part in this project. The company also continued its **fire protection campaign,** which in 2015 related to 69 hectares of land. Working in collaboration with qualified training institutes, the company organised 8 days of training for 211 farm producers.

Over the course of the year, the company implemented 100% of the **workplace health and safety plan**, as provided under the *Sistema Médico de Empresa SME-IHSS-ASP*, **and was awarded the prize for best company preventive health plan.** Implementation of the plan included medical and clinical check-ups, particularly for women, awareness campaigns concerning breast cancer, reduction of salt and tobacco consumption, workshops on nutrition and weight control, and vaccination campaigns (hepatitis A and B, tetanus, etc.). The company also organised sports competitions for staff and their families.

Initiatives in favour of personnel include a **financial education programme, as part of which** an agreement was reached with Banco Fichosa for subsidised loans for employees.

The company continued its **social support** work, offering Christmas gifts of toys to children in the most disadvantaged parts of the city, in a programme supported by some of the company staff. Also in the Christmas season, the company organised recreational events for staff and their families, as part of the general programme of company integration and socialisation.

To promote the culture of environmental respect and stimulate creativity, the company organised a **staff competition for Christmas decorations using only recycled materials**.

In the first half of the year activities were performed to improve the **Quality and Laboratory Management System,** implemented and certified pursuant to standards **ISO 9001:2008** and **ISO/IEC 17025:2005**. In March the EMA certification agency (Entidad Mexicana de Acreditación) conducted an audit of the Quality Management System, which ensured the compliance to the standard, confirming the certification.

ACEA DOMINICANA SA

Acea Dominicana handles the commercial management of the water service in the **northern and eastern areas of Santo Domingo**, Dominican Republic. Activities include the management of customer relations, the billing and estimate cycle, installation of new meters and work management relating to new connections. The project represents one of the first experiments of private participation in the water services of the Dominican Republic.

In 2014, Acea Dominicana signed a **contract addendum** with the client Corporación del Acueducto Y Alcantarillado De Santo Domingo (CAASD), governing a 20-month agreement for the financing, supply and installation of 30,000 meters for new customers and replacement of meters for 10,000 existing customers. The company will also have to calibrate and maintain the entire system of meters over the contractual period (30,000 existing meters and 30,000 new installations). The addendum provided for the **extension of the overall contract for a further seven years, bringing the expiry date to 30/09/2023.**

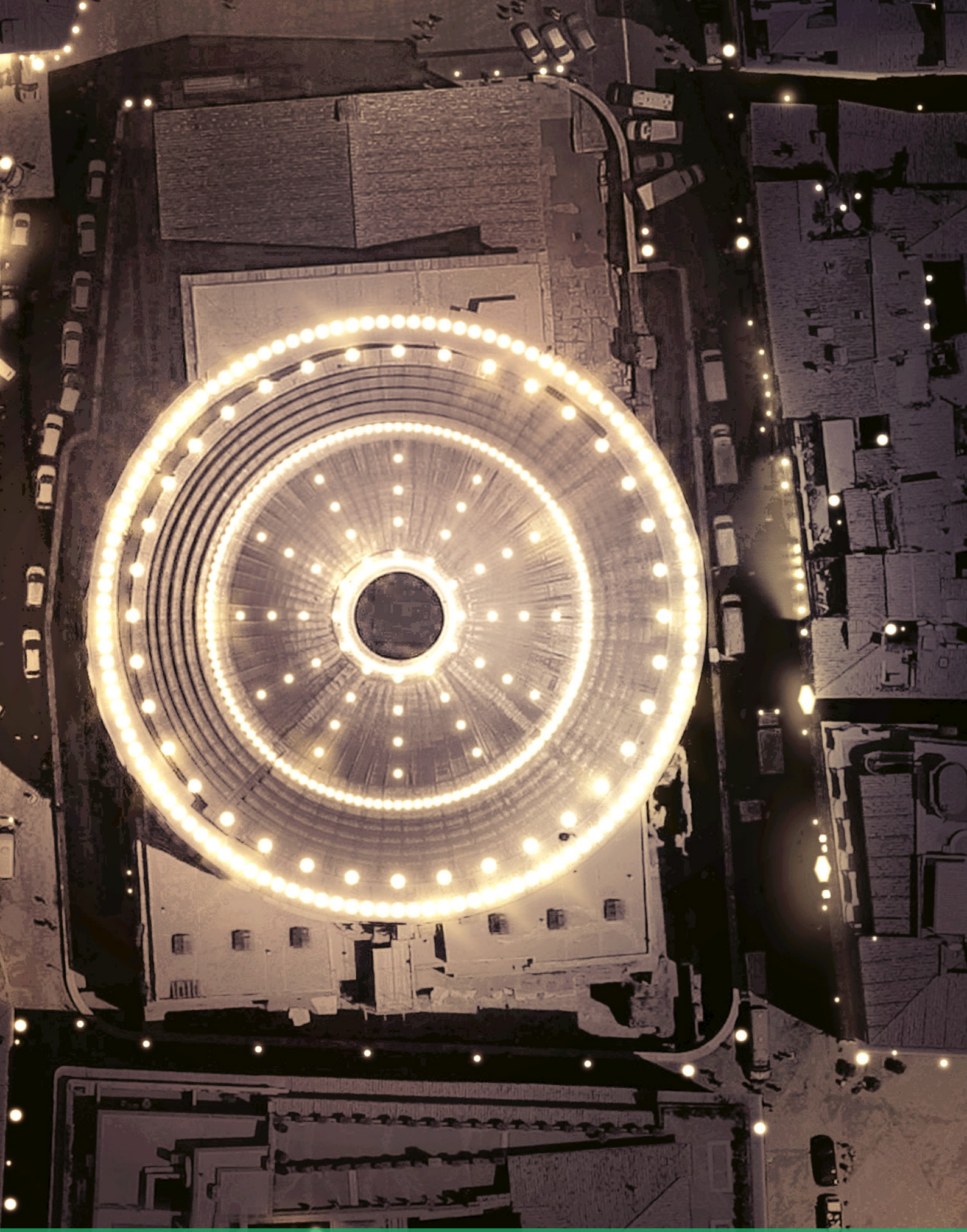
ACEA DOMINICANA SA – MAIN CORPORATE AND OPERATIONAL DATA

Country (area)	Dominican Republic (Santo Domingo, northern and eastern areas)
inhabitants served	1,500,000
customer	Corporación del Acueducto y Alcantarillado de Santo Domingo (CAASD)
duration of contract	01.10.2003 – 30.09.2023
purpose of project	commercial management of water service
partners	Acea SpA 100%,
no. of employees at 31.12.2015	178
business turnover (in thousands of Euro)	4,390

In 2015 Acea Dominicana continued its commitment to **raising awareness among the population served** as to the importance of the **correct use of water.** In the poorest areas of the capital and in Boca Chica, the "Plan Deuda Cero (Zero debt plan)" aimed at customers with accumulated arrears continued. This year too the campaign was supported by media interviews and feature stories presented in leading Dominican newspapers and television channels.

As regards personnel management, Acea Dominicana operates in full compliance with Dominican labour law and with the law on social policies. It has always adopted **company policies to safeguard workers' rights and dignity.** In keeping with this approach, each year the company has renewed the private insurance plan for staff, and provided for an employment leaving fund, both of which initiatives are not required under Dominican law.

Pantheon · Rome



ENVIRONMENTAL ISSUES

Water and light effects. Photo by Fabio Anghelone, Acea Archive

SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL PROTECTION WITHIN ACEA

With regard to global sustainable development, 2015 was a year which saw several fundamental events, including - in September - in New York, during the **United Nations Summit**, the definition of the new **Sustainable Development Goals** (SDGs) and, in November, in Paris, the **21st Conference of the Parties – COP21**, on **climate changes.** In this context, Acea recognises the central nature of environmental protection to its development strategy and contributes towards sustainable development, paying the greatest of attention to the related area and the social context, which it is bound to by a relationship of reciprocal influence.

BOX - THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS 2016-2030

On the basis of the favourable results of the previous Millennium Development Goals, World leaders have been called to define the new Sustainable Development Goals, in order to achieve - by 2030 - the elimination of poverty, promotion of prosperity and wellbeing for all, protection of the environment and the tackling of climate change issues. In the Declaration, the **private sector** is indicated as a central player in this process. Among the 17 goals defined, many concern environmental issues: climate change, water, sustainable use of the ecosystem, fight against land degradation, etc. Within the sphere of the private Sector Forum, what is more, a tool was presented, supporting businesses for developing a strategic approach to the SDGs and contributing towards sustainable development via core business activities. This is the SDG Compass, developed jointly by the Global Reporting Initiative - GRI, the United Nations Global Compact and the World Business Council for Sustainable Development (WBCSD), making it possible for the companies to measure and handle their impact.

BOX - THE COP21: PARIS 2015

On 14 October 2015, the European Parliament approved the resolution which thus granted a delegation of deputies with the mandate for the **COP21**[76] - the **United Nations Climate Change Conference**. Between 29 November and 12 December 2015, 196 delegates of countries worldwide met in Paris, at the time of the 21st Conference of the Parties (COP21), in order to discuss a new climate agreement, which was finally approved after 12 days of talks.
The main objective of the agreement, in which all the signatories take part, is to limit the average global temperature increase to less than 2°C compared to pre-industrial levels, with a further commitment to limit the increase to 1.5°C, recognising that in this manner the risks and the impacts of the climate change underway will reduce. The agreement also aims to increase the ability to adapt, encourage the resilience to the climate and lower the green-house gas emissions; funding of $100 billion a year is also envisaged, from 2020 to 2025, for Developing countries, in order to help them meet the challenge of environmental sustainability.

REDUCTION OF CARBON DIOXIDE EMISSIONS

Pressed by the concerns regarding the warming of the planet, which are increasingly insistent, from the scientific and institutional worlds, businesses that choose to pursue sustainable development policies cannot fail to accept the challenge of **containing greenhouse gas emissions**, and in particular carbon dioxide (CO_2). Acea, for several years, has implemented a policy for curbing CO_2 emissions, and has **participated in the international Carbon Disclosure Project (CDP) project**, considered, since its debut, to be an important incentive at international level for dealing with the subject of action for reducing/mitigating emissions. Awareness of the industrial processes and the estimation of quantities of carbon dioxide emitted make it possible to responsibly meet the challenge of a gradual changeover towards industrial management with low rates of CO_2 emissions.

Furthermore, seizing the opportunity of its participation in the COP, Acea launched **a survey into the emissions throughout its supply chain**, with the aim of raising suppliers' awareness on the subject so that they contribute towards the handling of the impacts on the natural environment, in particular with regard to savings in terms of energy consumption (from which part of the emissions derive), means of transport used for their work, etc. As a result of the survey, launched in April 2015 and continued until January 2016 (on 2015 data), **Acea drew up an** *ad hoc* **questionnaire** and asked certain suppliers[77] of "goods and services" and of "work" for quantitative information: fuels used for processes and ordinary uses, energy consumed, fuels consumed for transport (see *Energy consumption outside the Group* and *Scope 3 greenhouse gas emissions*). With a view to managing the supply chain responsibly, Acea is also taking part in the pilot project of the Global Compact Network Italy Foundation (GCNI Foundation) entitled TenP. Via the **TenP Platform, suppliers** fill in a questionnaire focused on the **ten principles of the Global Compact** (including the three principles relating to the environment). Acea has established that **all the suppliers who intend to register with the Qualification systems active in-house are obliged,** as a mandatory requirement, **to fill in the TenP Questionnaire** (see also Suppliers).

PRESENTATION OF THE TENP PLATFORM TO THE COMPRAVERDE FORUM

On 1 October 2015, during the CompraVerde Forum in Rome, a **meeting took place aimed at highlighting the meaning, for the company, of managing the supply chain responsibly**, the risks and opportunities deriving from the suppliers, which instruments exist for improving one's environmental and social performance together with that of suppliers.
It emerged that the ability to find suitable answers influences the mid- to long-term possibility of businesses to remain in the market, limiting reputational and legislative compliance risks, strengthening relations with suppliers and introducing important product and process innovations.
During the Forum, attended by Acea the TenP platform was presented among the various instruments for informing and handling suppliers: the platform is sponsored by the Global Compact Network Italy Foundation and helps businesses to construct a sustainable approach for the management of the supply chain. The debate focused on the real difficulties which the businesses face in sustainably handling their suppliers, at the same time exploring possible and practical solutions.

Over the past 10 years, after having undertaken initiatives such as the increase in production from renewable energy sources, increase in efficiency of internal energy use, and the modernisation of its vehicle fleet, **Acea has achieved one of the lowest values of CO_2 intensity** (tCO_2/euro billed) **in the Italian utilities sector** (see box on Carbon Disclosure Project and, later in this document, table 56).

[76] The COP (Conference of the Parties) is the highest decision-making body of the UNFCCC (United Nation Framework Convention on Climate Change) and all the countries which comply with the Convention are represented therein. The first COP was held in Berlin in 1995. Significant legs of the journey which culminated in Paris 2015 were: COP3 when the Kyoto Protocol was adopted; COP11 during which the Montreal Action Plan was produced; COP17 in Durban, where the Green Climate Fund was created.

[77] The suppliers who were sent the form requesting data on electricity consumption and CO_2 emissions (in order to quantify Scope 3 emissions of the Group) were taken from those considered the most important in terms of turnover.

ACEA ONCE AGAIN IMPROVES ITS CARBON DISCLOSURE PROJECT RATING

On 12 November 2015, the **2015 CDP Climate Change Report, Italian Edition,** was presented in Milan at the headquarters of Borsa Italiana. The 10th edition of the report provides evaluations made by an international pool of experts on climate change topics, drawn up on the basis of information provided by around 100 Italian companies participating in the "Carbon Disclosure Project".
The results represent a ranking in terms of the transparency of communications on practices adopted to combat climate changes ("disclosure", rated from 0-100), and the ability of businesses to contain the **carbon footprint** of activities carried out ("performance" rated D-A).
Acea is a long-standing participant in the Carbon Disclosure Project. Once again, the company improved its rating, going from an overall score of 92 B in 2014 to a **rating of 99 B** in 2015.
In the Utilities sector, which includes seven companies, **Acea ranked third from the top**, after Enel and Snam, and was noted in particular for its policies on controlling CO_2 emissions.
For more information on the "CDP Climate Change Report 2015, Italian Edition" see:
https://www.cdp.net/CDPResults/CDP-italy-climate-change-report-2015.pdf

PROTECTION OF LAND

Acea is aware that it is facing a global challenge. Effective action for safeguarding land and biodiversity, already being performed for some time in the areas in which it operates, is multi-faceted. By way of example, mention is made of the **protection of areas surrounding water springs, and the modernisation of the electricity distribution network**.
The protection of areas surrounding springs involves the maintenance of over time of optimal conditions of biological diversity in vast areas of natural interest, combined with the **constant monitoring of impacts on recipient water bodies.** Both forms of action represent a significant technological and human commitment, which contributes towards the preservation of natural capital of extraordinary value.

Activities in Central Lazio: springs and protected areas

The Group, through the company **Acea Ato 2**, mainly uses **springs located in uncontaminated areas** for the water supply, with the result that Rome is one of the few great metropolises of the world that boasts **abundant supplies of water resources**, which do not require **any preliminary treatment for drinking purposes,** since the water is of **excellent quality** at source.
The water-supply system that provides this important service to the entire Province of Rome is based on **eight major aqueducts**, making up an overall network of over 200 km (plus an additional 1,362 km of delivery network and 9,644 km of distribution network for drinking water), and a flow that reaches 20,000 litres/second. This priceless pool of water assets is supplemented by a number of well fields and the reserve of Lake Bracciano, used only in the event of emergency.
Acea pays the utmost attention to the **protection** and **safeguarding of the water resource**, scrupulously following the provisions of Italian Legislative Decree 152/2006, which in Article 94 governs the means of **protection of areas with surface and ground waters used for human consumption**.
Table 39 discloses the location and surfaces of areas under absolute protection[78] in the province of Rome, in square metres, and table 40 shows the same information relating to the province of Frosinone.

TABLE 39
MAIN WATER SOURCES UNDER PROTECTION IN ATO 2 – CENTRAL LAZIO

Sensitive area	Location	Surface area (m^2)
Peschiera Springs	Municipality of Cittaducale (Rieti, Lazio)	375,322
Le Capore Springs	Municipality of Frasso and Casaprota (Rieti, Lazio)	997,848
Acqua Marcia Spring	Municipality of Agosta-Arsoli-Marano Equo (Rome)	1,181,979
Acquoria Spring	Municipality of Tivoli (Rome)	17,724
Acqua Felice – Pantano Springs	Municipality of Zagarolo (Rome)	779,143
Pertuso Springs	Municipality of Trevi – Filettino (Lazio)	133,711
Doganella Springs	Municipality of Rocca Priora (Rome)	350,000
Acqua Vergine Springs	Municipality of Rome	500,000
Torre Angela wells	Municipality of Rome	70,829
Finocchio wells	Municipality of Rome	64,166

Note: The surface areas were updated after in-depth studies carried out in 2015 by Acea Ato 2 in the areas of absolute protection.

[78] The areas subject to absolute protection are those immediately surrounding the uptakes or branches, as defined in Italian Legislative Decree 152/2006.

TABLE 40
MAIN WATER SOURCES UNDER PROTECTION IN ATO 5 – SOUTHERN LAZIO

Sensitive area	Location	Surface areas (m^2) (*)
Posta Fibreno wells	Municipality of Posta Fibreno (Frosinone)	20,000
Tufano wells	Municipality of Anagni (Frosinone)	20,000
Capofiume Spring	Municipality of Collepardo (Frosinone)	10,000
Madonna di Canneto Spring	Municipality of Settefrati (Frosinone)	15,000
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

(*) Surface area figures are estimated.

The result of the activities for protecting the areas surrounding the springs lies not only in the scant or zero significance of the impact of the Group's activities on the sources but also that the sources are protected from any other activity which might arise in the area.

Natural capital and eco-system services

"*What we need (…) is an economy capable of ensuring an inclusive and better-quality wellbeing: a green economy*" – declared Edo Ronchi in the introductory report to the Environmental justice and climate change conference, held in Rome in September 2015. In detail, the ***European environment - state and outlook 2015*** report states: "*Natural capital (…) is both limited and vulnerable. The 'flow' provided by natural capital comes in the form of ecosystem services, such as fertile ground, biomass, good quality water, which represent contributions to human well-being*[79].

Acea commits itself every day to observing European legislation issued to protect, conserve and improve the ecosystems and their services, and is an active party in the biodiversity protection process. Therefore, it participated in the drafting of ***MAKING THE CASE***. ***Business, biodiversity and ecosystem services as tools for change*** report, produced by Global Compact Network Italy Foundation in collaboration with the Management Institute of the Scuola Superiore Sant'Anna of Pisa. The document was presented at the Ecomondo Fair, which was held in Rimini, during the General States of the Green Economy 2015[80], dedicated to the topic "The state of the Green Economy in Italy (see dedicated box).

Ecosystem services - such as those related to food, water, fuel, air purification, natural recycling of waste, etc. - **carry out a fundamental role in society**. The loss of ecosystem services contributes to food and energy insecurity, increases vulnerability to natural disasters, such as floods or tropical storms, decreases the level of health, reduces the availability and quality of water resources and undermines the cultural heritage.

The *MAKING THE CASE* report presents significant experiences of major Italian companies in the management of Biodiversity and Ecosystem Services (BES), inserting them within a framework of in-depth analysis of international, European and Italian legislation on the subject and of the main trends in the field. In detail, the document describes the results of the survey carried out on a number of economic players[81] involved in the challenge of creating a green economy, including Acea.

Specifically, Acea's contribution to the publication concerned the protection of areas surrounding the springs, with the goal of safeguarding biodiversity in its entirety and the ecosystem services affected. In greater detail, the project illustrated relates to the implementation of a satellite monitoring system, on the basis of experience already tried and tested by Acea Ato 2 in the period 2010/2012 and relaunched at the end of 2015. During 2016, satellite monitoring will be applied operatively in the areas in which the most important supply sources are concentrated.

THE GENERAL STATES OF THE GREEN ECONOMY

The National Council of the Green Economy illustrated, in Rimini on 3 and 4 November 2015, the **Report on the state of the green economy in Italy**, in the presence of the Minister for the environment, who was the final speaker. The work in the afternoon of 3 November included 5 theme-based sessions for analysis and consultation, involving the participation of around 70 speakers. The General States of the Green Economy ended on 4 November, with the presentation of **proposals of the National Council of the Green Economy**.

The 5 theme-based sessions were held on:

- *The internationalisation of green companies: Chinese-Italian environmental collaboration*
- *Natural Capital: a new driver of growth for companies*
- *Paris 2015: green companies call for the global climate agreement*
- *Adaptation to climate change, mitigation and prevention of hydrogeological instability and local policies in a green economy framework*
- *The new economy of waste. Industrial solutions and economic perspectives for the circular economy.*

[79] *The European environment - state and outlook 2015 - synthesis report (page 51), EEA*.
[80] Organised by the National Council of the Green Economy, in collaboration with the Ministry of the Environment and the Ministry of Economic Development.
[81] Besides Acea, the companies involved in the survey include: Gruppo Barilla F. & G. Fratelli, Enel, Expo2015, Fondazione Cariplo, Italcementi, Snam, Sofidel, Terna and UniCredit.

PROTECTION OF THE AREAS SURROUNDING SPRINGS BY MEANS OF SATELLITE MONITORING

Acea Ato 2, the main water company in the Acea Group, entrusted with the Integrated Water Service, in an extensive area of Central Lazio, Rome included, also supervises the areas in which springs that guarantee drinking water supplies for around 3.7 million inhabitants are located. The ecosystem in these areas is particularly rich from a naturalistic standpoint and, therefore, also exceptionally fragile, to the point of placing the areas with considerable biodiversity at risk.

Protection activities ensure the prompt identification of any changes due to human activities. Therefore, besides the traditional control activities *in situ* carried out by its staff, Acea Ato 2 has decided to **develop a semi-automatic system for recognising and classifying the changes by means of satellite detection**.

Acea Ato 2 has availed itself of the satellite observation technique, diversifying resolution (from 20 cm to 50 m) and timescales (each month) according to the level of attention required by legislation.

In order to maintain the value of and protect natural capital, preventing any kind of offence or damage, semi-automatic "change detection via satellite" is therefore envisaged, aimed at reporting by direct control. Differing resolutions make it possible to modulate the levels of attention between the maximum, relating to areas neighbouring installations and the aqueducts, and a minimum level, aimed at controlling the invariance in ground use and state of health of the woods, in part to preserve the water balance in the area.

Thanks to the application of IT and the use of sophisticated mathematical algorithms, it becomes possible to oversee and safeguard the area. In detail, it is possible to compare the satellite images in detail, register every change and **produce a change map** which highlights both the elements which have undergone changes, and those which have remained unchanged.

The software used is also capable of producing specific reporting, which also provides a classification of the extent of changes recorded according to the level of criticality linked to the nature of the event registered.

Respect for and protection of the territory also manifests in the energy sphere: in particular, during the electricity distribution phase: the protection of the territory and **mitigation of the risk of impact on bird species from overhead** high and medium voltage lines, especially in areas of special natural value, is one of Acea Distribuzione's objectives. Working in collaboration with competent Authorities, the company seeks the best technological answers to problems caused to birdlife by overhead transmission lines in sensitive areas (see the box on the Memorandum of Understanding for the reorganisation of high and very high voltage electricity networks in the Municipality of Rome. 2015 actions in *Energy distribution*).

ENVIRONMENTAL MANAGEMENT

Over a period of many years, Acea Group has unified its approach to management, including initiating a path of monitoring and reporting environmental performance. Acea's first "eco-balance" report dates back to 1994, and the first Environmental Report drawn up in accordance with internationally accredited standards (ENI Enrico Mattei Foundation Guidelines) dates back to 1999.

Over the years monitoring and reporting systems have continued to evolve, bringing about a progressive **systemisation of environmental management**, with the implementation, in the majority of Group plants and production processes, of **ISO 14001 standard**, in some cases further evolved in the direction of **EMAS registration** (Eco-Management and Audit Scheme) (see *Corporate identity, Management systems).*

The holding company has **implemented the integrated Quality, Environment, Security and Energy management system**, as the cornerstone of an organisation and management model which, in synergy with the Environmental Legislation Unit within the parent company's Legal and Corporate Affairs Division, has the task of ensuring environmental compliance and providing general policies for Group companies, so that their approach to environmental protection complies with the principles expressed in the Code of Ethics.

The **principle of continual improvement** is therefore a strength, favouring a dynamic of effective environmental protection, with a consequent **reduction in risks and containment of costs**. The planning process, formally envisaged by ISO 14001 Systems, periodically sets new environmental management efficiency thresholds. The control of performance indicators, also envisaged by the System, makes it possible to assess the correct nature of the direction adopted or identify possible anomalies in advance, which can then be promptly corrected.

Even though operating companies are very much committed to keeping the management system on environmental issues efficient, situations can come about, often caused by contingent circumstances, that generate non-compliances that may be disputed by **competent supervisory bodies**. During 2015, in the consolidated area, **around 500 environmental disputes** were reported **(including citations and fines)**, which **led to the payment of 96 fines**, for an economic value of **around 75,400 euro** (70,469 euro pertaining to Acea Ato 2). By contrast, considering the Group in its entirety, there were 105 fines paid for an equivalent value of around 139,400 euro (of which 30,309 euro pertaining to Acque and 22,144 euro pertaining to Publiacqua).

Environmental-related complaints from individual users are not systematically monitored, some however are addressed indirectly: the majority of Group companies (such as Acea Ato 2, Acea Ato 5, Kyklos, A.R.I.A.), only receive complaints from Supervisory Bodies or appointed Authorities (contacted by individuals). Authorities can often act autonomously with *in situ* controls and possibly apply procedures and fines as mentioned above. Exceptionally however, companies may receive a number of sporadic significant complaints. In such cases they are checked and, if necessary, action is taken to sort them out. During 2015, this occurred in two out of three complaints received by Acea Ato 5. As far as Acea Distribuzione in particular is concerned, observations inherent to alleged environmental damage often conceal urban planning-related interests linked to the decrease in value of owned properties, which house electricity installations. These installations are necessary and indispensable for the correct running of the public electricity distribution network, constructed by Acea Distribuzione further to permits granted by Bodies that oversee the area and therefore compliant with reference legislation, including urban planning and environmental regulations[82]. Problems/reports are handled by the company's Property

[82] The environmental legislative reference in this case is the Italian Prime Minister's Decree dated 8 July 2003.

Unit which protects company assets; the Property Unit receives the complaints made by the owners of properties that house the **power lines/transformer stations**, and, subsequently, the **Safety Unit carries out instrumental checks** in response to the complaints. 11 complaints were handled and closed positively in 2015.

Managing and monitoring operations that have an impact on the environment

Acea also monitors activities and processes that have the **potential to generate environmental impacts**, and pays particular attention to the handling of activities which require the use, or presence in the installation, of intrinsically hazardous materials, such as:

- **asbestos,** used as construction material until the 1970s, then banned from use and subject to strict regulations where still present. In compliance with Italian Ministerial Decree dated 6 September 1994, Acea has appointed an **Asbestos Officer**, who is responsible for monitoring and coordinating maintenance activities on buildings and plants documented as presenting asbestos risks;
- **sulphur hexafluoride,** present in high-voltage electrical plants as insulation fluid. SF_6 is handled with the maximum care so as to avoid leaks and uncontrolled atmospheric emissions. The use of dedicated sensors and careful monitoring of maintenance operations is envisaged, especially when they involve the emptying of the plants, making it possible to keep the potential environmental impact under control;
- **dielectric oil,** used in power transformers as insulating and cooling fluid. Since both its advantageous technological features and certain environmental problems linked to its chemical nature as an oil derivative are known, as early as the end of 2014 Acea began experiments using a **vegetable-origin insulating oil** that presents technological characteristics very similar to mineral oil, with the advantage of being totally **biodegradable as well as reusable** at the end of the life cycle. The experiments involve **3 MV/LV transformers, 2 with output of 400 kVA and a third with output of 630 kVA.** The transformers were designed and constructed for these experiments, then filled with the new vegetable oil, and introduced in production in 2015, between March and September (see also *Institutions and the Company).*

"ENVIRONMENTAL EXPENDITURE"

Environmental expenditure is defined at a European level as: "*the cost of steps taken by an undertaking or on its behalf by others* ***to prevent, reduce or repair damage to the environment which results from its operating activities"***[83].

With regard to 2015 and the identification of the environmental expenditure, the aforementioned definition was applied, supplementing it with the environmental expenditure items described by the G4-EN31 indicator of the GRI Guidelines adopted for reporting purposes.

This information was **illustrated to all Group companies** affected by the issue, **during a number of meetings**, specifically organised by the parent company's CSR unit, **for the purpose of raising awareness and encouraging internal engagement**, so that the reporting items are clear and agreed on. 2015 reporting is not therefore fully comparable with past years, and related to the following environmental expenditure items:

- managementmanagement/**disposal of waste (including sludge);**
- **training** on environmental matters;
- protection of **air** from pollution and combating climate change;
- reduction of **noise** pollution;
- protection of **biodiversity** and the countryside;
- environmental management systems, costs for certification of emissions;
- **insurance coverage** for environmental liability;
- **clean-up costs**, for example after spills (excluding fine-related costs);
- external services for environmental management;
- **extra** expenditures to install **cleaner innovative technologies** (additional cost beyond standard technologies);
- **leak detection** activities;
- R&D (environmental aspects);
- extra expenditures on **green products**;
- other environmental management costs.

During 2015, Acea incurred approximately **44.4 million euro in environmental expenditure**, including investments and current costs (see table 41).

TABLE 41
ENVIRONMENTAL EXPENDITURE OF MAIN OPERATING COMPANIES (2015)

Group companies	Current expenditure (millions of euro)	Investments (millions of euro)
Acea Produzione	0.39	0.18
A.R.I.A. (*) and SAO	9.08	0.95
Aquaser (**)	0.74	0.004
Acea Distribuzione	0.35	0.01
Water services (***)	30.37	2.33
total	**40.93**	**3.48**

(*) Expenditure referring to two waste-to-energy plants.

(**) Expenditure referring to composting plants and Aquaser activities.

(***) Acea Elabori, Acea Ato 2, Acea Ato 5.

[83] See Recommendation 2001/453/EC.

Recommendation 2001/453/EC, as recalled above, also placed the costs for **waste management** under environmental expenditure. The **water companies Acea Ato 2 and Acea Ato 5,** producers of great quantities of **treatment sludge** and other industrial residue, spent **around 27 million euro** for the **disposal** of the same in 2015, **an item which therefore accounts for more than 80%** of the approximately 33 million euro for environmental expenditure relating to the water companies. The **waste-to-energy plants** also spent **around 7.5 million euro** for waste management, 83% of all resources spent for the environment.
Environmental expenditure of the water companies Publiacqua, Acque, Acquedotto del Fiora, and Umbra Acque is described in the Environmental figures for the water companies.

ENERGY AREA

REFERENCE BOUNDARY

The Energy section deals with Acea Reti e Servizi Energetici, Acea Distribuzione, Acea Produzione and the A.R.I.A. waste-to-energy plants. The waste-to-energy activities are described in detail in the *Environmental Area - waste management*.

TOTAL ENERGY PRODUCED:
783 GWh

ENERGY PRODUCED FROM RENEWABLE SOURCES: **613 GWh**

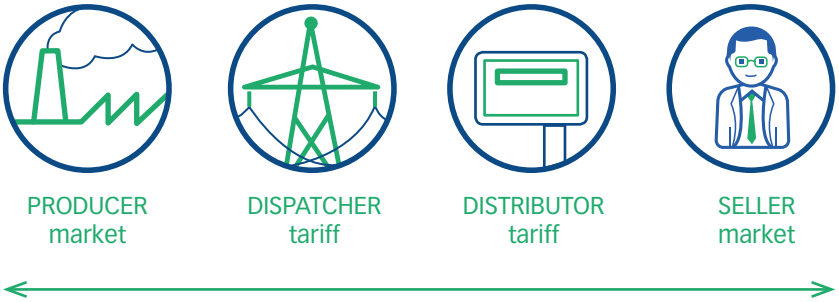
WHITE CERTIFICATES CANCELLED (No. TEEs): **222,556**

The Acea Group is vertically integrated in the entire electrical energy business chain, via independent companies that meet obligations which ensure neutrality in infrastructure management, essential for the development of a free energy market, prevent discrimination in accessing commercially sensitive information, and avoid cross subsidies between the various segments of the production chain. The activities carried out are:

- **production** of electrical energy and heat;
- **distribution** of electricity in the Rome and Formello area, including the management of public lighting;
- **sale** of electricity, heat and gas.

Under the current electrical energy system in Italy a consumer receives electricity as a result of the contribution of four distinct segments, managed by different parties, which operate in a separate, albeit integrated manner, in the value production chain (see chart 40).

CHART 40
THE ELECTRICAL ENERGY CHAIN



The electrical energy management system, despite representing the most sustainable energy vector at our disposal, has a strong socio-environmental impact, requires heavy infrastructure investment and needs support for research and development activities. Therefore, the sector requires market forces and the entrepreneurial capacity of the individual player, as well as the regulatory action of a public body that ensures the correct conduct of the various players.
Acea operates in almost all segments of the chain, as electrical energy producer, distributor for Rome and Formello, and seller throughout Italy.

ENERGY GENERATION: FOSSIL AND RENEWABLE ENERGY SOURCES

Generation and Group plants

Acea produces electrical energy primarily **through hydroelectric plants and waste-to-energy plants operating on Refuse Derived Fuel (RDF)** – a partially renewable, waste-derived primary energy source.

Acea Produzione carries out generation activities from (renewable) hydroelectric sources and via traditional thermoelectric plants using fossil sources. The overall generator base comprises:

- **7 hydroelectric plants** located in Lazio and Abruzzo (122 MW);
- **2 thermoelectric plants** located in the municipal area of Rome: Montemartini (78 MW) and Tor Di Valle (145 MW);

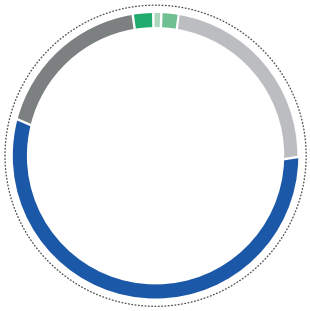
for a **total of 345 MWe of installed available power**.

Waste-to-energy generation is carried out by **A.R.I.A.,** which ensures production via **two waste-to-energy plants** located in San Vittore del Lazio and Terni. The gross overall electrical power currently available reaches **37 MWe**, **destined to increase to 50 MWe** once the revamping of Line 1 of the San Vittore plant has been completed (by the end of 2016).
The framework of installed generation power is completed by a small **photovoltaic park** of approximately **14 MWe**, corresponding to 52 plants, entrusted to Acea Reti e Servizi Energetici (see chart 42).

Electrical energy produced

Gross electrical energy production in 2015 came to around **783 GWh, down slightly** with respect to the previous year (3% less than the 2014 figure of 808 GWh), mainly due to the **decrease in production** from hydroelectric sources, caused by a very dry year.
The portion of electrical energy generated **from renewable sources**, around **613 GWh**, was clearly predominant, and came to **around 78% of the total,** with a contribution of **449 GWh from hydroelectric, 150 GWh from waste-to-energy** and **14 GWh from photovoltaic** sources (see chart 41 and table 45).
With regard to the **portion of green energy from waste-to-energy activities, around 49%** of production from this type of plant is **renewable**, since it is associated with the combustion of the biodegradable fraction of the waste used as the primary source. **The renewable portion** of the Refuse Derived Fuel (RDF) **entering the San Vittore del Lazio plant** came to **around 52% of the total waste-to-energy generation**, while **at Terni** the portion was **around 40%**. The average result of 49% is confirmed by continuous sampling of incoming material, throughout the entire 2015 running period.

CHART 41
ELECTRICAL ENERGY PRODUCED, BY PRIMARY ENERGY SOURCE (TJ) (2015)



Waste to energy (thermoelectric)	565.6	Photovoltaic solar	50.0
Hydroelectric	1,617.1	Gas oil	6.6
Waste to energy (renewable)	459.3	Natural gas fuel	40.3

Note: The values shown in the chart are TJ (1 GWh = 3.6TJ).

Thermal energy produced

The Tor di Vale thermoelectric plant produced approximately 80 GWh of thermal energy, obtained via the gas turbine unit engineered for cogeneration, and above all else via traditional boilers.

TABLE 42
GROSS HEAT PRODUCED AT THE TOR DI VALLE PLANT (2013-2015)

Gross heat produced (kWh_t)	2013	2014	2015
Tor di Valle thermoelectric plant	**99,332,154**	**92,026,747**	**80,195,695**
Gas turbine unit in cogeneration	*15,884,409*	*15,163,198*	*17,155,344*
Auxiliary boilers (Galleri type)	*83,447,745*	*76,863,549*	*63,040,351*

The heat generated is used to serve around **36,900 residents in southern Rome** (Mostacciano, Torrino, Mezzo Cammino) by means of a district heating network which serves a volume of 3,405,000 m³.

Efficiency of the electrical generation system

The gross average efficiency by means of which the Acea production system in its entirety managed to **convert the energy from primary sources into electrical energy**, estimated as the **ratio between gross electrical energy produced** in the year (equal to 783 GWh) a**nd incoming energy** (around 2,277 GWh), **came to 34%** (see also table 45).

$$E_{ff} = \left(\frac{783}{2{,}277}\right) x100 = 34\%$$

Where E_{ff} is the average gross conversion efficiency.

Average efficiency net of internal plant consumption and initial transformation losses is as follows:

$$E_{ff} = \left(\frac{728}{2{,}277}\right) x100 = 32\%$$

The breakdown of efficiency by individual plants is shown in table 45.

The Group's thermoelectric and hydroelectric plants, and the related gross output, are listed in table 43; the waste-to-energy plants are by contrast described in the pertinent section (see also the *Environmental accounts*).

TABLE 43
ACEA PRODUZIONE POWER PLANTS

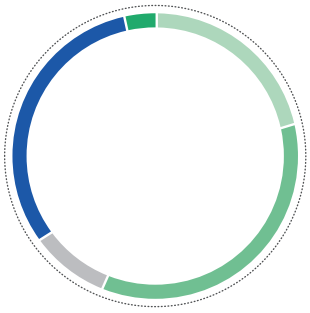
Hydroelectric plants	Thermoelectric plants
A. Volta plant, Castel Madama (Rome) gross output 9.4 MW	Tor di Valle plant: co-generation section (*) (Rome) Natural gas fuel – gross output 19.3 MW
G. Ferraris plant, Mandela (Rome) gross output 8.5 MW	Tor di Valle plant: combined cycle section (Rome) Natural gas fuel – gross output 125.7 MW
Salisano plant (Rieti) gross output 24.6 MW	Montemartini plant (Rome) Diesel fuel – gross output 78.3 MW
G. Marconi plant, Orte (Viterbo) gross output 20 MW	
Sant'Angelo plant (Chieti) gross output 58.4 MW	
Cecchina plant (Rome) gross output 0.4 MW	
Madonna del Rosario plant (Rome) gross output 0.4 MW	
grand total: gross output 345 MW	

(*) The co-generating turbogas unit at Tor di Valle is open-cycle in type and supplies the district heating service to the districts of Torrino Sud, Mezzocammino and Mostacciano, for a total of 36,930 inhabitants.

With reference to the thermoelectric plants, **the reconversion of the Tor di Valle plant** – combined cycle section under co-generation has been launched. In detail, the reconversion of the two current plants, a Combined Cycle Gas Turbine (CCGT) and a co-generation plant (CHP- Combined Heat and Power) is envisaged, converted into a single High-Efficiency Co-generation plant, functional for both the supply of heat to the southern districts of Rome - those already served and new sites - and the supply of heat for the new sludge drying plant serving the Rome South Treatment Plant. The potential benefits include: the optimisation of fuel consumption, greater machine output and the reduction of emissions into the atmosphere thanks to adoption of Best Available Techniques (BAT) for the "fume lines" of the engines and the type of boiler burners used, as well as for the atmospheric emissions monitoring system. Work is due to begin in the first half of 2016.

Chart 42 shows **installed capacities**, which **overall amount to around 396 MW**, broken down by energy source. There were no changes vis-à-vis the previous year.

CHART 42
GROUP INSTALLED ELECTRIC POWER, BY ENERGY SOURCE (MW) (2015)



Gas oil	78.3
Natural gas (combined cycles and co-generation)	144.9
Photovoltaic solar (**)	13.5
Hydroelectric	121.7
Waste to energy (*)	37

(*) As in the previous two years, once again in 2015 the San Vittore del Lazio plant was only considered for the two lines running.
(**) On 29 December 2015 the photovoltaic business segment of A.R.S.E was merged with Acea Produzione SpA, except for the Parco della Mistica Pensiline (953 kWp) and Parco della Mistica Serre (4,019 kWp) plants, transferred to Elga Sud SpA.

Following on from the medium/long-term investment projects for **the modernisation and streamlining of Acea Produzione hydroelectric plants**, also for the purpose of achieving incentive tariffs (for example green certificates), after the work carried out at the Guglielmo Marconi and Salisano plants - located in the municipalities of Narni (Terni) and Salisano (Rieti) - **during 2015** plant engineering **revamping work was launched** at the **Alessandro Volta plant** located in the municipality of Castel Madama (Rome). Modernisation activities also concerned pipes conveying the water to the plant, specifically the static functional modernisation of tunnels present in the offtake channel of water from the S. Cosimato Dam, as well as consolidation and improvement measures for masonry work and dam-rock contact at the same infrastructure. This series of works will make it possible, installed and authorised power under concession conditions being equal, to **optimise the use of the available water resource.**
Acea Produzione is also preparing the technical-economic feasibility study for possible further investments aimed at plant engineering revamping activities at the Galileo Ferraris hydroelectric plant, in the province of Rome.

The availability indices for Acea Produzione plants, by Plant, are shown in table 44.

TABLE 44
AVAILABILITY INDICES FOR ACEA PRODUZIONE PLANTS (2013-2015)

Energy source	Plant	Overall availability (%)			Scheduled unavailability (%)			Unscheduled unavailability (%)		
		2013	2014	2015	2013	2014	2015	2013	2014	2015
Natural gas	Tor Di Valle (combined cycle - CCGT)	95.6	100.0	73.3	0.0	0.0	25.2	4.4	0.0	1.5
	Tor Di Valle (co-generation section)	78.4	97.5	95.7	1.1	0.0	1.6	20.5	2.5	2.7
Gas oil	Montemartini	99.5	90.7	96.7	0.5	4.1	3.3	0.0	5.2	0.0
Hydroelectric	Salisano	97.7	99.8	99.4	0.2	0.0	0.3	1.8	0.2	0.3
	S. Angelo	94.5	97.0	96.6	0.2	2.0	3.3	5.2	1.0	0.1
	G. Marconi (Orte)	95.6	99.5	99.9	0.0	0.4	0.0	4.4	0.1	0.1
	A. Volta (Castel Madama)	91.9	99.0	47.1	0.2	0.4	51.7	7.9	0.7	1.3
	G. Ferraris (Mandela)	97.5	98.2	79.3	2.4	1.7	19.2	0.0	0.1	1.6
	Minor plants	99.7	93.9	99.1	0.0	2.0	0.0	0.3	4.1	0.9

Note: The figure for the hours of scheduled/unscheduled unavailability cannot be provided as the indices are calculated taking into account partial shut-downs and load limits as well.

The following definitions must be taken into account in order to correctly interpret the figures provided in table 44:

- **overall availability (%)**: this index refers to the period in which a plant or section thereof is available to produce energy, including periods it was not operational due to electricity market needs. It is obtained from the ratio between the available energy - equal to the difference between the maximum energy which can be generated and unavailable energy (see following points) and the maximum energy which can be generated in the month;
- **scheduled unavailability (%)**: this index refers to the period in which a plant or section thereof was unavailable due to scheduled events (maintenance, etc.). It is obtained from the ratio between the energy unavailable during the scheduled event and the maximum amount of energy that can be generated in the month;
- **unscheduled unavailability (%)**: this index refers to the period in which a plant or section thereof was unavailable due to fault. It is obtained from the ratio between the energy unavailable during the fault event and the maximum amount of energy that can be generated in the month.

TABLE 45
ENVIRONMENTAL INDICATORS: ELECTRICAL ENERGY PRODUCED (by primary energy source), ENERGY INDICATORS OF PRIMARY ENERGY AND OUTPUTS (2013-2015)

Primary energy source	2013	2014	2015
		TJ (GWh) (*)	
Electrical energy produced (by primary energy source)			
Gas oil	4.7 (1.3)	0.2 (0.05)	6.6 (1.84)
Natural gas (combined cycles and co-generation)	37.1 (10.3)	36.7 (10.2)	40.3 (11.2)
Waste-to-energy (for 2015: around 51% of total)	505.8 (140.5)	543.2 (150.9)	565.6 (157.1)
Total thermoelectric	**547.6 (152.1)**	**580.0 (161.1)**	**612.5 (170.1)**
Hydroelectric	1,788.1 (496.7)	1,782.7 (495.2)	1,617.1 (449.19)
Waste-to-energy (for 2015: around 49% of total)	430.6 (119.6)	490.0 (136.1)	459.3 (149.8)
Photovoltaic	62.3 (17.3)	55.8 (15.5)	50.0 (13.9)
Total renewable	**2,281.0 (633.6)**	**2,328.5 (646.8)**	**2,126.4 (612.9)**
Grand total	**2,828.6 (785.7)**	**2,908.5 (807.9)**	**2,738.9 (783.0)**
primary energy by energy source used			
Gas oil	18.4 (5.1)	1.6 (0.5)	26.6 (7.4)
Natural gas (combined cycles and co-generation)	154.1 (42.8)	142.1 (39.5)	155.9 (43.3)
Waste-to-energy	4,419.72 (1,227.7)	5,150.3 (1,430.7)	5,647.7 (1,568.8)
Hydroelectric	2,151.0 (597.5)	2,195 (609.7)	2,008.7 (558.0)
Photovoltaic	444.9 (123.6)	398.6 (110.7)	357.4 (99.3)
Grand total	**7,188.1 (1,996.7)**	**7,887.6 (2,191.1)**	**8,196.3 (2,276.8)**
Plants	**2013**	**2014**	**2015**
		%	
average outputs of the electrical energy generation plants			
Tor Di Valle plant (combined cycle - CCGT)	n.a.(**)	n.a.(**)	n.a.(**)
Tor di Valle plant (co-generation section)	69.9	70.6	71.3
San Vittore del Lazio waste-to-energy plant	20.9	20.0	19.5
Terni waste-to-energy plant	18.7	18.3	18.1
Montemartini plant	25.4	11.3	24.8
Salisano plant	87.9	88.0	88.0
S. Angelo plant	73.4	70.3	69.6
G. Marconi plant	98.6	98.6	98.6
A. Volta plant	83.0	82.8	81.9
G. Ferraris plant	91.6	91.2	91.4
Minor plants	62.7	61.0	61.3
Photovoltaic plants	14.0	14.0	14.0

(*) 1 GWh=3,6TJ.
(**) The extremely low levels of production reported in the year did not make it possible to calculate a significant output indicator; the combined cycle production has been equal to zero for several years.

ENERGY DISTRIBUTION

Distribution networks

DISTRIBUTION NETWORK - ROME AND FORMELLO - : **29,000 km**

ELECTRICITY DISTRIBUTED IN ITALY IN 2015: **11,200 GWh**

INDEX OF TERRITORIAL PROTECTION (UNDERGROUND HV NETWORK/TOTAL HV NETWORK): **42%**

Acea Distribuzione manages the **electrical energy distribution network** serving Rome and Formello, covering around **29,000 km** and capable of serving roughly 2.7 million resident inhabitants. In terms of volumes of electricity distributed, around 11,200 GWh per year, the company is the third leading Italian operator in the sector. Table 46 shows the main plant figures, relating to the primary, secondary stations and overhead and underground power lines.

The environmental indicator linked to the **protection of the area** is calculated as the percentage of **high voltage (HV) network underground by total HV lines operating** (overhead and underground). The data is monitored and in 2015 it was more or less stable at around **42%.**

With reference to **electric and magnetic fields** (relating to the primary transformer stations, the High and Average voltage overhead lines and secondary transformer stations), any possible risk for the health of the reference community is dealt with in the Company environmental analysis document and in the Risk Assessment document.
Acea Distribuzione carries out periodic sample checks and at the sites deemed the most critical. Furthermore, as a result of reports received from users/customers or external Bodies, additional checks are performed. At times, upon the specific request of the customers, checks are carried out by ARPA Lazio[84].

During 2015 the plan for the modernisation **of the high (150 kV) and very high (220 and 380 kV) electricity distribution and transmission network**, as part of the **Memorandum of Understanding** entered into in 2010 between Acea Distribuzione, Rome City Council and Terna SpA, continued, and in particular concerned:

- the creation of 4.7 km of overhead line (Flaminia – Cassia), which will **enable the demolition of 9.2 km** of the current Rome North – Cassia overhead line **and of 9.7 km of the 60 kV double-circuit** line Flaminia – Grottarossa, **of which 3.2 km within Veio Park**, created using old trestle supports;
- the creation of 3 km of overhead line (Rome North - Bufalotta), which once complete, also with works for the 1.8 km stretch of underground cables, will enable the **demolition of 9.7 km** of the current 150 kV Flaminia - Bufalotta overhead line, of which **3.2 km within Veio Park**;
- completion of reconstruction work on the 150kV "Rome North-Prati Fiscali" overhead line, to increase its range.

Furthermore, activities for the **demolition of the 60 kV power lines** constructed in the past decade on the **Roman shoreline at Ostia** were of particular importance; these lines, further to various urban planning changes, currently pass through inhabited areas and **protected natural zones,** such as the **Castel Fusano pinewood**. The work, begun in this area in **July 2015**, will lead to the **removal of 32 km of overhead lines** which are now obsolete in the Ostia area by the end of the first quarter of 2016. **Demolition work concluded** in 2015 for the 60 kV Casal Palocco-Lido overhead line (29 supports and 6 km of line removed), and the 60 kV Vitinia-Lido overhead line (64 supports and 13 km of line).

The entire project will generate important benefits, eliminating trestles and line conductors from inhabited zones and protected natural areas. But above all, thanks to lower energy losses, there will be a considerable energy saving of around 58 million kilowatt hours, equal to the annual consumption of around 20,000 households, plus an improved quality of the electricity service.

[84] Legislative References: Italian Legislative Decree 81/08; CEI 211-6 guide first edition dated 01/2001; Italian Prime Minister's Decree dated 8 July 2003 "Fixing of exposure limits, warning levels and quality objectives for protection of the population from electric and magnetic fields with a network frequency (50Hz) generated by power lines".

MEMORANDUM OF UNDERSTANDING FOR MODERNISATION OF THE HIGH AND VERY-HIGH VOLTAGE NETWORKS IN THE MUNICIPALITY OF ROME

The Memorandum of understanding for the modernisation of the high (150 kV) electrical distribution networks and high and very high (220 and 380 kV) electrical transmission networks was entered into in March 2010, by the City of Rome (Mayor and Director of Public Works), Acea Distribuzione and the company Terna (operator of the national transmission networks). The Memorandum was signed, for acceptance, by the Lazio Regional Authority (Director of Environment and Inter-Community Cooperation), the Veio Park Regional Agency, RomaNatura Regional Agency, and City of Rome Department of Environmental Policy, as Managing Agency for the Roman Coastal Nature Reserve.

The Memorandum contains a **programme of measures concerning numerous electrical lines and transformer and distribution stations**, and sets out important objectives in terms of **increasing the capacity of the electrical systems, improving the related reliability and integration of plants in the areas**. In detail, it envisages the construction of around 123 km of new overhead lines and the **demolition of nearly 300 km of existing overhead lines,** constructed over the last decade and currently in an area which passes through **11 protected natural areas**. Another important benefit involves energy savings deriving from reduced losses in transmission and transformation within the network, thanks to the changing technical features of new plants compared to pre-existing ones.

The new layouts of lines and the innovative technologies used in modernisation works will make it possible to **minimise the environmental impact**. With regard to the network managed by Acea Distribuzione, **demolitions relate to around 130 km of lines**, while **the new lines constructed will cover just over 20 km.**

The entire project will generate structural benefits with regard to environmental impact, energy efficiency and quality of the electricity service provided:

- portions of territory freed up: the elimination of trestles and line conductors from the areas used will lead to **ample portions of land being freed from the by-now outdated plants** which, even if still in line with current legislation, are in any event found close to dwellings;
- energy saving: the new installations, once fully up and running, will generate **an estimated annual energy saving of 58 million kilowatt hours**, equal to the annual consumption of around twenty thousand households;
- greater quality of the electricity service: **the new network will have a greater transportation capacity and increased reliability** compared with the installations currently operating.

Energy losses in the network, due mainly to the heating of conductors as a result of the Joules effect, come to **around 6.2% of total energy conveyed**, in line with average values in Italy.

The management of the Rome and Formello electrical energy distribution networks is marked by **on-going improvement in performance**, also with regard to energy efficiency. For some years now **numerous loss-reduction initiatives** have been under way, ranging from the installation of low-loss transformers to the replacement of medium voltage levels from 8.4 kW to 20 kW.

The Smart-Network Management System project, aimed at **improving network performance** thanks to the evolution and integration of operating systems, as well as other activities carried out in the Smart grid sphere, and in general, technology innovation applications for network management are illustrated in *Institutions and the Company*.

TABLE 46
ENVIRONMENTAL INDICATORS: OVERHEAD AND UNDERGROUND DISTRIBUTION LINES AND PLANTS

Acea Distribuzione

Plants and outputs	u. m.	2013	2014	2015
HV/HV - HV/MV primary sub-stations	No.	70	70	71
HV/HV and HV/MV transformers	No.	170	168	169
Transformation power	MVA	7,787	7,903	7,764
Secondary substations in operation	No.	13,078	13,113	13,124
MV/MV - MV/LV transformers	No.	12,760	12,799	12,797
Transformation power	MVA	6,032	6,118	6,154
Overhead and underground networks				
High voltage network - overhead lines	km	335	323	323
High voltage network - underground lines	km	252	238	239
Medium voltage network - overhead lines	km	456	458	440
Medium voltage network - underground lines	km	9,845	10,050	10,086
Low voltage network - overhead lines	km	1,669	1,658	1,648
Low voltage network - underground lines	km	17,450	17,585	17,723

ENERGY SAVINGS

Energy saving certificates and co-generation

Italian Legislative Decree 102/2014, implementing directive 2012/27/UE on energy efficiency, **identifies the mandatory regime envisaged by Article 7 of the EU directive in the mechanism of white certificates**, maintaining the **fundamental role performed in Italy**, since 2004, to provide incentives for energy efficiency measures in electrical energy and gas end uses. The white certificates mechanism is still that which must ensure annual energy savings, as at 31 December 2020, of no less than 5 Mtoe/year, out of a total envisaged target of around 15 Mtoe/year.

THE ENERGY EFFICIENCY CERTIFICATES (TEE) MECHANISM

Europe has been pushing for years to encourage the increase in the supply of energy from renewable sources and, at the same time, increase energy efficiency. The white certificates (or "Energy Efficiency Certificates", TEE) mechanism prepared in Italy has been assessed very positively, in particular by France and the United Kingdom, since it efficiently promotes the rational use of energy.
The incentive system has been operative since 2005, and entails **obligations** for electricity and natural gas **distributors**, combined with **benefits offered to parties who manage to reduce and improve energy end uses**. Parties that adopt (certain and gaugeable) energy efficiency measures are issued a number of White Certificates equal to the energy saving achieved (one certificate for each Toe saved). Leading distributors of electricity and natural gas are obliged to achieve savings of a well-defined portion of energy. Distributors may take steps directly to carry out energy efficiency measures in relations with their customers, obtaining the corresponding white certificates, or they can buy white certificates in a quantity corresponding to the portion not obtained. Obliged distributors are granted a cash contribution to partly cover the costs they have incurred for the accomplishment of energy efficiency measures or for the purchase of white certificates.
Until September 2011, the white certificates system was managed by the Electrical Energy and Gas Authority (AEEGSI), and beneficiaries could be those belonging to two specific categories: "obliged parties" and "voluntary parties". The Italian Ministerial Decree for Economic development dated 28 December 2012, which came into force on 3 January 2013, defined energy saving objectives for electrical energy and gas distribution companies for the years 2013-2016, with plans for **a further review of the mechanism** to improve it further.
source: http://www.nextville.it/Incentivi_e_Bandi/509/Certificati_Bianchi

During 2015 Acea Reti e Servizi Energetici concentrated **on energy efficiency initiatives carried out by Group companies**, reporting the results to the Energy Services Operator (GSE) so as to **obtain the Energy Efficiency Certificates** (TEE). In order to achieve the energy savings target, pertaining to Acea Distribuzione, action focused on the purchase of TEEs on the market managed by the Electrical Energy Market Operators (GME)[85].
In relation to the obligation for 2014, to be presented for cancellation by May 2015, the portion pertaining to Acea Distribuzione was equal to **174,316 TEEs**, to which the residual portion of the 2013 obligation should be added, equal to **48,240** TEEs.
Therefore, since **Acea Distribuzione has a TEE portfolio greater than the envisaged obligations, 222,556** white certificates were cancelled, completely meeting the aforementioned obligations.
With regard to the new obligation period - to be presented for cancellation by 31 **May 2016** - the GSE has established an overall amount equal to **201,469 TEEs**.

The activities entrusted to Acea Reti e Servizi Energetici, and in particular its subsidiary **Ecogena**, include the design and construction of **tri-generation plants**[86] for the production of electricity, heat and cooling energy, in a combined manner. **In 2015 cogeneration plants were managed for a total of 5.5 MW of electrical power**, in conjunction with district heating networks, further to the commissioning of the Europarco plant with electrical output of 0.4 MW, heating output of 5 MW and a cooling output of 5 MW.

To date, the plants managed by Ecogena have received, pursuant to Italian Ministerial Decree dated 5 September 2011, 2,047 TEEs.

Energy audits

As already recalled, Italian Legislative Decree 102/2014 provides for measures to increase energy efficiency in all areas of consumption for civil or industrial purposes, setting an indicative savings target, at a national level, in end uses, of 15.5 Mtoe (million tonnes oil equivalent) per annum to be achieved by 2020, in keeping with the provisions of the National Energy Strategy.

Acea is particularly affected by Article 8 of the decree, which introduces the **obligation** for all large enterprises to implement **Energy audits and energy management systems**. In accordance with this obligation, **Acea has drawn up a clusterisation plan,** in other words a **selection of plants on which to carry out energy diagnosis,** taking into consideration the representative nature of consumption of Group companies. Relative activities have been entrusted to Ecogena, which - also availing itself of outside consulting - took steps to draw up the energy audits and forwarded them to Enea, as per legislative provisions. In order to identify the sites, Ecogena involved 26 Group companies before selecting **48 sites to be subjected to energy audits.** Accordingly, out of 330,000 toe per annum of overall Group consumption, **250,000 toe per annum were analysed,** of which 54,000 toe per annum referring to uses other than electrical energy production. **The total efficiency measures identified** by the energy diagnosis

[85] This choice was also reinforced by the entry into force of AEEGSI Resolution 13/2014/R/eel, on new methods for defining the tariff-based contribution to those distribution companies obliged to annually cancel TEEs, which in practice links the contribution to the market price of the TEEs themselves, thus resulting in a ceiling on financial risks.
[86] Co-generation, in other words combined production of electricity and thermal energy, makes it possible to achieve high outputs: between 80 and 90%. Tri-generation is a particular application allowing use of part of the thermal energy recovered to produce refrigerating energy in the form of refrigerated water for air conditioning or industrial processes.

will permit, when **fully up and running, estimated annual savings of 9,800 toe, over 18% of primary energy consumption not linked to electricity production**.
Furthermore, measures were launched during 2015 for enhancing the **efficiency of lighting plants** for Piazzale Ostiense offices (central headquarters) and in Via dell'Aeronautica, with the replacement of lights in favour of the new LED technology. The estimated saving for 2016 comes to around **60 toe**.

Reduction in consumption and energy efficiency action

Over the last few years Acea has implemented various measures for the **recovery of energy efficiency in the processes handled** both in the **companies in the water area** and in the **networks and waste management areas.**
With regard to the **Water** area, it should be mentioned that the main Group companies, together[87], presented **an increase in consumption in 2015 (+5.95%) in absolute value when compared with last year**.
This overall increase was heavily influenced by the increase in **Acea Ato 2's** consumption by around 20 GWh, essentially attributable to plants belonging to the water sector (roughly +15% compared with 2014 consumption) and mainly due to the particularly dry weather conditions, which in 2015 led to the need to resort to reserve pumping stations to supplement gravity-based flows. This was compounded by the change in boundary which took place between 2014 and 2015 with the acquisition of new municipalities under management (Rocca di Papa, Capranica and Colleferro) and the consequent increase in the number of plants.
The same climatic conditions - 35% reduction in rainfall - affected the increases in electricity consumption for Acea Ato 5, attributable to the significant and necessary increases in pumping for supplies and the greater consumption of certain treatment plants, due to the meeting of more challenging standards and the widespread use of mobile centrifuges for the volumetric reduction of treatment sludge.
Similar situations were also noted for Group companies operating in Tuscany, Umbria and Campania.
These elements, together with the constant increase in services levels required by new legislation in the Italian water sector, were however flanked by energy efficiency measures, thereby making it possible to limit the increase in energy consumption of companies in the water area in absolute terms. For example, **Acea Ato 5** carried out measures for the timed switching off of lights, power factor correction in treatment plants and other suitable measures, for an annual saving of around 17,000 kWh, and obtained a further 86,000 kWh of savings thanks to a technical measure at the Agnone Cassino treatment plant[88].
Acea Ato 2 started work for the replacement of the 4 electric pumps at the Peschiera springs, which will lead to energy savings as from 2016. The energy saving action of water companies operating in Tuscany, Umbria and Campania are described in *Water Company Data Sheets.*
Like the majority of Group companies, companies operating in the water sector, are progressively obtaining UNI EN ISO 50001 standard energy certification, confirming their commitment with regard to energy efficiency and environmental sustainability.

In the **Networks** area, each year **energy audits** are carried out at the plants, with technical-economic analyses being the first step towards increased efficiency. In detail, **Acea Distribuzione** has adopted a structured energy efficiency enhancement policy and, in 2015, within the sphere of the energy management system (certified according to the UNI standard), with the coordination of Ecogena, carried out **energy diagnoses at 5 company sites**, as per Italian Legislative Decree 102/2014 (see *Energy diagnostics of the Group*).
The diagnosis made it possible to identify actions for increasing energy efficiency, and in 2016 a number of the related projects will be developed.
During 2015, actions deriving from similar previous diagnoses included: the refurbishing of a heating power plant, use of electrical machines, progressive transformation of the voltage level on MV from 8.4 to 20 kV plus other adaptations to standards also for the HV and LV lines and optimisation of the MV network structure; and the use of very low loss MV/LV transformers. As from 2016, activities will also commence for the replacement of light fittings with LED fittings, both for internal and external lighting.

TABLE 47
ENERGY EFFICIENCY WITHIN ACEA DISTRIBUZIONE (2014-2015)

		ENERGY SAVING OBTAINED	
Action	**u.m.**	**2014**	**2015**
Refurbishing of a heating power plant	MWh	-	4.9
Use of 43 electric motor vehicles	MWh	22.7	10.6
Reduction of network losses (*)	MWh	1,615	4,254
Reduction of losses for purchase of new transformers	MWh	5.9	6.96

(*) Measures carried out on the network, as from 2014. The measures carried out in 2014 also resulted in benefits in 2015. The portion of the measures carried out in 2015 comes to 2,639 MWh.

Acea Illuminazione pubblica is involved in activities linked to increasing the energy efficiency of Group companies, with the refurbishment or transformation of lighting systems at production sites, the application of advanced technologies (LED) leading to a sharp reduction in consumption. Furthermore, the transformation of lighting systems using LED technology is progressively implemented in the public, functional and artistic-monumental lighting service, man-

[87] In other words, considering all the Group's water companies, also those consolidated at equity.
[88] This involved an interconnection between the dissolved oxygen detector in the oxidation tank of the treatment plant and the functioning of the compressor which introduces air into the tank, so as to optimise electricity consumption.

aged in the Municipality of Rome: during the year, Acea Illuminazione Pubblica installed 6,553 LED lighting points (new and converted).

In the **Environment** area (waste management), **A.R.I.A.** - further to energy audit activities already carried out in previous years at the **San Vittore del Lazio plant** - implemented actions to increase efficiency, for example the **modification of systems for operating and controlling air compressors** (200,000 kWh of savings in 2015), and has **planned new measures** for 2016: the refurbishment of lighting at the plant using LED technology and the refurbishment of the slag transportation and cooling system. At present, the slag produced by the waste-to-energy process is extinguished by means of a water bath before storage and final disposal; it follows that, together with the slag, water is also stored and then disposed of, leading to greater waste. Furthermore, the intrinsic heat of the slag is transferred to the water for cooling. By means of the modification to the process, dry slag will be produced and the heat removed from the slag for cooling will be recovered by an economiser for the generation of electricity. A reduction in water consumption will also be achieved.
At the Orvieto waste-treatment plant managed by the subsidiary **SAO** important revamping work was launched and completed during 2015. Among other things, this work involved an anaerobic digestion section for the organic fraction, which will make it possible to produce biogas for electricity generation.

ENVIRONMENT AREA - WASTE MANAGEMENT

REFERENCE BOUNDARY

This section includes the activities of the company SAO, which sees to waste collection, recycling, treatment and disposal, as well as the A.R.I.A. waste-to-energy plants and the Aquaser compost-production plants.

WASTE PROCESSED IN WASTE TO ENERGY PLANTS: APPROXIMATELY
340,000 tons OF SSF AND PULPER

ENERGY PRODUCED BY SAN VITTORE DEL LAZIO AND TERNI PLANTS: AROUND
307 GWh

ENERGY PRODUCED (MWh) PER WTE OPERATING HOURS AT SAN VITTORE DEL LAZIO:
13.5 MWh/h

ENERGY PRODUCED (MWh) PER WTE OPERATING HOURS AT TERNI:
10 MWh/h

WASTE PRODUCED (t) PER WTE OPERATING HOURS AT SAN VITTORE DEL LAZIO:
2.7 t/h

WASTE PRODUCED (t) PER WTE OPERATING HOURS AT TERNI:
2.0 t/h

Since 2006, Acea has chosen to place its experience and its entrepreneurial ability at the service of waste cycle management. This is a sphere of activity that has a very high socio-environmental impact which if handled properly can fall within the parameters of the circular economy[89]: by re-using waste, one passes from the linear economy (extraction of resources, production, disposal of products) to the circular economy, where one reasons in terms of "re-making, repairing, recycling or reselling".

The Group handles the following stages of the waste cycle:
- The **treatment of municipal solid waste** (MSW) and other waste types (green waste from selective collection, industrial waste, etc.), **including material recovery** (glass, plastic, steel, other metals, paper and cardboard) and disposal of the residues in landfills;
- **Incineration with energy recovery**;
- **Production of high-quality compost** for agricultural purposes.

[89] *Towards the Circular Economy: Economic and business rationale for an accelerated transition* was published in 2012. The report was commissioned by the Ellen Mac Arthur Foundation and drafted by McKinsey & Company. See also the European Commission's Circular Economy study (Closing the Loop - An EU Action Plan for the Circular Economy" [COM(2015) 614 final].

With regard to the collection and transportation of the waste produced, **Aquaser,** an Acea subsidiary - mainly benefiting the Group's water companies - **collects the sludge produced by the non-industrial wastewater treatment cycle**, so that it is treated and used, for example, in agriculture.
The subsequent sections provide further information on the operational aspects of the listed activities, stressing **the advanced competencies and technologies required for modern and efficient waste management**.

SUSTAINABLE APPROACH TO INTEGRATED WASTE TREATMENT

The Acea Group, through the company **SAO** (Servizi Ambientali Orvieto), manages an important centre for the treatment of urban waste, situated in the municipality of Orvieto. The plant carries out activities for **sorting, composting and landfilling**, as per certified management systems (see *Corporate Identity, Management systems)*.
SAO manages its activities for **maximum recovery of materials**, while also favouring **energy production from renewable resources** and the **reduction of waste to landfills**. In 2015, incoming waste at the plant totalled 93,865 tonnes, of which 6,981 tonnes from separate waste collection.
Not everything is sent to landfill: around 7,031 tonnes (7.5%) of glass, paper and cardboard, metal and plastic are sent for recycling. As a rule, the plant also consumes a portion of energy from a photovoltaic plant (more than 30%) but in 2015 due to the revamping of the plant, the portion from PHV came to around 1.4% of the total consumed. The plant will be completely reactivated as from April 2016.

A **new anaerobic treatment line** for organic waste was completed at the end of 2015 and is now being tested and inspected; this will make it possible to produce electricity from the combustion of biogas released by digestion (see the dedicated box). The objective is to create a modern and innovative plant complex for the disposal of waste and recovery of materials with production of renewable energy.

RECOVERY OF ENERGY FROM BIOGAS

In some plants, besides aerobic (composting) treatment, anaerobic digestion is also carried out. **Anaerobic digestion** is a biochemical conversion process which takes place in the absence of oxygen and involves the demolition, by micro-organisms, of complex organic substances (lipids, protides, glucides) contained in vegetal matter and in animal-origin by-products. This process produces a gas (biogas), which can be burnt to produce electricity and heat; in this way, it is possible to decrease the level of polluting emissions of the landfill and improve handling, thanks to the consequent decrease in the volumes linked to the recycling of the humid fraction.
The test and inspection phase of important revamping work for the activation, at the beginning of 2016, of a **new anaerobic treatment line for organic waste** is under way at the SAO plant complex; this will make it possible to produce electricity from the combustion of biogas released by digestion. The calorific value of the biogas, equal to around 4,250 kCal/Nm^3, will be exploited by means of the installation of an internal combustion co-generation plant, by means of which it will be possible to produce energy (electricity and heat).
At the moment, at the non-hazardous waste landfill, a process takes place for the material delivered, involving decomposition (biodegradation) and mineralisation of the organic substance performed by aerobic bacteria, due to the presence of oxygen among the waste. Once the oxygen has been consumed, the anaerobic bacteria act (no longer in the presence of air) and continue the degradation process, with the formation of biogas. The biogas produced, both by the operating landfill and that depleted, is captured and sent to a special plant for its energy recovery, mainly made up of two internal combustion engines, located close to the operating landfill. In greater detail, drainage chambers are constructed at the landfill for the biogas (primary and secondary). All the chambers are linked to the energy exploitation plant, with the exception of those which are found in the cultivation plots. The biogas energy exploitation plant is managed, with its staff, by a third company (ICQ Srl), appropriately qualified and which holds the required authorisation for the exercising of recovery activities. The collection of biogas also contributes towards avoiding the spread of unpleasant smells in the air and makes it possible to decrease the emission of natural gas (greenhouse gas with a global warming potential 20 times that of CO_2) into the atmosphere, reducing the greenhouse effect in accordance with the principles of the Kyoto Protocol. Furthermore, its use for the production of electricity makes it possible to avoid the emission of CO_2 produced by the combustion of conventional fossil fuels, such as oil and coal. Therefore the positive effect is twofold: on the one hand, there is a reduction in the emission of greenhouse gas and on the other the production of electricity from renewable sources rises.
Further details: Acea Study Papers No. 3: Industrial management of waste for sustainable development.
http://www.acea.it/section.aspx/it/quaderni_acea.

WASTE INCINERATION AND ENERGY RECOVERY

The waste incineration process, considered by the European Union as valid if combined with energy recovery from waste, besides involving energy-economic advantages (energy recovery), makes it possible to obtain a notable reduction in waste volumes, as well as biological stabilisation of the waste.

Within Acea, **A.R.I.A.** handles the waste-to-energy process by means of **two plants,** one located in San Vittore del Lazio and the other in Terni. Both the plants operate in observance of certified management systems (see *Corporate Identity, Management systems*).
The San Vittore del Lazio (Frosinone) plant consists of **three independent waste-to-energy lines** designed for the same type of fuel source: waste-derived fuels (WDF), now also known as **Secondary Solid Fuels (SSF)**.
Each line has an **electrical generation power** of 12 MW_e, **for a plant total of 36 MW_e at full operation**. However, one of the three production lines, line 1, is undergoing revamping, which will be completed by the end of 2016, thus the **effective electrical power available is around 24 MW**, which in 2015 produced **225 GWh** of electricity. As a waste incinerator, the treatment capacity of the plant, **in 2015**, **was 239,871 t**, and when fully operational it could be roughly 360,000 t a year[90].
The San Vittore plant plays an important role in the management of urban waste for the Lazio region, given the particularly advanced technologies applied for its construction and its considerable treatment potential.

[90] This maximum quantity is subject to a new Environmental Impact Assessment procedure, which to date permits the heat processing of waste for a maximum of 300,000 t a year.

TABLE 48
SAN VITTORE DEL LAZIO WASTE-TO-ENERGY PLANT: OPERATING FIGURES (2013-2015)

	u. m.	2013	2014	2015
Solid fuel incinerated	t	224,220	224,336	239,871
Gross electricity produced	GWh	202.23	205.09	225.35
Conversion efficiency (*)	kWh/kg SSF	0.90	0.91	0.94

(*) Ratio between gross electricity produced (GWh) and the quantity of incinerated SSF (t).

The Terni plant, which recently underwent major revamping, consists of a **single waste-to-energy line** with power of about 12 MW_e, using **paper pulp** as fuel, specifically waste deriving from cellulose for paper production.

TABLE 49
TERNI WASTE-TO-ENERGY PLANT: OPERATING FIGURES (2013-2015)

	u. m.	2013	2014	2015
Pulp incinerated	t	69,417	99,397	99,892
Gross energy produced	GWh	57.86	81.95	81.52
Conversion efficiency (*)	kWh/kg pulp	0.83	0.82	0.82

(*) Ratio between gross electricity produced (GWh) and the quantity of incinerated pulp (t).

Since digital technologies will mean increasingly less paper for the company, in order to achieve greater operating flexibility, authorisation has been requested for the use of other types of waste, deriving for example from the scrap of separate waste collection units in Umbria. The authorisation procedure was launched in 2014 and is still under way.

Two indices are highlighted for both waste-to-energy plants: the first places the energy produced in relation to running hours; the higher this ratio is, the better the performance of the plant. At the S. Vittore del Lazio plant the average operating hours for each of the two lines, in 2015, was 8,350 (16,700 total hours), with total energy produced of around 225,350 MWh; the indicator was therefore 13.5 MWh/h, up on the figure of 12.7 MWh/h in 2014 (compared with 8,050 hours of operation on average last year). At the Terni waste-to-energy plant operating hours totalled 8,167 with total energy produced of 81,520 MWh; the indicator was around 10.0 MWh/h (down slightly on the figure of 10.4 MWh/h last year, and 7,884 operating hours)
The second index is based on the ratio between the waste produced (in other words process scraps) and operating hours: the shorter the ratio, the more satisfactory is performance. At the S. Vittore del Lazio plant this ratio in 2015 remained constant (2.7 t/h), despite the increase, in absolute terms, in process scraps. At Terni the same indicator improved, passing from 2.2 t/h to 2.0 t/h (see the *Environmental accounts*).

COMPOST PRODUCTION FOR SUSTAINABLE FARMING

As already mentioned, Aquaser operates in the sector of services that are complementary to the integrated water cycle, carrying out activities for the recovery and disposal of biological treatment sludge and waste deriving from water treatment.
The plants used by Aquaser, two Solemme and one Kyklos plant, process **treatment sludge** and the **organic fraction of municipal solid waste (MSW)** to produce compost. The three composting plants are located, respectively, in Aprilia and Sabaudia (both in the province of Latina) and Monterotondo Marittimo (Grosseto).
In 2015 Aquaser managed more than **400,000 tonnes of waste**, of which around 170,000 tonnes of semi-solid treatment sludge, originating primarily from the Acea Group water companies (165,000 tonnes), which were destined for the following final uses:

- 4% direct spreading in agriculture;
- 70% for composting.

The remaining 26% was sent for disposal since it was not recoverable.

For precise data on compost production see the *Environmental accounts*.

WATER AREA

REFERENCE BOUNDARY

The scope of reporting includes Acea Ato 2 and Acea Ato 5.
Acque, Gori, Acquedotto del Fiora, Publiacqua and Umbra Acque are included only in the scope of reporting for water charts, and some other minor data (water entering the network and analytical calculations). Precise data on these companies are included in the *Water Company Data Sheet*.
Environmental figures on water companies included in the scope of reporting are 100% attributable to Acea.

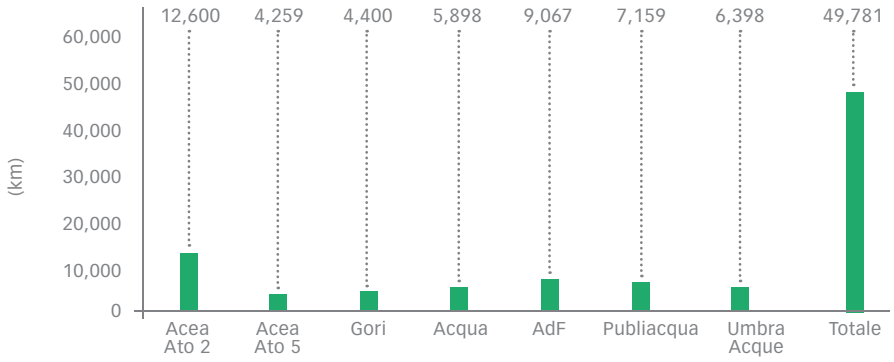
VOLUMES OF DRINKING WATER INTRODUCED ONTO THE NETWORK (GROUP):
1,317 Mm³

AROUND **49,800 km** OF MANAGED NETWORK SERVING THE GROUP DRINKING WATER SYSTEM

DRINKING WATER SUPPLIED BY ACEA ATO 2 AND ACEA ATO 5:
332.5 Mm³

Water is now considered, at international level, a resource that we must pay the greatest attention to, as it lies at the heart of human existence and sustainability of ecosystems. The management of the water resource is one of the Group's core businesses, and the monitoring of water consumption is becoming increasingly accurate.
Acea, via investee companies, manages the integrated water service (SII) in the Optimum Areas of Operation (ATO) which fall within four regions: Lazio, Campania, Umbria and Tuscany, qualifying itself as national leader in the sector. It is also active abroad[91], with special purpose entities created in partnership with local and international partners, to carry out activities for improving the water service.
The customer base served in Italy is around **8.6 million inhabitants**, with **volumes of drinking water** introduced into the network of around **1,317 million cubic metres** in 2015.
In **ATO 2- Central Lazio** alone, including the city of Rome and another 111 municipalities, of which 78[92] under management as of 31 December 2015, the **volume of water introduced into the network** serving roughly 3.7 million inhabitants was around **660 million cubic metres** (of which 493 million cubic metres into the "historic network" of Rome and Fiumicino)[93].

CHART 43
THE GROUP'S WATER DISTRIBUTION NETWORK IN ITALY (2015)



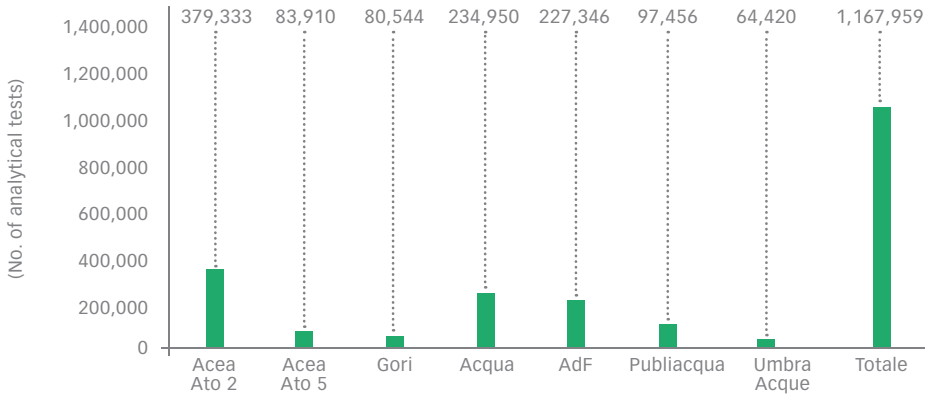
Note: Network kilometres include the aqueducts.

[91] In Peru, Honduras and the Dominican Republic; countries where, between the integrated water services and commercial aspects of the service, a total of 3.6 million inhabitants are served. The percentage of foreign business with regard to total revenues from the water sector amounts to 1.7%. On the basis of GRI "materiality" indications, it was therefore established that only a summary description would be provided in *Activities abroad*, to which reference is made.
[92] In another 17 municipalities the SII was managed partially.
[93] The water balance items in 2015 (as in 2014) were calculated by means of calculation criteria provided by the AEEGSI (att. 2 to Resolution 5/2014).

WATER QUALITY

Each Group company carries out regular and scheduled controls on the quality of drinking water provided and wastewater returned to the environment after the treatment process. The analytical checks on drinking water distributed to customers are of fundamental importance, first and foremost due to the health repercussions which could derive from the same. Chart 44 presents a summary of the activities carried out in this sphere, by all the water companies.

CHART 44
ANALYTICAL TESTS ON DRINKING WATER: TOTALS AND BY COMPANY (2015)



The quality of drinking water distributed in Rome is very high, thanks to its purity and excellent mineral levels. Lazio includes areas of volcanic origin, where water potability is sometimes a problem, due to the inherent presence of greater concentrations of substances than are permitted under existing legislation. In these spheres, Acea Ato 2 has over the years adopted numerous measures to sort out the problem (see *Quality of Water Operations* under *Customers and Community*).

Given the scope of measurement and analytical monitoring activities on water, Group companies have chosen to carry out this work both independently and **through the subsidiary Acea Elabori, accredited under the ISO/IEC 17025 standard** for execution and certification of chemical-physical and bacteriological analyses in different materials, including water (see Table 50 for the analysis carried out for Acea Ato 2 and Acea Ato 5).

TABLE 50
ENVIRONMENTAL INDICATORS: ANALYTICAL TESTS (2013-2015) AND QUALITY PARAMETERS OF THE DRINKING WATER DISTRIBUTED IN ROME AND FROSINONE (2015)

ANALYTICAL TESTS CARRIED OUT BY ACEA ELABORI - ATO 2 - CENTRAL LAZIO and ATO 5 SOUTHERN LAZIO (2013-2015)

Type of water analysed	No. of analytical tests		
	2013	2014	2015
Acea Ato 2 drinking water	307,391	310,507	320,946
Acea Ato 5 drinking water	96,233	69,553	80,440
Acea Ato 2 waste water	164,130	161,466	155,355
Acea Ato 2 surface water	34,861	31,437	40,562
Total	**602,615**	**572,963**	**597,303**

ANALYTICAL TESTS CARRIED OUT BY ACEA ELABORI ON DRINKING WATER – ROME "HISTORIC" NETWORK (2013-2015)

Area of withdrawal	No. of withdrawal points	No. of samples			No. of analytical tests		
		2013	2014	2015	2013	2014	2015
Collection	45	542	544	602	21,788	21,996	22,556
Aqueduct and feeder lines	26	358	343	310	10,952	10,451	9,411
Reservoirs/water centres	21	246	283	274	8,426	11,285	10,471
Distribution networks	320	3,783	4,095	3,965	124,802	138,927	137,053
Total	**412**	**4,929**	**5,265**	**5,151**	**165,968**	**182,659**	**179,491**

AVERAGE CHEMICAL AND MICROBIOLOGICAL FEATURES OF DRINKING WATER DISTRIBUTED IN ROME AND FROSINONE (2015)			
Parameters	**Unit of measurement**	**2015 average value**	**Legal parameter (Italian Legislative Decree 31/01)**
ROME			
Turbidity	NTU	**<0.5**	with no unusual changes
Temperature	°C	**12.9**	not envisaged
Concentration of hydrogen ions	pH unit	**7.5**	>6.5 and < 9.5
Electrical conductivity	µS/cm at 20 °C	**561**	< 2,500
Chlorides	mg/l Cl	**10.1**	< 250
Sulphates	mg/l SO_4	**17.4**	< 250
Calcium	mg/l Ca	**95.8**	not envisaged
Magnesium	mg/l Mg	**18.5**	not envisaged
Sodium	mg/l Na	**8.14**	< 200
Potassium	mg/l K	**4.84**	not envisaged
Water hardness	°F	**31.5**	(*)
Free residual chlorine	mg/l Cl_2	**0.16**	(**)
Alkalinity	mg/l $CaCO_3$	**314**	not envisaged
Fixed residual calculated	mg/l	**401**	(***)
Nitrates	mg/l NO_3	**3.70**	< 50
Nitrites	mg/l NO_2	**<0.05**	< 0.50
Ammonia	mg/l NH4	**<0.10**	< 0.50
Fluorides	mg/l F	**0.21**	< 1.50
Bicarbonates	mg/l HCO_3	**383**	not envisaged
Total organic carbon	mg/l C	**0.61**	with no unusual changes
Iron	µg/l Fe	**7.29**	< 200
Copper	mg/l Cu	**0.003**	< 1.0
Lead	µg/l Pb	**0.19**	< 10
Cadmium	µg/l Cd	**<2.0**	< 5.0
Chromium	µg/l Cr	**< 5.0**	< 50
Nickel	µg/l Ni	**<2.0**	< 20
Manganese	µg/l Mn	**0.47**	< 50
Arsenic	µg/l As	**1.21**	< 10
Vanadium	µg/l V	**2.50**	< 140
Total trialomethanes	µg/l	**1.46**	< 30
Trichlorethylene	µg/l	**<0.10**	< 10
Tetrachlorethylene	µg/l	**<0.10**	< 10
Dichloroethane	µg/l	**<0.30**	< 3.0
Benzene	µg/l	**<0.10**	< 1.0
Benzopyrene	µg/l	**<0.003**	< 0.010
Coliform bacteria at 37° C	MPN/100 ml	**0**	0
Escherichia coli	MPN/100 ml	**0**	0
Enterococcus	UFC/100 ml	**0**	0

FROSINONE			
Turbidity	NTU	**<0.5**	with no unusual changes
Temperature	°C	**13.1**	not envisaged
Concentration of hydrogen ions	pH unit	**7.63**	>6.5 and < 9.5
Electrical conductivity	µS/cm at 20 °C	**462.7**	< 2,500
Chlorides	mg/l Cl	**6.9**	< 250
Sulphates	mg/l SO_4	**7.8**	< 250
Calcium	mg/l Ca	**85**	not envisaged
Magnesium	mg/l Mg	**14.1**	not envisaged
Sodium	mg/l Na	**4.87**	< 200
Potassium	mg/l K	**1.3**	not envisaged
Water hardness	°F	**27.0**	(*)
Free residual chlorine	mg/l Cl_2	**0.14**	(**)
Alkalinity	mg/l $CaCO_3$	**275**	not envisaged
Fixed residual calculated	mg/l	**336.42**	(***)
Nitrates	mg/l NO_3	**4.20**	< 50
Nitrites	mg/l NO_2	**<0.05**	< 0.50
Ammonia	mg/l NH_4	**0.26**	< 0.50
Fluorides	mg/l F	**0.16**	< 1.50
Bicarbonates	mg/l HCO_3	**377**	not envisaged
Total organic carbon	mg/l C	**0.63**	with no unusual changes
Iron	µg/l Fe	**21.70**	< 200
Copper	mg/l Cu	**0.006**	< 1.0
Lead	µg/l Pb	**0.48**	< 10
Cadmium	µg/l Cd	**<0.2**	< 5.0
Chromium	µg/l Cr	**< 5.0**	< 50
Nickel	µg/l Ni	**4.28**	< 20
Manganese	µg/l Mn	**1.35**	< 50
Arsenic	µg/l As	**< 1.0**	< 10
Vanadium	µg/l V	**3.07**	< 140
Total trialomethanes	µg/l	**3.35**	< 30
Trichlorethylene	µg/l	**<0.10**	< 10
Tetrachlorethylene	µg/l	**<0.14**	< 10
Dichloroethane	µg/l	**<0.30**	< 3.0
Benzene	µg/l	**<0.10**	< 1.0
Benzopyrene	µg/l	**<0.004**	< 0.010
Coliform bacteria at 37° C	MPN/100 ml	**0**	0
Escherichia coli	MPN/100 ml	**0**	0
Enterococcus	UFC/100 ml	**0**	0

(*) Recommended values: 15-50 °F - the lower limit is valid for water subject to softening or desalination treatment.

(**) Recommended value 0.2 mg/l.

(***) Maximum value recommended: 1,500 mg/l.

SEWERAGE SERVICE AND TREATMENT SYSTEM

APPROXIMATELY **151,200 tons**
TOTAL SLUDGE PRODUCED BY
ACEA ATO 2 AND ACEA ATO 5

Sludge recovered for agriculture and composting by Acea Ato 2 and Acea Ato 5: approximately
110,000 tons
(73% of total)

The integrated water service includes the governance of the treatment system, overseeing the last stage of the industrial cycle prior to returning the resource to the environment. The water, which has been used for various non-industrial purposes, is then collected via sewage pipes and sent to the treatment plants for the removal of pollutants by physical processes (filtration, sedimentation, flocculation) and biological processes (aerobic decomposition of organic substances by bacteria). The water exiting the plant, after having undergone the necessary treatments, has chemical and biological features compatible with the life cycle of the receiving water body which it will flow into. Italian Legislative Decree 152/2006, in its third section, sets the values of parameters which must not be exceeded to ensure complete compatibility.
Thanks to the approximately 850 treatment plants, the **volumes of water treated by the Group in 2015 totalled around 900 million m³.** Managed sewage networks are around **23,800 km**.

CHART 45
GROUP SEWER NETWORKS IN ITALY (2015)

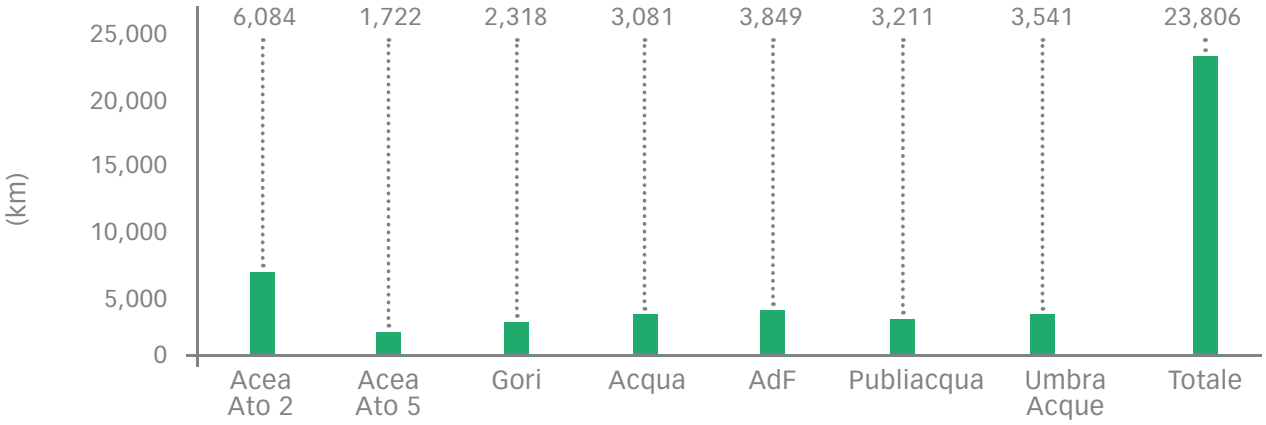
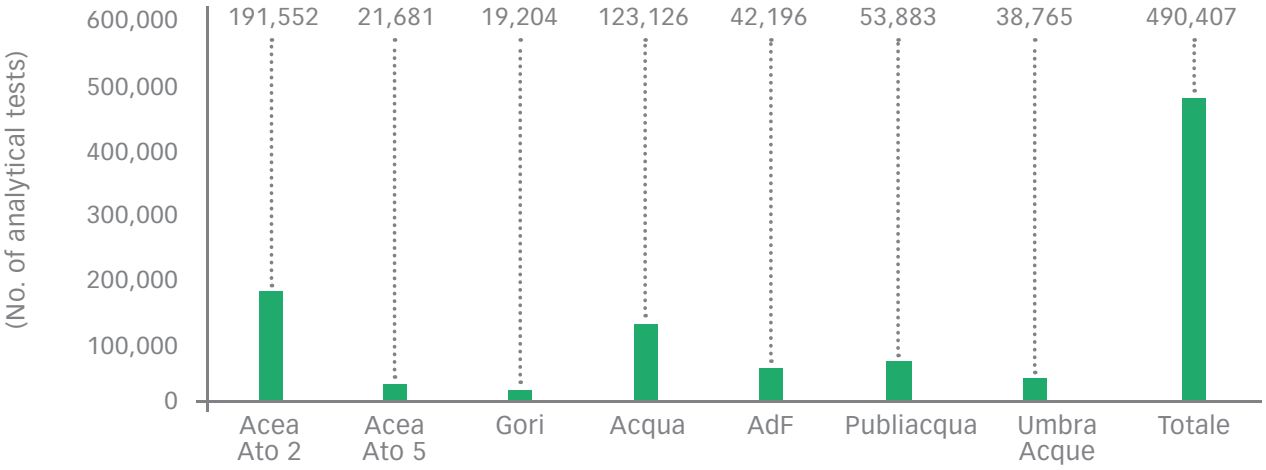


CHART 46
ANALYTICAL TESTS ON WASTEWATER: TOTALS AND BY COMPANY (2015)



Tables 51 and 52 show the volumes of wastewater treated and percentage coverage of sewage and treatment services out of the total consumer base served by aqueducts, for companies operating in the Lazio area.

TABLE 51
PERCENTAGE COVERAGE OF SEWERAGE AND TREATMENT SERVICES OUT OF THE TOTAL CONSUMER BASE OF WATER COMPANIES OPERATING IN LAZIO (2013-2015)

Company	2013		2014		2015	
	Sewerage	Wastewater treatment	Sewerage	Wastewater treatment	Sewerage	Wastewater treatment
Acea Ato 2	91.5%	87.5%	91.7%	87.8%	88.5%	84.9%
Acea Ato 5	67.3%	55.5%	67.1%	55.4%	66.5%	54.6%

TABLE 52
VOLUMES OF WASTE WATER TREATED BY WATER COMPANIES OPERATING IN LAZIO (2013-2015) (MM^3)

Company	2013	2014	2015
Acea Ato 2	639.6	651.6	623.1
Acea Ato 5	26.5	26.6	27.0

In the "historic" area of Rome and Fiumicino alone, the **main treatment plants processed around 530 million cubic metres of wastewater in 2015**, down slightly compared with the approximately 560 million cubic metres of wastewater treated in 2014.
Also considering minor treatment plants and those belonging to the municipalities acquired in ATO 2 (174 in total), a **total volume of around 623 million cubic metres of wastewater was treated**, down 4% vis-à-vis 2014, in line with the lower production due to it being a rather dry year.
The **treatment efficiency** of plants made it possible to maintain the values of pollutant parameters in outgoing treated water **within the limits set by law**. A breakdown of the main parameters for water leaving treatment plants is shown in table 53. Other indicators of treatment efficiency, pertaining to both Acea Ato 2 and Acea Ato 5, are described in *Environmental sustainability performance – Water area* of the *Environmental accounts*.

TABLE 53
PARAMETERS FOR WATER EXITING THE MAIN TREATMENT PLANTS MANAGED BY ACEA ATO 2 SPA – MUNICIPALITY OF ROME (2015)

Parameter	Rome South treatment plant	Rome North treatment plant	Rome East treatment plant	Ostia treatment plant	Limits of concentration in surface water (Italian Legislative Decree 152/06)
	Average values (mg/l)				
BOD_5	13	8	8	5	≤ 25
COD	38	23	20	21	≤ 125
TSS	18	18	11	8	≤ 35
Nitrogen (ammonia, nitric and nitrous)	8	11	7	7	-
Phosphorous	1	2	1	3	-
	Absolute values (t)				
COD	11,301	2,212	2,743	556	-
TSS	5,353	1,731	1,490	212	

The sludge produced in the treatment process is **re-used in the agricultural sector**, either spread directly on the ground or subject to composting.
In quantitative terms, **73% of the total sludge of Acea Ato 2 and Acea Ato 5** was recovered (see also *Compost production*, in *Environment Area)*.

USE OF ENERGY AND WATER

REFERENCE BOUNDARY

The boundaries of this section include Acea SpA, Acea Reti e Servizi Energetici, Acea Distribuzione, Acea Elabori, Acea Produzione, A.R.I.A., with two waste-to-energy plants, and Aquaser with three composting plants. With regard to the water sector, Acea Ato 2 and Acea Ato 5 are included.

ENERGY CONSUMPTION

Group energy consumption

The **direct energy consumption** of the main Group companies, i.e. those that involve the use of primary sources **for the functioning of the production system, including consumption for generation** of electricity and heat (table 54), and **indirect energy consumption, which includes the losses** which occur within the Rome electricity distribution network, attributable to the transformation and transportation phases (table 55), are illustrated below.

Total consumption of energy, **direct and indirect**, amounted in 2015 to **around 10,000 TJ** (9,487 TJ in 2014). The increase is mainly due to the additional direct consumption of the waste-to-energy sector, in line with the rise in energy production by the waste-to-energy plants.

TABLE 54
ACEA GROUP DIRECT ENERGY CONSUMPTION (2013-2015)

Energy by source	2013	2014	2015
		TJ (GWh)	
Methane (for electricity generation, district heating, office heating)	725.5 (201.5)	579.2 (160.9)	577.5 (160.4)
Diesel (for electrical generation, office heating)	35.2 (9.8)	17.2 (4.8)	40.6 (11.3)
WDF/SSF and paper pulp (waste-to-energy)	4,446.5 (1,235.1)	5,150.4 (1,430.7)	5,646.6 (1,568.5)
Petrol (vehicle transport) (*)	20.8 (5.8)	13.4 (3.7)	13.4 (3.7)
Diesel (vehicle transport) (*)	24.4 (6.8)	35.0 (9.7)	35.0 (9.7)
LPG (heating)	0.6 (0.2)	0.6 (0.2)	0.8 (0.2)
Total	**5,253.0 (1,459.2)**	**5,795.7 (1,609.9)**	**6,313.9 (1,753.9)**

(*) The 2015 vehicle fleet figures have been considered equal to the 2014 figures due to the unavailability of relative information at the time of publication.

Note: the figures include A.R.I.A., Aquaser, Acea Produzione, Acea SpA, Acea Ato 2, Acea Ato 5, Acea Distribuzione, Acea Illuminazione Pubblica and Acea Produzione.

TABLE 55
ACEA GROUP INDIRECT ENERGY CONSUMPTION (2013-2015)

	2013	2014	2015
		TJ (GWh)	
Electricity losses in the distribution and transportation networks	1,512.7 (420.2)	1,332.4 (370.1)	1,341.8 (373.0)
Losses and internal consumption for electricity production	182.6 (50.71)	186.5 (51.80)	198.0 (55.0)
Heat losses in the district heating network	82.1 (22.8)	68.0 (18.9)	28.8 (8.0)
Consumption for public lighting	669.2 (185.9)	669.2 (185.9)	602.4 (167.3)
Electricity consumption for waste treatment plants	18.4 (5.1)	12.6 (3.5)	7.9 (2.2)
Electricity consumption for drinking and non-drinking water distribution	711.6 (197.7)	699.5 (194.3)	788.8 (219.1)
Electricity consumption for wastewater treatment	646.9 (179.7)	689.8 (191.6)	685.1 (190.3)
Electricity consumption for the offices	41.4 (11.5)	33.12 (9.2)	36.72 (10.2)
Total indirect energy consumption	**3,864.9 (1,073.6)**	**3,691.1 (1,025.3)**	**3,689.5 (1,025.1)**

Note: the figures for the three-year period include the consumption of A.R.I.A., Acea Produzione, Acea Distribuzione, Acea Illuminazione Pubblica, Acea Reti e Servizi Energetici, Acea SpA and the water companies Acea Ato 2 and Acea Ato 5.

The trends of the **energy consumption intensity indices** are shown in table 56.

TABLE 56
ENERGY INTENSITY INDICES (2014-2015)

Energy consumption intensity indices	u.m.	2014	2015
Electricity consumed by the Group per consolidated revenues	TJ/M€	3.12	3.43
Electricity consumed for public lighting per lighting point	TJ/lighting point)	0.0035	0.0031
Total electricity consumed by Acea Ato 2 per water supplied	TJ/Mm^3	3.124	3.387
Electricity consumed by Acea Ato 2 for sewerage service per km of sewerage network	TJ/km	0.0260	0.0254
Electricity consumed by Acea Ato 2 in the treatment process per equivalent inhabitants (EI)	TJ/Million EI	28.40	27.54
Electricity consumed by Acea Ato 5 - sewerage service per km of sewerage network	MJ/km	5.641	5.937
Total Electricity consumed by Acea Ato 5 for treatment service per treated wastewater	TJ/Mm^3	1.773	1.848

Energy consumption outside the Group

In 2015 Acea started monitoring energy consumption outside the Group, throughout the supply chain, by means of specific questionnaires.
In December 2015 the questionnaire was sent to the most representative suppliers as regards the value of orders during the year. Thanks to the response of 14 of the same (19% of overall Acea expenditure for the procurement of goods/services and work), their overall energy consumption was estimated at around 206,871 GJ[94].

[94] An initial survey was carried out in 2014, with a more limited scope, which had permitted an estimate of consumption of 8,953 MWh (8,953*3.6= 32,231 GJ), included in the 2014 CDP. The two-yearly figures are therefore not directly comparable.

WATER CONSUMPTION

Group water consumption involves both **industrial processes,** such as uses for remote heating, and **civil uses**, as analysed in table 57. The increase in consumption for civil uses registered in 2014 has not yet been reversed, although it should be noted that a review is under way on users and consumption characteristics.

TABLE 57
ACEA GROUP WATER CONSUMPTION (2013-2015)

	2013	2014	2015
		(Mm^3)	
Industrial processes: district heating and other processes for thermoelectric generation (*) (source: aqueduct, wells)	0.11	0.11	0.12
Non-industrial/sanitary use (**) (source: aqueduct)	1.43	1.70	2.04
Total water consumption	**1.54**	**1.81**	**2.16**

(*) Includes: process water used at the Tor di Valle thermoelectric plant, and the water used at the A.R.I.A. waste-to-energy plants, mainly deriving from the aqueduct.

(**) The companies to which the data refer are: Acea SpA, Acea Distribuzione, Acea Produzione, Acea Elabori, Acea Ato 2, Acea Ato 5, SAO (since 2014), A.R.I.A.

Projects are nearing completion at some plants for the purpose of recovering process wastewater and reusing it for industrial purposes. In greater detail, at the Kyklos composting plant the commissioning of a wastewater treatment plant is expected to take place in 2016[95]; the resulting water will be reusable in the industrial cycle. At the SAO (Orvieto) waste treatment complex, a rainwater collection system is operative. This water is collected from the roofs of the offices and the treatment building so as to replenish the fire-fighting reserves. Furthermore, at the Terni waste-to-energy plant, even if the use of water in processes has decreased greatly after the recent revamping, necessary rainwater is used in the production processes. At the San Vittore del Lazio waste-to-energy plant, work has been planned for the treatment of the initial rainwater for reuse of the same in the process.

Water losses

The sustainable management of the water resource, regardless of the use made of it, also includes the aspect of limiting distribution network losses, aware of the difficulties of such activities and of the considerable resources required. During 2015 Acea Ato 2 continued with its studies of distribution networks and detection of water losses, carried out in collaboration with Acea Elabori, on the basis of a "division into districts" approach. Activities, consisting of pressure and flow monitoring campaigns, for the purpose of reconstructing the functioning of the network, were concentrated in Velletri, affected by frequent water problems, and in Rome, in certain zones of municipal areas XIV and XV. Specifically, in **Velletri**, water supply shifts **for the northern part of the municipal area** were eliminated and new measures were planned for the improvement and rationalisation of the supply system which will permit additional service continuity improvements. Thanks to loss detection, division into districts and improvement measures, it was also possible during the year to eliminate the need for shifts in **Olevano Romano**, where there is a similar situation to that in Velletri. In turn, Acea Ato 5 continued with the analysis of water network structures and activities to **detect and repair losses**, with **more than 380 actions to find hidden losses**. In particular, work was carried out in the municipalities of Cassino, Rocca d'Evandro and Cervaro. Other important activities involved the **pilot study** for the municipality of **Isola del Liri** carried out with the technical consulting of Società Ingegnerie Toscane, aimed at reducing the overall water supply of the municipality, on the one hand **reorganising the working pressure** of the water network and **searching for hidden losses** throughout the area and, on the other, the division into districts of areas served by the various tanks. This made it possible to **recover around 25 l/s** in favour of users, and the consequent **elimination of the need for regular actions** involving water tanks, as well as **lowering the network pressure at night.** At year end, a similar study was also launched for the municipality of Fiuggi.

Constant **monitoring of the total value of real losses** from water distribution networks (parameter A15 under Italian Ministerial Decree 99/97) is the most common system for measuring the effectiveness of measures implemented by operators. A progressive trend of declining losses is in fact a positive signal of successful management, limiting breakages in pipes and reducing malfunctions in plants.

In order to make the figures between the various operators comparable and define the parameters used to make relative estimates, Italian Ministerial Decree 99/97 provided the reference model. Back in **2014**, however, the **AEEGSI,** by means of **Resolution 5/2014, introduced a number of innovations in the calculation process**, which do not make the comparison with figures relating to previous years possible. Comparability is possible for the two-year period 2014-2015. For further details in this connection, **see the *Environmental accounts***[96].

Chart 47 illustrates **the model indicated by Italian Ministerial Decree 99/97**, considering the innovations of the aforementioned AEEGSI Resolution.

Real losses[97] **in Acea Ato 2** in 2015, with reference to the historic network of Rome and Fiumicino, amounted to **around 42% of the total introduced into the network**.

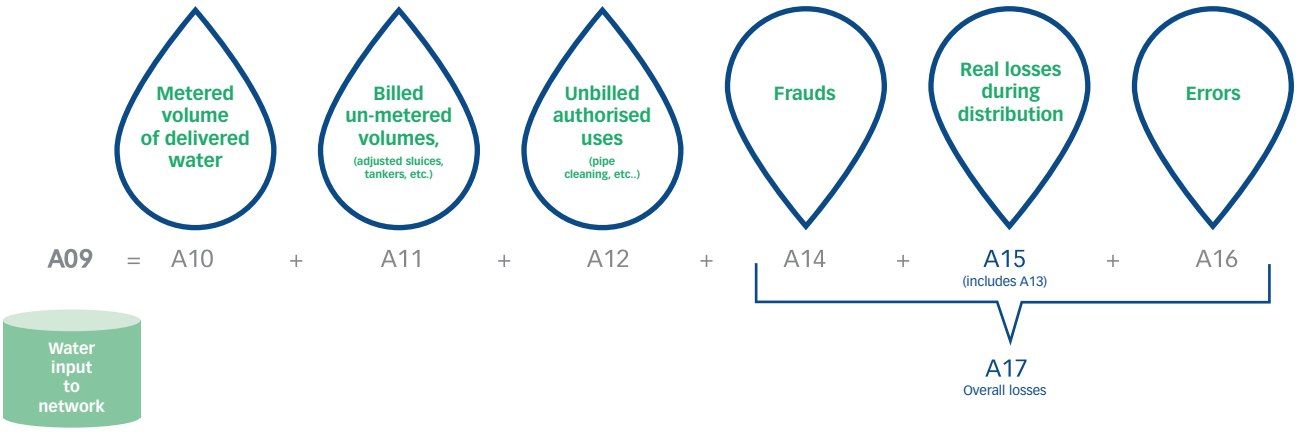
In **Acea Ato 5** (Frosinone) real losses for 2015 came to around **67%** of the total input to the network.

[95] The section for treatment of wastewater for reuse in the process, completed in 2013, is still being tested and inspected due to the seizure of the plant in July 2014 which lasted for the whole of 2015.

[96] The water balances of the companies in Campania, Umbria and Toscana, consolidated at equity in 2015, can be examined in the *Water Company Data Sheets*.

[97] Real losses, according to the AEEGSI, Resolution 5/2014, are indicated by the parameter (A13 + A15); they only quantify losses due to breakages and defects in plants (for example: leaks in the joints between piping, holes and lacerations in pipes, structural subsidence of concrete or metal structures). This parameter is obtained by subtracting the water sold (A10) and all the types of failure to deliver to the end customer: emergency consumption (A11), washing (A12), fraud (A14), metering errors (A16), from total water input to the network (A09).

CHART 47
REAL WATER LOSSES (based on Italian Ministerial Decree 99/97, supplemented by AEEGSI Resolution 5/2014)



Note: under Resolution 5/2014 of the Authority, item A15 "real losses" also includes item A13 "failures" of Italian Ministerial Decree 99/97.

EMISSIONS AND MOBILITY

REFERENCE BOUNDARY

The boundaries of this section include Acea SpA, Acea Reti e Servizi Energetici, Acea Distribuzione, Acea Elabori, Acea Produzione and A.R.I.A. with the two waste-to-energy plants, and the SAO plant. With regard to the water sector, Acea Ato 2 and Acea Ato 5 are included.

AIR EMISSIONS AND MOBILITY OF THE GROUP

The **monitoring of air emissions from Acea plants**, particularly **the waste-to-energy plants**, is carried out using **chemical analysers** that continuously sample the gases exiting chimneys, providing measurements of numerous parameters. These are monitored regularly by internal personnel and by qualified outside laboratories. The emerging scenario is satisfactory, with **values of main pollutants well below the limits laid down by law** (see table 58); however, Acea continues its research into technical solutions offering better performance regarding emission quality.

(G4-14) There are many reliable and efficient technical solutions for maintaining emissions of atmospheric pollutants at low levels. Acea takes a **cautious approach**, and so has chosen the most advanced solutions **for its waste-to-energy plants**, equipping **the gas-generating lines with treatment systems that make up the predominant part of the entire industrial complex, by virtue of their technological and operational importance.** In addition, given Acea's annual programming of improvement goals, and its long habit of working according to management standard UNI EN ISO 14001, the Group is stimulated to adopt ever-higher targets for the containment of pollutant emissions.

SYSTEM FOR CUTTING EMISSIONS AT THE SAN VITTORE DEL LAZIO WASTE-TO-ENERGY PLANT

In the San Vittore del Lazio plant, the system for reducing gaseous emissions, installed on each waste-to-energy line, comprises the following components:

- An "**electro-filter**" – This provides the first stage of treatment of boiler gases, permitting reduction of the ash, for subsequent periodic elimination;
- A "**dry reactor**" – This uses sodium bicarbonate and activated charcoal to reduce pollutant acids, heavy metals, dioxins and furans;
- A "**sleeve filter**" – This provides the second stage of exhaust gas filtration, for gathering of finer particulates. When operating, the filter becomes covered with a solid layer of captured material, which acts as absorber for the additional pollutant substances, thus further improving the overall performance of the capture system. The solids accumulated on the sleeve filters are accumulated in silos and periodically removed;
- A **system for reduction of nitrous oxides (NO_x)** - called $DeNO_x$ - which uses an ammonia-reaction conversion to produce nitrogen. In relation to this system, energy efficiency enhancement measures will be adopted to reduce current natural gas consumption by around 70% (the ammonia-NO_x reaction takes place at elevated temperatures, requiring a heat source).

The system is completed by a fan, which provides the correct rate of movement of exhaust gases through the boiler and the treatment/filter section, and their final discharge into the atmosphere via a chimney, 50 metres tall.

TABLE 58
AIR EMISSIONS FROM THE SAN VITTORE DEL LAZIO AND TERNI WASTE-TO-ENERGY PLANTS (2013-2015)

		San Vittore del Lazio plant				Terni plant			
Pollutant	**u.m.**	**reference parameter (*)**	**2013**	**2014**	**2015**	**reference parameter (*)**	**2013**	**2014**	**2015**
HCl	mg/Nm³	8	0.051	0.030	0.185	10	4.780	3.800	3.840
NO_x	mg/Nm³	70	25.506	24.909	22.105	200	92.130	146.940	139.480
SO_2	mg/Nm³	40	0.012	0.015	0.035	50	0.410	0.270	0.170
HF	mg/Nm³	1	0.006	0.022	0.030	1	0.190	0.230	0.220
CO	mg/Nm³	40	3.654	2.086	1.200	50	1.680	1.560	1.370
Total powders (particulates)	mg/Nm³	3	0.003	0.012	0.020	10	0.920	0.770	0.350
PAH (polycyclic aromatic hydrocarbons)	mg/Nm³	0.01	0.00002	0.00002	0.00003	0.01	0.00001	0.00003	0.00005
Dioxins and furans (PCDD PCDF)	ng/Nm³	0.1	0.0052	0.0019	0.0010	0.1	0.0093	0.0028	0.0166 (**)
Heavy metals (Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V)	mg/Nm³	0.5	0.0042	0.0413	0.0418	0.5	0.0069	0.0753	0.0501

(*) The reference parameters: Italian Legislative Decree 133/2005, 2000/76/CE and AIA - daily averages, are different for each waste-to-energy plant.

(**) There is no comparability between the 2015 figure and previous years since at the Terni plant a monitoring plan with on-going sampling commenced in January 2015. The frequency and values gauged are not comparable with previous ones.

Note: the figures for the San Vittore plant refer to the arithmetic averages on the two operating lines.

In 2015, as every year, steps were taken at the San Vittore del Lazio waste-to-energy plant to **monitor air quality in the points of greatest accumulation of pollutants emitted by chimneys**, using mobile and fixed computerised equipment. Furthermore, periodic monitoring of the **quality of the terrain and water of the aquifers** surrounding the plant is carried out.
Once again in 2015, two monitoring campaigns for the determination of heavy metals, lasting 15 days each, were carried out using the two **fixed monitoring stations** situated in the municipalities of San Vittore del Lazio and Cervaro.
The **mobile monitoring device**, used for collection of data in the area of the San Vittore del Lazio plant, was used intermittently, in six-month intervals, for campaigns of 15 days, for monitoring the parameters PM_{10}, $PM_{2.5}$ so as to determine heavy metals, dioxins, PAHs and furans. The mobile device was also used to detect heavy metals. The results of **all the monitoring campaigns,** using both fixed and mobile monitoring devices, **did not indicate excessive levels** for the parameters measured.

Particular attention has been paid to the topic of **greenhouse gas emissions**. These, according to the international document *Greenhouse Gas Protocol* (or *GHG Protocol*), aligned with the ISO 14064 standards, are divided up into:
- Scope 1 emissions: in other words direct greenhouse gas emissions;
- Scope 2 emissions: in other words indirect greenhouse gas emissions;
- Scope 3 emissions: in other words other indirect greenhouse gas emissions.

Acea has already for some years quantified its CO_2 emissions, evaluating the carbon footprint of the individual macro-processes according to the aforementioned guidelines of the GHG Protocol (www.ghgprotocol.org) and taking part in the CDP (see box dedicated to the "Carbon Disclosure Project" in *Reduction of Carbon Dioxide Emissions*.

Scope 1 greenhouse gas emissions are direct emissions originating from the Group's thermoelectric plants, waste-to-energy plants, the heating process, motor vehicles of its fleet (with reference to petrol and diesel vehicles), and sulphur hexafluoride (SF_6) losses from Acea Distribuzione's plants. As can be gathered from the figures indicated in table 61 (see below) the greatest contribution comes from CO_2 emitted by waste-to-energy plants, which since 2013 has not varied much. The contribution of Acea Produzione plants remains more or less constant over the three-year period.
Scope 2 greenhouse gas emissions are indirect, deriving from the consumption of electricity by Acea Group companies. These are emissions which Acea monitors regularly, disclosing them by means of the Carbon Disclosure Project (see table 61).

Scope 3 greenhouse gas emissions are represented by **other indirect emissions** in addition to Scope 2 emissions, and include emissions deriving from the purchase of goods/services and work, employees travelling for business purposes and employees commuting to and from work.
Specifically, as from 2015 Acea undertook the monitoring of its suppliers so as to raise their awareness of the environmental impact deriving from their activities. See table 61 below for the figures.

The Terni plant, together with those at Montemartini and Tor di Valle, are the three thermoelectric plants subject to the Emission Trading Scheme (ETS). Table 59 shows the allowances assigned under the NAP (National Allocation Plan) framework, in respect of actual emissions registered in the three-year period 2013-2015.

TABLE 59
CO_2 EMISSION ALLOWANCES AS PER THE NATIONAL ALLOCATION PLAN (NAP) AND ACTUAL EMISSIONS BY PLANT (2013-2015)

	2013		2014		2015	
	assigned by the NAP	actual	assigned by the NAP	actual	assigned by the NAP	actual
Tor di Valle	13,502	29,060	11,060	21,019	9,105	23,466
Montemartini	0	1,344	0	121	0	1,971
Terni waste-to-energy plant (*)	0	97,329	0	127,728	0	120,286

(*) In 2015, the applicable legislative framework allowed the Tor di Valle plant to benefit from free of charge emission allowances (9,105 t), since it serves a remote heating network.

AUCTIONS OF CO_2 EMISSION ALLOWANCES

The European trading scheme for carbon dioxide emissions, the ***European Union Emissions Trading Scheme*** (EU ETS) is a system for the trading of greenhouse gas emission allowances aimed at reducing the emissions of CO_2 in energy intensive sectors. The scheme has been active in Europe since 2005. Until 2012, the assignment of allowances in the EU ETS took place mainly free-of-charge and on the basis of past emissions. As from 2013 the **fundamental mechanism for the allocation of allowances** is charged placement **via auction.** Compared with free-of-charge assignments, auctions ensure greater efficiency in the formation of a reference price for CO_2 in Europe and encourage the in-sourcing of environmental costs deriving from greenhouse gas emissions, providing incentives for **investments in energy efficiency and clean technologies**. Furthermore, they offer **transparency** and harmonisation among the member nations with regard to the **assignment of allowances.**

Auctions are used to place:

- around 50% of *European Union Allowances* (EUA), which can be used to fulfil the compensation obligations of the emissions of all operators subject to the ETS Directive, both fixed installations and aviation operators;
- 15% of the *European Union Allowances Aviation* (EUA A), which can be used by just aviation operators.

The quantities of allowances to be placed are published annually by the Commission, after the quantification of allowances to be placed free-of-charge. The auctions commenced in November 2012; the EUA A allowance auctions started in 2014.

The producers of electricity and plants which are involved in the capture, transportation and storage of CO_2 (Carbon Capture and Storage - CCS) **take part in the auctions.** Both sectors must procure the allowances necessary to cover their emission requirements on the carbon market. Manufacturing sectors and the aviation industry by contrast receive part of the allowance free-of-charge and resort to auctions for the remaining part.

The auctions **take place on auction platforms** identified by means of tenders, managed by organised markets as per the formalities set forth in Regulation 1031/2010.

At present, there are three operating platforms. The parties obliged to comply with the EU ETS, whether they are fixed installation or aviation operators, can obtain allowances on all the platforms, irrespective of their nationality.

Italy auctions, via the **GSE** – which is responsible for the placement of the allowances in Italy – **9.31% of the overall EUA quantity**, which includes both allowances belonging to the 28 member nations and the allowances of Island, Norway and Liechtenstein, countries of the European Economic Area which comply with the EU ETS.

For greater information and details: www.gse.it

Intensity indices for greenhouse gas emissions

An intensity index for greenhouse gas emissions relates to **Scope 2 carbon dioxide emissions, deriving from losses in the electrical energy network, compared with total electricity distributed.** In the last two years the index passed from 0.0135 t/MWh to 0.0123 t/MWh, down and in line with the decrease in network losses (technical losses/electrical energy distributed). See table 61 below for other GHG emission intensity indicators.

Table 60 summarises atmospheric emission figures, with reference to the most significant macro-pollutants due to the main production processes.

TABLE 60
TOTAL EMISSIONS OF ATMOSPHERIC POLLUTANTS FROM ACEA GROUP PLANTS (2013-2015)

Emissions	2013	2014	2015
		(t)	
CO	9.94	6.81	6.75
NO_x	155.03	177.12	190.86
SO_x	0.23	0.20	0.22
Particulates	0.46	0.50	0.32

Note: the emissions refer to the following companies: A.R.I.A. and Acea Produzione.

Monitoring carried out on all the plants at risk[98] demonstrated **the absence of** appreciable quantities **of emissions of substances responsible for reducing the ozone layer.**

Group vehicle fleet and Mobility management

During 2014 Acea's Mobility manager[99] provided Group employees with a questionnaire, via the company intranet, with the purpose of understanding how to rationalise and optimise the home-to-work commuting of personnel. In 2015 the results of the questionnaire were processed: out of the roughly 4,200 employees who had access to the questionnaire, 458 responses were received. The findings revealed a considerable lack of consistency with respect to the means of transport used and the combination between several means, without a single trend on which it is possible to take action. Therefore, the decision was made on a general basis to promote collective transport, encouraging a reduction in the use of private vehicles, and consequently in the related emissions. The first action taken was to promote the purchase of the Metrebus card[100], the second to facilitate bicycle mobility.

In keeping with Acea's undertaking to cut down atmospheric emissions, it devotes specific attention to the **renewal of the company vehicle fleet**.

Out of a total of around 2,300 Group vehicles in 2015, about 750 were recently purchased and are latest generation, mainly diesel fuelled. Precise figures on consumption and emissions are provided in table 61 and in the *Environmental accounts*.

A marginal but positive contribution also came from **electric vehicles** used by the operation teams of Acea Distribuzione (see dedicated box). These are light, full-electric vehicles. Since 2012, Acea Distribuzione has been monitoring the use of these vehicles in terms of:

- average and maximum daily operating distances;
- specific consumption (km/kWh);
- factors of nominal battery charging and battery use;
- kg of reduction in carbon dioxide emissions;
- costs per km of operation, and savings compared to similar vehicles with internal combustion engines.

In addition, within the **project for the development of electric mobility** in Rome, already launched for some years and followed, together with other partners, by Acea Distribuzione, the authorisation process continued in 2015 for the installation of 88 recharging stations (see *Customers and the Community*, *Quality in the energy area*, and *Institutions and the Company*).

Other companies are also are taking steps to make the vehicle fleet more efficient: Acea Ato 2, for example, thanks partly to the boost provided by the implementation of the Work Force Management, as per the Acea2.0 programme (see *Human Resources*), has recently increased the percentage of Euro 5 and Euro 6 vehicles, and disposed of 88 older vehicles. The company also envisages the purchase, in 2016, of around a hundred new vehicles, again with a view to environmental improvement and the reduction in pollutants and CO_2 emissions.

ELECTRIC MOBILITY IN ACEA DISTRIBUZIONE

Registrations of electric vehicles in Italy are on the rise: 1,460 in 2015 (UNRAE data), even though the number is still small compared with 1,583,618 total registrations in the year. In Acea the electric vehicle fleet is used by Acea Distribuzione, which monitors usage data to gauge the benefits in environmental and economic terms. The electric fleet in use comprises 43 Fiat Fiorino's, with an autonomy of around 110 km a car, 8 hours of recharging time, 230 Vac (volts of alternating current) of battery powering voltage, and on-board energy of 22.2 kWh. 1,200 recharging cycles are estimated. The vehicles are equipped so as to support engineers when carrying out their duties, thus representing genuine "mobile electric offices".

At operations centres (within private areas), and for each of the vehicles, Acea Distribuzione has installed an electric panel with a special recharge socket (3 kW, single phase) coupled with a non-fiscal meter. The positive user experience so far has led Acea Distribuzione to undertake a general overhaul of its electric vehicle fleet in 2015.

With regard to carbon dioxide emissions, as of December 2015 a cumulative saving of around 6,500 kilos (*) was achieved, of which 450 kilos saved in the year.

(*) With regard to production, the figure of 386 g/kWh was considered, referring to Italy, contained in the 2011 annual document of the International Energy Agency - IEA; for emissions of CO_2 of a diesel-equivalent vehicle, the figure of 123 g/km contained in the vehicle catalogue was considered.

Mobility: consumption and impacts

The consumption of fuels for the vehicle fleet is described in the *Environmental accounts*.

The figures for vehicle fleet emissions, in table 61, reflect the choice of using a vehicle fleet powered mainly by diesel. Emissions of nitrous oxide, typical of diesel engines, thus rose as from 2014, while the emissions of carbon dioxide and carbon monoxide were down, consistent with the lower average age of the vehicles. **2015 vehicle fleet figures are considered as equal to 2014 figures due to unavailability of these figures at the time of publication of this document**.

[98] This is primarily air conditioning equipment using refrigerant gases (particularly chlorofluorocarbons) subject to the 1987 Montreal accord.

[99] The decree of the Ministry of the Environment dated 27 March 1998 requires Organisations employing more than 300 employees to adopt a home-work Commuting Plan and appoint a head of company mobility, the Mobility Manager.

[100] Metrebus card passes taken out by the Mobility Manager in 2015 totalled 649.

TABLE 61
ENVIRONMENTAL INDICATORS: CO_2 EMISSIONS, INTENSITY INDICES OF THE GREENHOUSE GAS EMISSIONS AND VEHICLE FLEET EMISSIONS (2013-2015)

CO_2 EMISSIONS	u.m.	2013	2014	2015
SCOPE 1 EMISSIONS				
FROM ENERGY GENERATION PLANTS				
CO_2 emissions from Acea Produzione thermoelectric plants	t	30,404	23,843	25,440
CO_2 emissions from A.R.I.A. waste-to-energy plants	t	195,000	227,728	220,286
FROM ENERGY DISTRIBUTION, HEATING, VEHICLE FLEET				
CO_2 emissions from heating	t	1,003	1,368	1,644
CO_2 emissions from vehicle fleet	t	3,167	3,051	3,051
CO_2 emissions from Acea Distribuzione plants (from SF_6) (*)	t	16,644	16,188	12,540
SCOPE 2 EMISSIONS				
CO_2 emissions from consumption of electrical energy (**)	t	461,629	436,495	418,799
SCOPE 3 EMISSIONS				
CO_2 emissions deriving from the purchase of goods/services, and work (***)	t	n.a.	4,400	15,464
CO_2 emissions from commuting	t	n.a.	3,500	3,800
CO_2 emissions from business travel	t	n.a.	224	166
INTENSITY INDICES OF THE GREENHOUSE GAS EMISSIONS (2013-2015)				
intensity indices of GHG emissions	**u.m.**	**2013**	**2014**	**2015**
CO_2 emissions (Scope 1+ Scope 2)/Acea Group revenues	(t/M€)	0.247	0.243	0.234
Scope 1 CO_2 emissions/gross production (****)	(g/kWh)	286.9	311.4	313.8
Scope 2 CO_2 emissions deriving from losses on the electrical energy distribution network/GWh distributed	(t/MWh)	0.0148	0.0135	0.0123
EMISSIONS OF AIR POLLUTANTS PRODUCED BY THE ACEA VEHICLE FLEET				
EMISSIONS FROM VEHICLES - AROUND 2,300 ACTIVE VEHICLES				
	u.m.	**2013**	**2014**	**2015**
CO_2	t	3,166.6	3,051.4	3,051.4
NO_x	t	6.4	8.2	8.2
CO	t	30.7	20.5	20.5

(*) These are the tonnes of equivalent CO_2 corresponding to the emissions of insulating SF_6 present in Acea Distribuzione's HV equipment (1 t of SF_6 equal 22,800 t of CO_2): 0.55 tonnes in 2015 (0.55x22,800=12,540 t).

(**) Indirect emissions (scope 2) include the following companies: A.R.I.A., Aquaser, Acea Produzione, Acea Distribuzione, Acea Reti e Servizi Energetici, Acea SpA and the water companies Acea Ato 2, Acea Ato 5, Gori, Umbra Acque, Acquedotto del Fiora, Publiacqua, Acque and Gesesa, only for the part owned by Acea. The value of 0.37 is used as the emission factor per unit of electrical energy consumed (t CO_2/MWh), calculated adopting the primary energy data of the MISE 2013 energy balance and CO_2 emission factors per single source established by means of EU Decision 2007/589/EC.

(***) For 2014 around 4,400 tonnes will be estimated, but referring only to the purchase of goods and excluding emissions for their transportation, due to the lack of data received; with regard to 2015, the estimated figure also refers to the suppliers of services and work, and transport emissions are excluded. Therefore, the figures for the two-year period are not directly comparable.

(****) Scope 1 emissions in this index do not include emissions deriving from SF_6 losses in Acea Distribuzione plants.

Note: the emission factors for Scope 1 emissions are taken from the standard parameters-ISPRA 2015.

WATER COMPANY DATA SHEETS

WATER ACTIVITIES IN CAMPANIA, UMBRIA, AND TOSCANA

The environmental information and data of the main Group companies operating in the water sector, and that from 2014 are consolidated in the Group statutory financial statements using the "equity" method, are presented below.
In 2015, consistently with last year, for water balance reporting and, in particular, for the calculation of water losses, the companies followed the criteria under Resolution 5/2014 of the AEEGSI (att. 2), as well as Italian Ministerial Decree 99/97.
Please note that the items included in environmental expenditure have been reviewed and made consistent with the recommendation of the European Commission 2001/453/EC[101] and with the new GRI-G4 guidelines.

GORI

Gori SpA manages the integrated water service in Campania, in the area covered by ATO 3 - Sarnese Vesuviano.
It is a joint-stock company with a predominantly public-owned share capital, where the private minority shareholder (which holds 37.05% of the share capital), has been identified in relation to its technical-industrial and management abilities. The latter is Sarnese Vesuviano Srl, 99.16% of whose share capital is owned by Acea SpA. ATO 3 – Sarnese Vesuviano comprises 76 Municipalities (59 in the province of Naples and 17 in the province of Salerno), fully acquired under management as of 31 December 2009. The area served has around 1,450,000 inhabitants, with over 500,000 customers; the water network and sewerage network cover more than 4,300 km and 2,400 km, respectively.

Human resources

GORI SPA EMPLOYEES: BREAKDOWN OF THE HUMAN RESOURCES (2014-2015)

(No.)	2014				2015			
	Men	Women	Total	%	Men	Women	Total	%
Executives	5	1	**6**	1	6	2	**8**	1
Managers	16	2	**18**	3	14	1	**15**	2
White-collar workers	310	60	**370**	56	307	60	**367**	57
Blue-collar workers	268	0	**268**	40	258	0	**258**	40
Total	**599**	**63**	**662**	**100**	**585**	**63**	**648**	**100**

GORI SPA EMPLOYEES: CONTRACT TYPE (2014-2015)

(No.)	2014			2015		
	Men	Women	Total	Men	Women	Total
Permanent workforce (open-ended contracts)	599	63	**662**	585	63	**648**
of which part-time personnel	*0*	*1*	***1***	*0*	*1*	***1***
Personnel with fixed-term contracts	0	0	**0**	0	0	**0**
Personnel with professional apprenticeship contracts	0	0	**0**	0	0	**0**
Total	**599**	**63**	**662**	**585**	**63**	**648**

INDUSTRIAL ACCIDENTS AND FREQUENCY AND SEVERITY INDEXES (2014-2015)

	2014	2015
Accidents (No.)	29	34
Total days of absence (*)	733	948
Hours worked	1,073,702	1,067,685
Frequency index (FI) (No. accidents x 1M/work hours)	**27.00**	**31.84**
Severity index (SI) (days absence x 1,000/work hours)	**0.68**	**0.89**

(*) The figure also includes the days of absence due to the continuing or returning effects of accidents occurring in previous years.

[101] According to the Recommendation of the European Commission 2001/453/EC, the "environmental expenditure" of a company is understood to be the cost of «steps taken by an undertaking or on its behalf by others to prevent, reduce or repair damage to the environment which results from its operating activities. The costs include the disposal of waste and the measures for training, protection of soil and surface and underground water courses, protection of air and climate from pollution, noise reduction and the protection of biodiversity and landscape». Costs that may influence favourably the environment but whose primary purpose is to respond to other needs, for instance to increase profitability, health and safety at the workplace, safe use of the company's products or production efficiency, should be excluded. This definition was supplemented by the items set forth in GRI-G4.

TRAINING COURSES AND COSTS IN GORI SPA (2014-2015)

Type of course	Courses (No.)		Editions (No.)		Training (hours)		Costs (euro)	
	2014	2015	2014	2015	2014	2015	2014	2015
Human resource management (*)	0	2	0	2	0	12	0	0
IT	6	3	8	9	648	156	0	2,000
Induction of new recruits (*)	1	0	2	0	360	0	0	0
Languages	2	2	2	7	38	978	0	15,840
Technical-specialist	14	18	27	27	6,344	3,241	800	10,057
Managerial	8	1	22	4	454	408	25,696	13,320
Administrative-managerial	0	2	0	2	0	18	0	790
Safety	8	6	13	35	964	5,736	24,168	53,584
Legal	0	7	13	8	0	67	0	4,820
Total	**39**	**41**	**87**	**89**	**8,808**	**10,616**	**50,664**	**100,411**

(*) The training may be carried out by teaching staff within the Group.

EMPLOYEES TRAINED (2014-2015)

(No.)	2014			2015		
	Men	Women	Total	Men	Women	Total
	761	21	**782**	452	22	**474**

Networks and plants – environmental figures

WATER SYSTEM MANAGED BY GORI SPA

	2014	2015
Water network (km)	4,386	4,400
Aqueducts and transport networks (km)	*353*	*361*
Distribution network (km)	*4,033*	*4,039*
Well intake structures (No.)	71	61
Spring intake structures (No.)	9	9
Pumping stations (No.)	98	101
Reservoirs (No.)	158	162

WASTEWATER TREATMENT AND SEWERAGE PLANTS MANAGED BY GORI SPA

	2014	2015
Wastewater treatment plants (No.)	11	11
Sewer pumping stations (No.)	156	165
Sewer network (km)	2,300	2,318

GORI SPA ENVIRONMENTAL ACCOUNTS

Products and analytical tests	u.m.	2013	2014	2015	Δ% 2015/2014
Drinking water					
Drinking water from the environment	**Mm³**	**38.84**	**39.36**	**40.78**	**3.6**
from wells	*Mm³*	*36.27*	*36.96*	*37.79*	*2.2*
from springs	*Mm³*	*2.57*	*2.40*	*3.00*	*25.0*
Water from other aqueduct systems	**Mm³**	**176.17**	**167.57**	**164.38**	**-1.9**
Drinking water introduced onto the network	**Mm³**	**215.02**	**206.93**	**205.16**	**-0.9**
Total drinking water supplied	**Mm³**	**87.56**	**91.29**	**91.07 (*)**	**-0.2**
Assessment of losses according to Italian Ministerial Decree 99/97 also in compliance with AEEGSI Resolution 5/2014					
Overall losses (measure A17)	Mm³	126.37	115.64	114.08	-1.3
Real losses (Parameter A15 of MD 99/97)	Mm³	95.06	105.87	104.34	-1.4
Wastewater treated					
Water treated in the main treatment plants	**Mm³**	**8.0**	**12.6**	**8.7**	**-31.0**
Analytical tests on drinking water and wastewater					
No. of analytical tests on drinking water	**No.**	**71,409**	**75,113**	**80,544**	**7.2**
No. of analytical tests on wastewater	**No.**	**13,333**	**15,037**	**19,204 (**)**	**27.7**

(*) Estimated figures.

(**) The figure includes tests carried out on wastewater of the sewer network and treatment plants.

The resources used	u.m.	2013	2014	2015	Δ% 2015/2014
Capture, transportation and distribution of drinking and non-drinking water					
Materials					
Sodium hypochlorite	t	127.0	129.9	164.4	26.6
Electricity					
Total electricity for drinking water	**GWh**	**44.96**	**45.28**	**50.86**	**-**
electricity for water pumping stations	*GWh*	*44.96*	*45.28*	*50.44*	*11.4*
electricity for offices	*GWh*	na	na	*0.42*	-
Wastewater treatment					
Materials					
Polyelectrolyte powder	t	0.0	0.0	25.8	-
Polyelectrolyte emulsion	t	23.0	44.7 (*)	20.3	-54.6 (*)
Sodium hypochlorite	t	75.5	83.8	146.2	74.5
Ferric chloride aiding flocculation (40%)	t	9.6	86.3 (**)	69.5	-19.5
Citric acid	t			1	
Peracetic acid, polyamine/anti-foaming agent	t	102.9	128.5	71.4	-44.4
Polyaluminium chloride (PAC)	t	12.4	13.1	5.4	-58.8
Mineral oil and grease	t	0.2	2.0 (*)	1.4	-30.0
Other (artificial COD + soda for deodorisation)	t	0.0	0.0	2.5	-
Electricity for wastewater					
Total electricity for wastewater	**GWh**	**12.13**	**14.33**	**15.42**	**7.6**
electricity for treatment	*GWh*	*7.31*	*9.99*	*10.63*	*6.4*
electricity for pumping stations	*GWh*	*4.82*	*4.34*	*4.79*	*10.4*

Other consumption					
Other drinking water consumption	**m^3**	**111**	**1,972**	**1,972 (***)**	**0.0**
drinking water consumed for non-industrial water uses (the figure relates to consumption for offices, outside showers, etc.)	*m^3*	*na*	*1,880 (*)*	*1,880 (***)*	*0.0*
drinking water consumed for process water uses (washing machinery and yards, etc.)	*m^3*	*na*	*92 (****)*	*92 (***)*	*0.0*

(*) In 2014, the significant increase in consumption of certain materials depended on extraordinary management activities at the Scafati treatment plant.

(**) In 2013, the product was used at Gasto, for just three months, while in 2014 it commenced from March.

(***) Estimated figure equal to the 2014 figure since it was not available at the time of publication.

(****) The 92 m^3 relates to the total water used both for non-industrial use and for process use since in certain plants differentiated meters are lacking, which it is presumed may be installed during 2015.

Waste	u.m.	2013	2014	2015	Δ% 2015/2014
Specific waste from wastewater treatment					
Treatment sludge	t	3,528	10,700 (*)	12,286	14.8
Sand and sediment from treatment	t	552	1,988 (*)	2,361	18.8
Waste pursuant to Italian Legislative Decree 152/06) excluding sludge and sand					
Hazardous waste	t	0.079	5.2 (**)	0.061 (**)	-98.8
Non-hazardous waste	t	1.76	0.01 (**)	0.00 (**)	-100.0

(*) The increase in treatment sludge recorded for 2014 arises from the entry into operation of a new wastewater treatment plant.

(**) As in previous years, the variability in quantities of hazardous and non-hazardous waste derives from wastewater treatment processes. Excluding sludge, sediment and sand, these are linked to uncontrollable external factors, and therefore can be highly variable.

TOTAL COD ON INPUT AND OUTPUT

(tonnes/year)	2014	2015
COD_{out}	120	183
COD_{in}	1,666	3,379

OUTPUT PARAMETERS FOR THE MAIN TREATMENT PLANTS MANAGED BY GORI SPA

Parameter	Average value (mg/l) 2013	Average value (mg/l) 2014	Average value (mg/l) 2015
BOD_5	7.1	9.2	9.4
COD	39.4	28.3	27
TSS	10.2	13.9	15
NH_4^+	2.2	2.3	1.5
Phosphorous	1	0.9	1.0

TREATMENT EFFICIENCY OF THE MAIN TREATMENT PLANTS MANAGED BY GORI SPA

Parameter	Average value (%) 2013	Average value (%) 2014	Average value (%) 2015
$100x(COD_{in} - COD_{out})/COD_{in}$	87	93	91
$100x(TSS_{in}-TSS_{out})/TSS_{in}$	94	91	96
$100x(NH_4^+{}_{in} - NH_4^+{}_{out})/ NH_4^+{}_{in}$	94	93	88
$100x(PO_4^{-3}{}_{in} -PO_4^{-3}{}_{out})/ PO_4^{-3}{}_{in}$	74	80	71

Gori implemented measures for increasing energy efficiency in 2015, achieving the savings shown in the table.

GORI SPA ENERGY EFFICIENCY

Action	Energy saving obtained 2015 (kWh)
Murata plant – pumping, regulation and functioning electric pumps via inverter (Municipality of Cercola)	812,000
Martiri d'Africa plant – pumping, regulation and functioning electric pumps via inverter (Municipality of Torre del Greco)	650,000
Parrocchia well - actions on networks and division into districts (Municipality of Palma Campania)	130,000
Petraro plant - pumping – actions on networks and division into districts (Municipality of Nocera Superiore)	87,000
Spiano well – actions on networks and division into districts (Municipality of Mercato S. Severino)	58,000
Sasso well - regulation and functioning electric pumps via inverter (Municipality of Roccarainola)	55,000
Torretta well – actions on networks and division into districts (Municipality of Pagani)	48,000

Environmental expenditure

The "environmental expenditure" in 2015 amounted to around 2.0 million euro, and was broken down as illustrated in the table.

ENVIRONMENTAL EXPENDITURE (IN EURO)

description (2001/453/EC) and GRI-G4	2015	
	Investments	Operations
management/**disposal of waste (including sludge)**		1,969,272
training on environmental matters		
protection of **air** from pollution and combating climate change		
reduction of **noise** pollution		
protection of **biodiversity** and the countryside		
environmental management systems, costs for certification of environmental emissions		
insurance coverage for environmental responsibility		73,350
decontamination costs, for example after spills (excluding fine-related costs)		
services outsourced for environmental management		
additional costs for installing **innovative technologies** (cost differential with respect to the traditional technologies)		
leak detection activities		
R&D (environmental aspects)		
additional costs for **green products**		
other environmental management expenditure.		
Total		**2,042,622**

UMBRA ACQUE

Umbra Acque SpA is a company with predominantly public capital, in which Acea SpA has a 40% interest. Since 1 January 2003 the company manages the integrated water service for ATO - Umbria 1, consisting of 38 municipalities, of which 37 in the province di Perugia and 1 (San Venanzo) in the province of Terni, serving a total population of around 500,000 inhabitants.

Human resources

UMBRA ACQUE SPA EMPLOYEES: BREAKDOWN OF HUMAN RESOURCES (2014-2015)

(No.)	2014				2015			
	Men	Women	**Total**	%	Men	Women	**Total**	%
Executives	6	0	**6**	1.8	6	0	**6**	1.8
Managers	6	2	**8**	2.3	6	2	**8**	2.4
White-collar workers	57	51	**108**	31.8	64	51	**115**	34.0
Blue-collar workers	218	0	**218**	64.1	209	0	**209**	61.8
Total	**287**	**53**	**340**	**100.0**	**285**	**53**	**338**	**100.0**

UMBRA ACQUE SPA EMPLOYEES: CONTRACT TYPE (2014-2015)

(No.)	2014			2015		
	Men	Women	**Total**	Men	Women	**Total**
Permanent workforce (open-ended contracts)	286	51	**337**	282	52	**334**
of which part-time personnel	*1*	*9*	***10***	*1*	*8*	***9***
Personnel with fixed-term contracts	1	2	**3**	3	1	**4**
Personnel with professional apprenticeship contracts	0	0	**0**	0	0	**0**
Total	**287**	**53**	**340**	**285**	**53**	**338**

INDUSTRIAL ACCIDENTS AND FREQUENCY AND SEVERITY INDEXES (2014-2015)

	2014	2015
Accidents (No.)	21	14
Total days of absence (*)	861	503
Hours worked	547,445	550,964
Frequency index (FI) (No. accidents x 1M/work hours)	**38.36**	**25.41**
Severity index (SI) (days absence x 1,000/work hours)	**1.57**	**0.91**

(*) The figure also includes the days of absence due to the continuing or returning effects of accidents occurring in previous years.

TRAINING COURSES AND COSTS IN UMBRA ACQUE SPA (2014-2015)

Type of course	Courses (No.)		Editions (No.)		Training (hours)		Costs (euro)	
	2014	2015	2014	2015	2014	2015	2014	2015
Advanced training	0	1	0	1	0	64	0	11,520
Technical-specialist	7	11	8	14	576	2,624	12,907	16,600
Legal	5	6	6	6	64	120	3,790	1,590
Managerial	6	8	13	8	1,876	340	21,480	10,625
Administrative-managerial	9	8	9	20	184	1,950	6,660	18,500
Safety	9	12	29	21	2,026	2,015	19,880	26,117
Total	**36**	**46**	**65**	**70**	**4,726**	**7,113**	**64,717**	**84,952**

EMPLOYEES TRAINED (2014-2015)

(No.)	2014			2015		
	Men	Women	Total	Men	Women	Total
	287	53	**340**	285	53	**338**

Networks and plants – environmental figures

WATER SYSTEM MANAGED BY UMBRA ACQUE SPA (*)

	2014	2015
Water network (km)	6,398	6,398
Aqueducts and transport networks (km)	*385*	*385*
Distribution network (km)	*6,013*	*6,013*
Well intake structures (No.)	215	215
Spring intake structures (No.)	267	267
River intake structures (No.)	2	2
Pumping stations (No.)	161	161
Piezometers (No.)	1	1
Reservoirs (No.)	552	552
Disinfection/treatment plants (No.) (*)	235	250

(*) The 2014 item has been updated.

TREATMENT AND SEWERAGE PLANTS MANAGED BY UMBRA ACQUE SPA

	2014	2015
Wastewater treatment plants (No.)	121	121
Sewer pumping stations (No.)	189	189
Sewer network (km)	3,541	3,541

Certification

OltIn addition to the certification already obtained - the **ISO 9001:2008** certification, renewed in March 2015 and expiring in April 2018, **SOA** certification for the OG6 categories in class II, OS22 in class III, and Qualification for planning and construction performance up to class VIII - Umbra Acque took steps to renew laboratory accreditation as per the **UNI EN CEI ISO/IEC 17025:2005** standard from the ACCREDIA agency, relating to **pH** and **manganese** parameters in natural water matrices. Laboratory accreditation was extended to **metals** (antimony - arsenic - cadmium - chromium - copper - lead - vanadium - aluminium - iron) and **anions** (bromides - chlorides - fluorides - nitrates - nitrites - sulphates). In November the certification audit on the Health and Safety Management System was carried out, in accordance with the **OHSAS 18001** standard. The related certificate was issued in January 2016.

UMBRA ACQUE SPA ENVIRONMENTAL ACCOUNTS

Products and analytical tests	u.m.	2013	2014	2015	Δ% 2015/2014
Drinking water					
Drinking water from the environment	**Mm³**	**57.05**	**57.43**	**59.46**	**3.5**
from lakes/rivers	*Mm³*	*0.92*	*0.88*	*1.15*	*30.7*
from wells	*Mm³*	*39.33*	*41.80*	*43.55*	*4.2*
from springs	*Mm³*	*16.80*	*14.75*	*14.76*	*0.1*
Drinking water introduced onto the network	**Mm³**	**56.80**	**57.20**	**59.23**	**3.5**
Total drinking water supplied	**Mm³**	**28.45**	**27.38**	**28.73**	**4.9**
Assessment of losses according to Italian Ministerial Decree 99/97 also in compliance with AEEGSI Resolution 5/2014					
Overall losses (measure A17)	Mm³	24.17	25.19	25.60	1.6
Real losses (Parameter A15 of MD 99/97)	Mm³	22.69	23.76	24.13	1.6
Wastewater treated					
Water treated in main treatment plants	**Mm³**	**59.1**	**60.7**	**58.0**	**-4.4**

Analytical tests on drinking water and wastewater					
No. of analytical tests on drinking water	**No.**	**80,205**	**74,880**	**64,420**	**-14.0**
No. of analytical tests on wastewater	**No.**	**44,932**	**41,909**	**38,765**	**-7.5**
No. of analytical tests on surface water	**No.**	**2,500**	**2,200**	**2,500**	**13.6**

Resources used	u.m.	2013	2014	2015	Δ% 2015/2014
Capture, transportation and distribution of drinking and non-drinking water					
Materials (provide concentration if solutions)					
Sodium hypochlorite	t	87.2	80.7	69.3	-14.1
Sodium chlorite	t	150.5	164.0	167.0	1.8
Hydrochloric acid	t	153.5	172.0	166.2	-3.4
Polyaluminum chloride	t	4.5	3.0	4.0	33.3
Phosphoric acid 10% (*)	t	na	2.2	0.0	-100.0
Acetic acid (*)	t	na	49.2	0.0	-100.0
Electricity (**)					
Total electricity for drinking water	**GWh**	**55.10**	**57.39**	**64.33**	**12.1**
electricity for water pumping stations	*GWh*	*54.79*	*57.07*	*63.97*	12.1
electricity for offices	*GWh*	0.31	0.32	*0.36*	12.5
Wastewater treatment					
Materials					
Polyelectrolyte emulsion	t	55.8	49.4	69.3	40.3
Ferric chloride (40%)	t	52.9	20.5	25.2	22.9
Mineral oil and grease	t	1.15	1.06	1.40	32.1
Electricity for wastewater (**)					
Total electricity for wastewater	**GWh**	**21.47**	**21.55**	**21.16**	**-1.8**
electricity for treatment	*GWh*	*16.14*	*16.61*	*16.96*	*2.1*
electricity for pumping stations	*GWh*	*5.21*	*4.82*	*4.07*	*-15.6*
electricity for offices	*GWh*	*0.12*	*0.12*	*0.13*	*8.3*
Other consumption					
Other drinking water consumption	**m^3**	**24,891**	**25,796**	**28,889**	**12.0**
drinking water consumed for non-industrial water uses (the figure relates to consumption for offices, outside showers, etc.)	*m^3*	*2,269*	*2,372*	*2,282*	*-3.8*
drinking water consumed for process water uses (washing machinery and yards, etc.)	*m^3*	*22,622*	*23,424*	*26,607*	*13.6*

(*) The change in the consumption of phosphoric acid and acetic acid is due to a plant being out of service.

(**) The figure relating to electricity consumption in previous years has been updated with the final figures and supplemented by the consumption of utilities serving the offices. In the absence of a direct reading for activities, the breakdown between the various activities has been achieved by reversing the consumption of utilities serving the offices in proportion to the consumption of each service, as indicated by the AEEGSI at the time of the 2012-2013 data collation in the document responding to the questions dated 19 May 2014.

Waste	u.m.	2013	2014	2015	Δ% 2015/2014
Specific waste from wastewater treatment					
Treatment sludge	t	18,728	18,421	22,987	24.8
Sand and sediment from treatment	t	1,851	1,578	1,290	-18.3
Waste pursuant to Italian Legislative Decree 152/06) excluding sludge and sand					
Hazardous waste	t	17.48	11.04	7.52	-31.9
Non-hazardous waste	t	6,496.65	16,111.26	22,169.54	37.6

TOTAL COD ON INPUT AND OUTPUT

(tonnes/year)	2014	2015
COD_{out}	2,556.68	2,516.97
COD_{in}	18,155.98	22,308.35

OUTPUT PARAMETERS FOR MAIN TREATMENT PLANTS MANAGED BY UMBRA ACQUE SPA

Parameter	Average value (%) 2013	Average value (%) 2014	Average value (%) 2015
BOD_5	19.1	13.2	18.2
COD	51.5	42.1	43.3
TSS	19.9	16.8	19.7
NH_4^+	6.6	5.8	5.6
Phosphorous	2.0	1.9	2.2

TREATMENT EFFICIENCY FOR MAIN TREATMENT PLANTS MANAGED BY UMBRA ACQUE SPA

Parameter	Average value (%) 2013	Average value (%) 2014	Average value (%) 2015
$100x(COD_{in} - COD_{out})/COD_{in}$	96.1	85.9	88.7
$100x(TSS_{in}-TSS_{out})/TSS_{in}$	79.8	93.3	95.7
$100x(NH_{4\ in}^{+} - NH_{4\ out}^{+})/ NH_{4\ in}^{+}$	85.2	82.9	83.5
$100x(PO_{4\ in}^{-3} -PO_{4\ out}^{-3})/ PO_{4\ in}^{-3}$	28.6	35.2	32.5

Umbra Acque implemented measures for increasing energy efficiency, achieving the savings indicated in the table.

UMBRA ACQUE SPA ENERGY EFFICIENCY

Action	Energy saving obtained 2014 (kWh)	Energy saving obtained 2015 (kWh)
replacement of pumps and motors - Petrignano-Bastia Umbra PG plant	275,000	385,000
replacement of motors in various plants	20,000	-

Environmental expenditure

The "environmental expenditure" in 2015 amounted to around 2.83 million euro, and was broken down as illustrated in the table.

ENVIRONMENTAL EXPENDITURE (IN EURO)

description (2001/453/EC) and GRI-G4	2015	
	Investments	Operations
management/**disposal of waste (including sludge)**		2,066,234
training on environmental matters		3,300
protection of **air** from pollution and combating climate change		
reduction of **noise** pollution		26,400
protection of **biodiversity** and the countryside		

environmental management systems, costs for certification of environmental emissions		
insurance coverage for environmental responsibility		24,005
decontamination costs, for example after spills (excluding fine-related costs)		
services outsourced for environmental management		
additional costs for installing **innovative technologies** (cost differential with respect to the traditional technologies)		
leak detection activities	372,080	235,400
R&D (environmental aspects)		
additional costs for **green products**		
other environmental management expenditure		97,709
Total	**327,080**	**2,453,048**

PUBLIACQUA

Publiacqua SpA is a mixed company, the balance being in public hands; Acea's equity interest is through the company Acque Blu Fiorentine SpA. It has managed the integrated water service in ATO 3 – Medio Valdarno since 2002. The territory includes around 1.3 million inhabitants, with cities of great artistic and environmental merit, including Florence, Prato and Pistoia.

Human resources

PUBLIACQUA SPA EMPLOYEES: BREAKDOWN OF HUMAN RESOURCES (2014-2015)

(No.)	2014				2015			
	Men	Women	**Total**	%	Men	Women	**Total**	%
Executives	5	1	**6**	0.9	3	1	**4**	0.6
Managers	13	7	**20**	3.2	13	7	**20**	3.3
White-collar workers	193	141	**334**	53.1	189	141	**330**	53.7
Blue-collar workers	263	6	**269**	42.8	255	6	**261**	42.4
Total	**474**	**155**	**629**	**100.0**	**460**	**155**	**615**	**100.0**

PUBLIACQUA SPA EMPLOYEES: CONTRACT TYPE (2014-2015)

(No.)	2014			2015		
	Men	Women	**Total**	Men	Women	**Total**
Permanent workforce (open-ended contracts)	472	155	**627**	460	155	**615**
of which part-time personnel	*5*	*21*	***26***	*4*	*18*	***22***
Personnel with fixed-term contracts	1	1	**2**	0	0	**0**
Personnel with professional apprenticeship contracts	0	0	**0**	0	0	**0**
Total	**473**	**156**	**629**	**460**	**155**	**615**

INDUSTRIAL ACCIDENTS AND FREQUENCY AND SEVERITY INDEXES (2014-2015)

	2014	2015
Accidents (No.)	25	28
Total days of absence (*)	642	578
Hours worked (**)	1,037,465	1,021,728
Frequency index (FI) (No. accidents x 1M/work hours)	**24.10**	**27.40**
Severity index (SI) (days absence x 1,000/work hours)	**0.62**	**0.57**

(*) The figure also includes the days of absence due to the continuing or returning effects of accidents occurring in previous years.

(**) The data is the result of estimation for December.

TRAINING COURSES AND COSTS IN PUBLIACQUA SPA (2014-2015)

Type of course	Courses (No.)		Editions (No.)		Training (hours)		Costs (euro)	
	2014	2015	2014	2015	2014	2015	2014	2015
Advanced training	92	68	92	68	840	1,224	n.a.	50,000
IT	3	6	1	13	2,451	1,288	n.a.	35,000
Languages	1	0	1	0	98	0	n.a.	0
Technical-specialist	11	33	1	111	10,021	4,453	n.a.	30,000
Managerial	6	10	1	74	4,224	4,876	n.a.	50,000
Administrative-managerial	7	23	1	57	2,086	2,120	n.a.	20,000
Safety	8	16	1	106	920	5,439	n.a.	50,000
Total	**128**	**156**	**98**	**429**	**20,640**	**19,400**	**n.a.**	**235,000**

EMPLOYEES TRAINED (2014-2015)

(No.)	2014			2015		
	Men	Women	Total	Men	Women	Total
	423	132	**555**	430	140	**570**

Training in 2015 related mainly to safety in the workplace. The implementation of the **Workforce Management** (WFM) system and the definition of a new operational organisation have made it necessary to identify *ad hoc* responsibilities for executives and safety officers, thus specific training courses have been organised. Training measures also concerned the sphere of transversal skills, with courses on the handling of conflicts and the effectiveness of the role of coach in relations with trusted co-workers.

Networks and plants – environmental figures

WATER SYSTEM MANAGED BY PUBLIACQUA SPA (*)

	2014	2015
Water network (km)	7,152	7,159
Aqueducts and transport networks (km)	*1,347*	*1,348*
Distribution network (km)	*5,805*	*5,811*
Well intake structures (No.)	579	590
Spring intake structures (No.)	851	851
River intake structures (No.)	61	61
Lake intake structures (No.)	20	20
Pumping stations (No.)	418	419
Reservoirs (No.)	913	914
Disinfection/treatment plants (No.)	136	144

(*) The figures are consistent with the communication made to AEEGSI on managed infrastructures and have been reclassified.

WASTEWATER TREATMENT AND SEWERAGE PLANTS MANAGED BY PUBLIACQUA SPA (*)

	2014	2015
Wastewater treatment plants (No.)	128	129
Sewer pumping stations (No.)	194	195
Sewer network (km)	3,837	3,849

(*) The figures are consistent with the communication made to AEEGSI on managed infrastructures and have been reclassified.

PUBLIACQUA SPA ENVIRONMENTAL ACCOUNTS

Products and analytical tests	u.m.	2013	2014	2015	Δ% 2015/2014
Drinking water					
Drinking water from the environment	**Mm³**	**166.3**	**163.6**	**169.2**	**3.4**
from lakes/rivers	*Mm³*	*110.9*	*109.2*	*112.3*	*2.8*
from wells	*Mm³*	*43.2*	*42.4*	*44.8*	*5.7*
from springs	*Mm³*	*12.2*	*12.0*	*12.1*	*0.8*
Drinking water introduced onto the network	**Mm³**	**150.6**	**149.2**	**154.3**	**3.4**
Total drinking water supplied	**Mm³**	**83.5**	**83.5**	**82.8**	**-0.8**
Assessment of losses according to Italian Ministerial Decree 99/97 also in compliance with AEEGSI Resolution 5/2014					
Overall losses (measure A17)	Mm³	57.96	60.3	65.9	9.3
Real losses (measure A15 of MD 99/97)	Mm³	47.11	56.7	62.4	10.1
Wastewater treated					
Water treated in main treatment plants	**Mm³**	**105.7**	**110.0**	**106.8**	**-2.9**
Analytical tests on drinking water and wastewater					
No. of analytical tests on drinking water	**No.**	**185,399**	**209,988**	**227,346**	**8.3**
No. of analytical tests on surface water (*)	*No.*	*na*	*21,376*	*21,745*	*1.7*
No. of analytical tests on wastewater	**No.**	**38,869**	**38,175**	**42,196**	**10.5**

(*) Analysis of untreated surface water; the value is included in the analyses of drinking water.

Resources used	u.m.	2013	2014	2015	Δ% 2015/2014
Capture, transportation and distribution of drinking and non-drinking water					
Materials					
Sodium hypochlorite	t	1,458	1,232	1,428	15.9
Sodium chlorite	t	281	260	264	1.5
Hydrochloric acid	t	383	216	303	40.3
Flocculant	t	6,670	5,600	4,438	-20.8
Charcoal powder	t	150	44	0	-100.0
Purate	t	457	428	334	-22.0
Sulphuric acid	t	665	687	564	-17.9
Electricity					
Total electricity for drinking water	**GWh**	**75.4**	**75.9**	**79.7**	**5.0**
electricity for water pumping stations	*GWh*	*74.3*	*74.9*	*78.6*	4.9
electricity for offices	*GWh*	*1.1*	*1.0*	*1.1*	10.0
Wastewater treatment					
Materials					
Polyelectrolyte emulsion	t	230	219	222	1.4
Sodium hypochlorite	t	10	9	8	-11.1
Peracetic acid, caustic soda, polyamine/anti-foaming agent	t	2	5	6	20.0
Polyaluminium chloride (PAC)	t	2,148	1,968	3,121	58.6
Lime	t	142	234	209	-10.7
Electricity for wastewater					
Total electricity for wastewater	**GWh**	**34.1**	**34.2**	**34.1**	**-0.3**
electricity for treatment	*GWh*	*28.5*	*28.7*	*29.3*	*2.1*
electricity for pumping stations	*GWh*	*5.1*	*5.1*	*4.3*	*-15.7*
electricity for offices	*GWh*	*0.5*	*0.4*	*0.5*	*25.0*

Other consumption					
Other drinking water consumption	m^3	n.a.	n.a.	n.a.	-

Waste	u.m.	2013	2014	2015	Δ% 2015/2014
Specific waste from wastewater treatment					
Treatment sludge	t	23,982	26,995	26,063	-3.5
Sand and sediment from treatment	t	1,969	1,858	1,346	-27.6
Waste pursuant to Italian Legislative Decree 152/06) excluding sludge and sand					
Hazardous waste	t	22	35	45	28.6
Non-hazardous waste	t	15,992	12,983	10,162	-21.7

TOTAL COD ON INPUT AND OUTPUT

(tonnes/year)	2014	2015
COD_{out}	2,088	1,893
COD_{in}	17,020	17,095

OUTPUT PARAMETERS FOR MAIN TREATMENT PLANTS MANAGED BY PUBLIACQUA SPA - SAN COLOMBANO

Parameter	Average value (mg/l) 2013	Average value (mg/l) 2014	Average value (mg/l) 2015
BOD_5	2.9	2.4	1.9
COD	20.4	19.3	15.8
TSS	6.5	6.0	4.5
NH_4^+	1.9	0.6	0.7
Phosphorous	0.9	1.0	1.0

Note: the San Colombano treatment plant (600,000 PE) treats around half the global wastewater.

OUTPUT PARAMETERS: GROUP OF 36 TREATMENT PLANTS, INCLUDING SAN COLOMBANO, WHICH IN TOTAL TREAT 98% OF THE WASTEWATER AND 96% OF THE ORGANIC LOAD (COD) OF PUBLIACQUA

Parameter	Average value (mg/l) 2013	Average value (mg/l) 2014	Average value (mg/l) 2015
BOD_5	3.2	2.5	2.4
COD	21.1	19.3	17.7
TSS	7.3	7.3	5.2
NH_4^+	2.0	1.3	1.1
Phosphorous	1.1	1.5	1.2

TREATMENT EFFICIENCY OF THE MAIN TREATMENT PLANTS MANAGED BY PUBLIACQUA SPA

Parameter	Average value (mg/l) 2013	Average value (mg/l) 2014	Average value (mg/l) 2015
$100x(COD_{in} - COD_{out})/COD_{in}$	83.7	83.3	87.0
$100x(TSS_{in}-TSS_{out})/TSS_{in}$	89.3	87.6	91.4
$100x(NH_4^+{}_{in} - NH_4^+{}_{out})/ NH_4^+{}_{in}$	91.6	97.6	97.0
$100x(PO_4^{-3}{}_{in} -PO_4^{-3}{}_{out})/ PO_4^{-3}{}_{in}$	66.2	60.1	60.9

TREATMENT EFFICIENCY: GROUP OF 36 TREATMENT PLANTS, INCLUDING SAN COLOMBANO, WHICH IN TOTAL TREAT 98% OF THE WASTEWATER AND 96% OF THE ORGANIC LOAD (COD) OF PUBLIACQUA

Parameter	Average value (mg/l) 2013	Average value (mg/l) 2014	Average value (mg/l) 2015
$100x(COD_{in} - COD_{out})/COD_{in}$	87.2	92.0	88.9
$100x(TSS_{in}-TSS_{out})/TSS_{in}$	92.5	94.5	93.3
$100x(NH_4^+{}_{in} - NH_4^+{}_{out})/ NH_4^+{}_{in}$	91.2	95.1	95.2
$100x(PO_4^{-3}{}_{in} -PO_4^{-3}{}_{out})/ PO_4^{-3}{}_{in}$	63.3	59.8	61.2

The process for improving energy efficiency in managed main plants continued in 2015, with a considerable reduction in energy consumption.

PUBLIACQUA SPA ENERGY EFFICIENCY

Action	Energy saving obtained 2014 (kWh)	Energy saving obtained 2015 (kWh)
Soa Sibille plant - New line pumping	300,000	-
Case Passerini treatment plant - Installation of new mixers	150,000	-
Soa Garage plant - Disposal of pumping equipment	30,000	-
Soa La Querce plant - final pumping efficiency improvements	-	300,000
Ponte a Niccheri plant - Installation of fine bubble diffusors	-	150,000

Environmental expenditure

The "environmental expenditure" in 2015 amounted to around 2.1 million euro, and was broken down as illustrated in the table.

ENVIRONMENTAL EXPENDITURE (IN EURO)

description (2001/453/EC) and GRI-G4	2015	
	Investments	Operations
management/**disposal of waste (including sludge)**		
training on environmental matters		
protection of **air** from pollution and combating climate change		
reduction of **noise** pollution		
protection of **biodiversity** and the countryside		
environmental management systems, costs for certification of environmental emissions		
insurance coverage for environmental responsibility		
decontamination costs, for example after spills (excluding fine-related costs)		
services outsourced for environmental management		
additional costs for installing **innovative technologies** (cost differential with respect to the traditional technologies)	185,828.18	
leak detection activities		
R&D (environmental aspects)	112,066.29	
additional costs for **green products**		
other environmental management expenditure	1,527,568.97	277,571.85
Total	**1,825,463**	**277,572**

ACQUEDOTTO DEL FIORA

Acquedotto del Fiora SpA has managed the integrated water service for the largest Optimum Area of Operations in Tuscany, ATO 6 – Ombrone, comprising 56 municipalities and covering an area of over 7,600 km^2, since 1 January 2002. The resident population is around 494,766 inhabitants (DemoIstat figure as of 1 January 2015), a figure which, during the Summer season, almost doubles.
The area served has many **protected areas featuring high biodiversity**, including in particular, due to its special natural importance, Maremma Natural Park and Monte Labro Natural Park.
Activities for management of the water service relate to both networks (aqueduct and sewers) and plants (water purification, wastewater treatment, desalination, etc.) of the 28 municipalities of the province of Grosseto and 28 (out of a total 36) municipalities of the province of Siena.

Human resources

ACQUEDOTTO DEL FIORA SPA EMPLOYEES: BREAKDOWN OF HUMAN RESOURCES (2014-2015)

(No.)	2014				2015			
	Men	Women	Total	%	Men	Women	Total	%
Executives	1	0	**1**	0.2	1	0	**1**	0.2
Managers	10	4	**14**	3.5	10	4	**14**	3.4
White-collar workers	95	88	**183**	45.3	102	93	**195**	47.7
Blue-collar workers	204	2	**206**	51.0	197	2	**199**	48.7
Total	**310**	**94**	**404**	**100.0**	**310**	**99**	**409**	**100.0**

ACQUEDOTTO DEL FIORA SPA EMPLOYEES: CONTRACT TYPE (2014-2015)

(No.)	2014			2015		
	Men	Women	Total	Men	Women	Total
Permanent workforce (open-ended contracts)	283	90	**373**	306	98	**404**
of which part-time personnel	*2*	*11*	***13***	*4*	*13*	***17***
Personnel with fixed-term contracts	16	3	**19**	0	0	**0**
Personnel with professional apprenticeship contracts	11	1	**12**	4	1	**5**
Total	**310**	**94**	**404**	**310**	**99**	**409**

INDUSTRIAL ACCIDENTS AND FREQUENCY AND SEVERITY INDEXES (2014-2015)

	2014	2015
Accidents (No.)	19	9
Total days of absence (*)	471	135
Hours worked	666,130	672,345
Frequency index (FI) (No. accidents x 1M/work hours)	**28.52**	**13.39**
Severity index (SI) (days absence x 1,000/work hours)	**0.65**	**0.22**

(*) The figure also includes the days of absence due to the continuing or returning effects of accidents which occurred in previous years.

TRAINING COURSES AND COSTS IN ACQUEDOTTO DEL FIORA SPA (2014-2015)

Type of course	Courses (No.)		Editions (No.)		Training (hours)		Costs (euro)	
	2014	2015	2014	2015	2014	2015	2014	2015
IT	17	4	27	10	1,932	831	33,881	n.a.
Induction of new recruits	1	1	1	1	76	24	1,253	n.a.
Technical-specialist	41	20	41	27	2,030	1,417	40,103	n.a.
Managerial	5	2	16	7	1,981	527	44,940	n.a.
Administrative-managerial	24	16	28	16	862	395	17,098	n.a.
Safety	18	11	41	25	2,416	1,755	46,134	n.a.
Total	**106**	**54**	**154**	**86**	**9,297**	**4,949**	**183,409**	n.a.

EMPLOYEES TRAINED

(No.)	2014			2015		
	Men	Women	Total	Men	Women	Total
	310	94	**404**	264	69	**333**

Networks and plants – environmental figures

WATER SYSTEM MANAGED BY ACQUEDOTTO DEL FIORA SPA

	2014	2015 (active)
Water network (km)	8,421	9,067
Aqueducts and transport networks (km)	*1,963*	*1,963*
Distribution network (km)	*6,458*	*7,104*
Well intake structures (No.)	229	188
Spring intake structures (No.)	292	249
River intake structures (No.)	1	1
Lake intake structures (No.)	6	6
Pumping stations (No.)	288	273
Piezometers (No.)	13	13
Reservoirs (No.)	787	785
Disinfection/treatment plants (No.)	40	32
Seawater desalination plants (No.)	3	3

TREATMENT AND SEWERAGE PLANTS MANAGED BY ACQUEDOTTO DEL FIORA SPA

	2014	2015
Wastewater treatment plants (No.)	132	141 (*)
Sewer pumping stations (No.)	254	266
Sewer network (km)	3,209	3,211

(*) Excluding Imhoff pits.

Certification

During 2015, Acquedotto del Fiora maintained its **UNI EN ISO 9001:2008** standard certification.

ACQUEDOTTO DEL FIORA SPA ENVIRONMENTAL ACCOUNTS

Products and analytical tests	u.m.	2013	2014	2015	Δ% 2015/2014
Drinking water					
Drinking water from the environment	**Mm³**	**65.90**	**62.44**	**62.50 (*)**	**0.1**
from lakes/rivers	*Mm³*	*1.28*	*0.99*	n.a.	-
from wells	*Mm³*	*21.74*	*19.75*	n.a.	-
from springs	*Mm³*	*42.88*	*41.70*	n.a.	-
Water from other aqueduct systems	**Mm³**	**na**	**0.78**	**n.a.**	-
Drinking water introduced onto the network	**Mm³**	**61.33**	**58.35**	**58.80 (*)**	**0.8**
Total drinking water supplied	**Mm³**	**32.01**	**31.47**	**31.47 (*)**	-
Assessment of losses according to Italian Ministerial Decree 99/97 also in compliance with AEEGSI Resolution 5/2014					
Overall losses (measure A17)	Mm³	28.41	28.43 (**)	n.a.	-
Real losses (Parameter A15 of MD 99/97)	Mm³	25.20	28.28(**)	n.a.	-
Wastewater treated					
Water treated in the main treatment plants	**Mm³**	**16.75**	**17.15**	**17.07**	**-0.5**
Water treated in plants with potential greater than 2,000 PE	**Mm³**	**26.2**	**26.3**	**25.1**	**-4.6**
Analytical tests on drinking water and wastewater					
No. of analytical tests on drinking water	**No.**	**90,472**	**113,502**	**97,456**	**-14.1**
No. of analytical tests on wastewater	**No.**	**48,774**	**50,497**	**53,883**	**6.7**
No. of analytical tests on surface water	**No.**	**590**	**1,257**	**813**	**-35.3**

(*) Data not available at the moment. Insert estimate for 2015.

(**) Data not comparable with previous years since it is calculated on the basis of AEEGSI resolution 5.

Resources used	u.m.	2013	2014	2015	Δ% 2015/2014
Capture, transportation and distribution of drinking and non-drinking water					
Materials (provide concentration if solutions)					
Sodium hypochlorite	t	582.02	450	278	-38.2
Sodium chlorite	t	0	0	7	-
Hydrochloric acid	t	13.3	10	14	40.0
Charcoal powder	t	17.5	0	29	na
Polyaluminum chloride	t	12.0	16	15.7	-1.9
Electricity					
Total electricity for drinking water	**GWh**	**32.7**	**29.2**	**31.1**	**6.5**
electricity for water pumping stations	*GWh*	*20.7*	*18.6*	*20.1*	8.1
electricity for offices	*GWh*	0.3	0.3	*0.3*	0.0
Wastewater treatment					
Materials					
Polyelectrolyte emulsion	t	178.3	na	163.65	n.a.
Sodium hypochlorite	t	208.9	250.0	417.33	66.9
Ferric chloride for dehydration of sludge (40%)	t	2.6	0.0	0.0	-
Polyaluminium chloride (PAC)	t	62.5	80.0	67.40	- 15.8
Electricity for wastewater					
Total electricity for wastewater	**GWh**	**23.2**	**23.5**	**23.9**	**1.7**
electricity for treatment	*GWh*	*19.5*	*19.8*	*20.4*	*3.0*
electricity for pumping stations	*GWh*	*3.7*	*3.7*	*3.5*	*-5.4*
Other consumption					
Other drinking water consumption	**m^3**	**n.a.**	**n.a.**	**n.a.**	-

Waste	u.m.	2013	2014	2015	Δ% 2015/2014
Specific waste from wastewater treatment					
Treatment sludge	t	14,386	14,619	13,031	-10.9
Sand and sediment from treatment	t	652	920	748	-18.7
Waste pursuant to Italian Legislative Decree 152/06) excluding sludge and sand					
Hazardous waste	t	15.47	82.39	64.44	-21.8
Non-hazardous waste	t	512.93	632.197	707.76	12.0

In some treatment plants, including the Ponte a Tressa treatment plant in the municipality of Siena, an industrial water network is present, which makes it possible to use the treated wastewater for cleaning machinery and for the toilet facilities of the office block.

TOTAL COD ON INPUT AND OUTPUT

(t/anno)	2014	2015
COD_{out}	678	832
COD_{in}	6,636	6,875

OUTPUT PARAMETERS FOR MAIN TREATMENT PLANTS MANAGED BY ACQUEDOTTO DEL FIORA (*)

Parameter	Average value (mg/l) 2013	Average value (mg/l) 2014	Average value (mg/l) 2015
BOD_5	10.4	10.7	12.6
COD	37.6	39.5	48.8
TSS	13.0	14.4	14.6
NH_4^+	7.8	6.0	4.9
Phosphorous	2.0	2.0	2.3

(*) Plants with potential >20,000 PE.

TREATMENT EFFICIENCY OF MAIN TREATMENT PLANTS MANAGED BY ACQUEDOTTO DEL FIORA SPA (*)

Parameter	Average value (mg/l) 2013	Average value (mg/l) 2014	Average value (mg/l) 2015
$100x(COD_{in} - COD_{out})/COD_{in}$	90.4	89.8	87.9
$100x(TSS_{in}-TSS_{out})/TSS_{in}$	91.5	92.5	91.7
$100x(NH_4^+{}_{in} - NH_4^+{}_{out})/ NH_4^+{}_{in}$	80.1	79.2	86.6
$100x(PO_4^{-3}{}_{in} -PO_4^{-3}{}_{out})/ PO_4^{-3}{}_{in}$	50.2	50.6	46.3

(*) Plants with potential >20,000 PE.

Acquedotto del Fiora implemented energy efficiency improvement measures both in the sphere of known technologies (inverters, high efficiency motors, recourse to LED technology for lighting, more efficient pumps, remote control), and innovative pilot projects, in particular within the sphere of treatment systems.
The main actions, together with an estimate of the related energy saving, are presented in the table below.

ACQUEDOTTO DEL FIORA ENERGY EFFICIENCY

Action	Energy saving obtained 2014 (kWh)	Energy saving obtained 2015 (kWh)
improved efficiency of drinking water pumping	-	240,000
improved efficiency of treatment processes	250,000	500,000
replacement of lighting units with LED units	n.a.	10,000

Environmental expenditure

The "environmental expenditure" in 2015 amounted to a total of around 4.0 million euro and was broken down as illustrated in the table.

ENVIRONMENTAL EXPENDITURE (IN EURO)

description (2001/453/EC) and GRI-G4	2015	
	Investments	Operations
management/**disposal of waste (including sludge)**		2,613,000
training on environmental matters		
protection of **air** from pollution and combating climate change		
reduction of **noise** pollution		
protection of **biodiversity** and the countryside		
environmental management systems, costs for certification of environmental emissions		
insurance coverage for environmental responsibility		
decontamination costs, for example after spills (excluding fine-related costs)		26,000
services outsourced for environmental management		168,000
additional costs for installing **innovative technologies** (cost differential with respect to the traditional technologies)		
leak detection activities	1,176,151	
R&D (environmental aspects)		
additional costs for **green products**		
other environmental management expenditure		
Total	**1,176,151**	**2,807,000**

ACQUE

Acque SpA operates as the sole operator of the integrated water cycle in Basso Valdarno, an area covering five Tuscany provinces. The service is provided in 56 municipalities belonging to the provinces of Florence, Lucca, Pisa, Pistoia, and Siena, corresponding to Territorial Conference 2 – Basso Valdarno, reference area for activities entrusted to Acque SpA and to group companies. Acque SpA's subsidiaries are: Acque Industriali Srl (100%); Acque Servizi Srl (100%); Le Soluzioni Scarl (59.55%).

Human resources

ACQUE SPA EMPLOYEES: BREAKDOWN OF HUMAN RESOURCES (2014-2015)

(No.)	2014				2015			
	Men	Women	Total	%	Men	Women	Total	%
Executives	5	1	**6**	1.6	5	2	**7**	1.8
Managers	5	2	**7**	1.9	5	2	**7**	1.8
White-collar workers	89	111	**200**	54.1	87	133	**220**	56.6
Blue-collar workers	157	0	**157**	42.4	155	0	**155**	39.8
Total	**256**	**114**	**370**	**100.0**	**252**	**137**	**389**	**100.0**

ACQUE SPA EMPLOYEES: CONTRACT TYPE (2014-2015)

(No.)	2014			2015		
	Men	Women	Total	Men	Women	Total
Permanent workforce (open-ended contracts)	255	105	**360**	252	129	**381**
of which part-time personnel	*4*	*24*	***28***	*3*	*28*	***31***
Personnel with fixed-term contracts	1	8	**9**	0	7	**7**
Personnel with professional apprenticeship contracts	0	1	**1**	0	1	**1**
Total	**256**	**114**	**370**	**252**	**137**	**389**

INDUSTRIAL ACCIDENTS AND FREQUENCY AND SEVERITY INDEXES (2014-2015)

	2014	2015
Accidents (No.)	6	8
Total days of absence (*)	139	154
Hours worked	584,273	617,550
Frequency index (FI) (No. accidents x 1M/work hours)	**10.27**	**12.95**
Severity index (SI) (days absence x 1,000/work hours)	**0.24**	**0.25**

(*) The figure also includes the days of absence due to the continuing or returning effects of accidents which occurred in previous years.

TRAINING COURSES AND COSTS IN ACQUE SPA (2014-2015)

Type of course	Courses (No.)		Editions (No.)		Training (hours)*		Costs (euro)	
	2014	2015	2014	2015	2014	2015	2014	2015
IT	11	2	24	12	495	342	1,416	0
Induction of new recruits	4	4	15	15	68	201	400	200
Technical-specialist	41	53	52	73	1,354	1,377	9,180	16,844
Managerial (*)	1	2	2	2	2,674	846	15,544	0
Safety	47	36	89	78	3,865	2,830	2,770	3,280
Environmental services	2	7	2	9	34	77	150	1,155
Transversal (*)	3	3	3	10	80	200	0	0
Total	**109**	**107**	**187**	**199**	**8,570**	**5,873**	**29,460**	**21,479**

(*) Funded training, provided by means of free training channels or using teaching staff within the company.

EMPLOYEES TRAINED (2014-2015)

(No.)	2014			2015		
	Men	Women	Total	Men	Women	Total
	237	108	**345**	240	110	**350**

In line with the human resources development process undertaken by the company in recent years, in 2015 350 employees were involved in training programmes, 90% of the workforce (345 in 2014, 92% of the total).
In greater detail, the **Soft Skill project** was completed during the year, addressing human resources with duties for the direct coordination of individuals or work groups, with the aim of providing them with tools, including operating tools, for the correct and effective handling of co-workers, also in situations featuring great change and transformation in the working context. Acque also launched a training programme, *Engineering of the integrated water service: environmental and safety management aspects*, for refreshing the technical skills of its engineers.

Networks and plants – environmental figures

WATER SYSTEM MANAGED BY ACQUE SPA OPERATING PLANTS

	2014	2015 (attivi)
Water network (km)	5,953	5,898
Aqueducts and transport networks (km)	*808*	*829*
Distribution network (km)	*5,145*	*5,069*
Well intake structures (No.)	434	428
Spring intake structures (No.)	274	268
River and lake intake structures (No.)	14	14
Reservoirs (No.)	550	547
Disinfection/treatment plants (No.)	248	293
Pumping stations (No.)	402	402

TREATMENT AND SEWERAGE PLANTS MANAGED BY ACQUE SPA

	2014	2015
Wastewater treatment plants (No.)	139	139
Sewer pumping stations (No.)	515	517
Sewer network (km)	3,064 (*)	3,081

(*) The figure has been adjusted in relation to that published.

Certification

Acque has always been inclined to put in place voluntary Management systems that ensure sustainable performances. The company is certified by RINA SpA - an ACCREDIA recognised certification body for Quality (UNI EN ISO 9001), Environment (UNI EN ISO 14001), Safety (OHSAS 18001), Energy (UNI EN ISO 50001), Social responsibility (SA 8000), Emission management ISO 14064 – ISO 14067 - Carbon footprint and EMAS Registration for the liquid waste treatment plant at Pagnana Empoli – managed by Acque and Acque Industriali.
Acque has also obtained multi-site certification by ACCREDIA for laboratories of analysis compliant with the UNI CEI EN ISO/IEC 17025 standard, for the wastewater chemical laboratory in Pontedera, chemical laboratory for drinking water in Empoli and microbiological laboratories in Pisa and Empoli. For details see the website www.acque.net.

ACQUE SPA ENVIRONMENTAL ACCOUNTS

Products and analytical tests	u.m.	2013	2014 (*)	2015 (**)	Δ% 2015/2014
Drinking water					
Drinking water from the environment	**Mm³**	**72.89**	**70.35**	**73.95**	**5.1**
from lakes/rivers	*Mm³*	*3.28*	*3.12*	*2.98*	*-4.5*
from wells	*Mm³*	*60.91*	*58.72*	*62.50*	*6.4*
from springs	*Mm³*	*8.70*	*8.50*	*8.47*	*-0.4*
Water from other aqueduct systems	**Mm³**	**6.00**	**6.38**	**6.71**	**5.2**
Drinking water supplied to other aqueduct systems	*Mm³*	*0.958*	*0.99*	*0.98*	*-1.0*
Production losses between capture and intake to the network	*Mm³*	*5.161*	*3.96*	*5.84*	*47.5*
Drinking water introduced onto the network	*Mm³*	*73.73*	*72.77*	*74.82*	*2.8*
Drinking water introduced onto the network + drinking water supplied to other systems and production losses between capture and intake to the network	**Mm³**	**74.68**	**73.76**	**75.80**	**2.8**
Total drinking water supplied	**Mm³**	**46.85**	**46.39**	**46.01**	**-0.8**
Assessment of losses according to Italian Ministerial Decree 99/97 also in compliance with AEEGSI Resolution 5/2014					
Overall losses (measure A17)	Mm³	26.88	26.38	28.81	9.2
Real losses (Parameter A15 of MD 99/97)	Mm³	18.07	17.81	19.83	11.3
Wastewater treated					
Water treated in all treatment plants	**Mm³**	**51.95**	**52.90**	**47.20**	**-10.8**
Analytical tests on drinking water and wastewater					
No. of analytical tests on drinking water *(including tests on surface water)*	**No.**	**355,380**	**346,695**	**234,950**	**-32.2**
No. of analytical tests on wastewater	**No.**	**119,192**	**113,827**	**123,126**	**8.2**

Note: the figures in the table have been recalculated according to the criteria indicated in resolution 5/2014 of the AEEGSI (att. 2).
(*) 2014 figures have been updated with the final values.
(**) 2015 figures: the figures are provisional for the part relating to losses, the volumes delivered to the customers and the volumes of the single uptakes since the volumes delivered to users in 2015 and volumes attributable to individual uptakes are not known; the volumes input to water networks, volumes delivered to other SII operators and volumes from other SII operators are by contrast known and measured.

Resources used (*)	u.m.	2013	2014	2015	Δ% 2015/2014
Capture, transportation and distribution of drinking and non-drinking water					
Materials					
Sodium hypochlorite	t	201.17	200.30	233.61	16.6
Hydrochloric acid	t	161.70	341.81	392.82	14.9
Potassium permanganate	t	3.80	3.70	4.30	16.2
Polyaluminium chloride	t	78.15	15.09	38.01	151.9
Sodium chlorite	t	171.44	265.64	312.49	17.6
Caustic soda and sodium metabisulphite	t	5.88	3.75	3.025	-19.3
Phosphoric and acetic acid	t	2.80	2.42	2.725	12.6
Alginate, alifons, hydrofloc	t	0.87	0.77	0.105	-86.4
Polychlorinated aluminium sulphate	t	0.0	144.81	102.12	-29.5
Electricity (*)					
Total electricity for drinking water	**GWh**	**53.3**	**51.1**	**53.46**	**4.7**
electricity for water pumping stations	*GWh*	*52.9*	*50.6*	*53.0*	*4.7*
electricity for offices	*GWh*	0.4	0.46	*0.46*	*0.0*

Wastewater treatment					
Materials					
Polyelectrolyte powder	t	13.60	4.25	3.00	-29.4
Polyelectrolyte emulsion	t	77.06	88.875	93.025	4.7
Polyaluminium chloride	t	89.88	51.50	15.40	-70.1
Ferric chloride for dehydration of sludge (40%)	t	429.0	532.14	524.45	-1.4
Sodium hypochlorite for final disinfection	t	6.0	17.00	8.365	-50.8
Peracetic acid for disinfection	t	18.15	14.05	11.00	-21.7
Sulphuric acid	t	1.5	3.00	3.75	25.0
Sodium chlorite 8.5%	t	1.0	0.0	0.0	0.0
Ferrous chloride 31.5%	t	29.43	10.145	3.795	-62.6
Caustic soda 30% (sodium hydroxide)	t	32.17	23.10	12.15	-47.4
Citric acid	t	3.0	3.00	1.30	-56.7
Biological reactivants	t	0.46	0.18	0.12	-33.3
Acetic acid	t	0.0	0.075	0.00	-100.0
Sodium aluminate	t	0.0	2.70	2.70	0.0
Electricity for wastewater					
Total electricity for wastewater (*)	**GWh**	**33.80**	**31.77**	**31.20**	**-1.8**
electricity for treatment	*GWh*	*26.9*	*24.98*	*25.33*	*1.4*
electricity for pumping stations	*GWh*	*6.6*	*6.50*	*5.60*	*-13.8*
electricity for offices	*GWh*	*0.3*	*0.29*	*0.27*	*-6.9*
Other consumption					
Other drinking water consumption	**m^3**	**62,765**	**55,937**	**40,381**	**-27.8**
drinking water consumed for non-industrial water uses (the figure relates to consumption for offices, outside showers, etc.)	*m^3*	*62,765*	*55,937*	*40,381*	*-27.8*

(*) 2013 and 2014 figures updated with the final values. This 2015 item is estimated on the basis of invoices received.
The figures for raw materials have been corrected for past years too, inserting the final values.

Waste	u.m.	2013	2014	2015	Δ% 2015/2014
Specific waste from wastewater treatment					
Treatment sludge	t	66,777.69	61,984.500	68,609.913	10.7
Sand and sediment from treatment	t	2,710.76	2,664.280	3,415.77	28.2
Waste pursuant to Italian Legislative Decree 152/06) excluding sludge and sand					
Hazardous waste	t	13.26	14.89	11.643	-21.8
Non-hazardous waste	t	2,725.42	2,628.50	2,636.00	0.3

Acque **reused/recycled part of the water** in the main treatment plants for a total volume of around 458,000 m^3 in 2015.

TOTAL COD ON INPUT AND OUTPUT (ALL PLANTS)

(tonnes/year)	2014	2015
COD_{out}	2,209	**1,757**
COD_{in}	19,984	**21,659**

OUTPUT PARAMETERS FOR MAIN TREATMENT PLANTS MANAGED BY ACQUE SPA (*)

Parameter	Average value (mg/l) 2013	Average value (mg/l) 2014	Average value (mg/l) 2015
BOD_5	10.5	6.5	4.7
COD	48.7	41.1	36.0
TSS	18.2	11.4	8.7
NH_4^+	6.3	5.7	4.8
fosforo	1.9	2.1	2.1

(*) Plants with potential ≥ 10,000 PE.

TREATMENT EFFICIENCY OF MAIN TREATMENT PLANTS MANAGED BY ACQUE SPA (*)

Parameter	Average value (%) 2013	Average value (%) 2014	Average value (%) 2015
$100x(COD_{in}-COD_{out})/COD_{in}$	87.9	86.8	90.8
$100x(TSST_{in}-TSS_{out})/TSS_{in}$	90.2	91.4	93.5
$100x(NH_4^+{}_{in}-NH_4^+{}_{out})/NH_4^+{}_{in}$	82.6	83.3	87.4
$100x(PO_4^{-3}{}_{in}-PO_4^{-3}{}_{out})/ PO_4^{-3}{}_{in}$	64.6	61.1	62.6

(*) Plants with potential ≥ 10,000 PE.

Acque has implemented energy efficiency enhancement measures, achieving the savings indicated in the table.

ACQUE SPA ENERGY EFFICIENCY

Action	Energy saving obtained 2014 (kWh)	Energy saving obtained 2015 (kWh)
Pagnana plant - pumping	-	40,000
Cambiano plant - pumping	-	10,000
Le Lame plant - replacement of ventilation system	-	30,000
S. Jacopo plant - replacement of ventilation system	-	40,000
Local authority treatment plant - automation and energy efficiency enhancement	600,000	600,000
La Fontina plant - automation and energy efficiency enhancement	-	10,000
San Prospero plant - pumping	-	6,000
Other energy efficiency improvements	-	13,000

Environmental expenditure

The "environmental expenditure" in 2015 amounted to around 4.9 million euro, and was broken down as illustrated in the table.

ENVIRONMENTAL EXPENDITURE (IN EURO)

description (2001/453/EC) and GRI-G4	2015	
	Investments	Operations
management/**disposal of waste (including sludge)**		4,755,879.94
training on environmental matters		
protection of **air** from pollution and combating climate change		
reduction of **noise** pollution	1,144	8,000
protection of **biodiversity** and the countryside		
environmental management systems, costs for certification of environmental emissions	20,029.0	10,662.0
insurance coverage for environmental responsibility	20,559.4	0.0
decontamination costs, for example after spills (excluding the fine-related costs)		
services outsourced for environmental management (analysis)		80,400.0
additional costs for installing **innovative technologies** (cost differential with respect to the traditional technologies)		
leak detection activities		
R&D (environmental aspects)		
additional costs for **green products**		
other environmental management expenditure		
Total	**40,588.40**	**4,854,941.94**

GRI-G4 CONTENT INDEX: GENERAL STANDARDS AND MATERIAL SPECIFIC STANDARDS

In accordance with **"comprehensive"** compliance with the **G4 Sustainability Reporting Guidelines** (2013 edition)[102], including the Electric Utilities Sector Disclosures-G4[103], the GRI Content Index is presented below, including:

- **definition of general standards and material specific standards** (economic, social and environmental), with **indication of the sections and pages of the documents** where it is possible to find them **- or responses to the indicators** - and **the reporting of any omissions or "non-materiality" of certain indicators** included under relevant aspects;
- **extension of the materiality of each aspect, which means its significance within the Organization** (Group or company linked to specific business) **or outside it** (e.g. supply chain, community);
- **indication of the aspects/indicators** selected on a sample basis and **subject to analysis and control by the independent auditor.**

definition of GRI-G4 general standards and specific standards, notes (responses or reporting of non-materiality) reference pages and sections		extension of "materiality"	subject to independent audit
GENERAL STANDARD DISCLOSURES GRI-G4 (INCLUDING SECTOR DISCLOSURES – EU)			
Strategy and Analysis			
G4-1	**Statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability**. *Letter to the stakeholders* pages 6-7, *Corporate Identity* pages 32 et seq., 36 et seq.		
G4-2	**Description of key impacts, risks, and opportunities**. *Letter to the stakeholders* pages 6-7, *Corporate Identity* pages 28 et seq., 29 et seq., 31 et seq., 36 et seq.		
Organizational Profile			
G4-3	**Name of the organization**. Acea SpA, *Corporate Identity* page 24.		✓
G4-4	**Primary brands, products, and services.** *Corporate Identity* pages 25 et seq.		✓
G4-5	**Location of the organization's headquarters**. Piazzale Ostiense 2, 00154 Roma.		✓
G4-6	**Number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.** *Corporate Identity* pages 25 et seq., 30.		✓
G4-7	**Nature of ownership and legal form.** *Corporate Identity* page 27.		✓
G4-8	**Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries).** *Corporate Identity* pages 25 et seq., 30; *Socio-economic relations with stakeholders* pages 53 et seq.		✓
G4-9	**Report the scale of the organization, including: number of employees; number of operations; net sales (for private sector organizations) or net revenues (for public sector organizations); total capitalization broken down in terms of debt and equity (for private sector organizations); quantity of products or services provided.** *Corporate Identity* pages 25, 30; *Socio-economic relations with stakeholders* pages 104, 127.		✓
G4-10	**Number of employees by employment type, by employment contract, by region and gender**. *Socio-economic relations with stakeholders* pages 105 et seq., 114.		✓
G4-11	**Percentage of total employees covered by collective bargaining agreements.** *Socio-economic relations with stakeholders* page 114.		
G4-12	**Description of organization's supply chain.** *Corporate Identity* page 31; *Socio-economic relations with stakeholders* pages 95, 97.		✓
G4-13	**Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain.** No significant changes were noted during the year in the spheres envisaged by the indicator.		✓

[102] The definitions of the general and specific standard elements are consistent with the English version of the Guidelines and the Sector Disclosures, published in 2013; for a more complete explanation of their significance, which has been taken into account when drafting the report, please see the original edition of the G4 Sustainability Reporting Guidelines (part 1 and part 2) and the Electric Utilities Sector Disclosures-G4 available online on the website www.globalreporting.org.

[103] The indicators of the Sector Disclosures for Utility companies in the Electric Sector (EU) are supplemented in the table; the text governs distinct topics for energy companies, introduces specific aspects (EU) and a number of in-depth notes relating to indicators already set forth in the *GRI-G4 Guidelines*.

EU1	**Installed capacity, brocken down by primary energy source and by regulatory regime.** *Environmental issues* page 151.	
EU2	**Net energy output broken down by primary energy source and by regulatory regime.** *Environmental issues* page 149.	
EU3	**Number of residential, industrial, institutional and commercial customer accounts.** *Socio-economic relations with stakeholders* page 54, table 10.	
EU4	**Length of above and underground transmission and distribution lines by regulatory regime.** *Environmental issues* page 154.	
EU5	**Allocation of CO_2 emissions allowances or equivalent, broken down by carbon trading framework.** *Environmental issues* page 171, table 59.	
G4-14	**Report whether and how the precautionary approach or principle is addressed by the organization.** *Corporate Identity* pages 41, 43, 44 et seq. and table 7; *Socio-economic relations with stakeholders* page 133; *Environmental issues* page 169.	
G4-15	**Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses**. *Disclosing sustainability: methodological note* page 12; *Compliance with the Global Compact* page 17; *Corporate Identity* page 44 and table 7*; Socio-economic relations with stakeholders* pages 95, 96, 116, 133, 134; *Environmental issues* page 144.	
G4-16	**List memberships of associations (such as industry associations) and national or international advocacy organizations in which the organization: holds a position on the governance body, participates in projects or committees, provides substantive funding beyond routine membership dues, views membership as strategic**. *Socio-economic relations with stakeholders* page 133.	
Identified Material Aspects and Boundaries		
G4-17	**Entities included in the organization's consolidated financial statements or equivalent documents. Report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.** The indicator is shown in the report each time the report boundary has a scope different to the consolidation area. This change in some cases should simply be linked to the various business sectors (and related pertinent companies) reported on, in others it should be placed in relation to the centralised management of some data which, by virtue of the activities managed under the service, does not cover the entire Group. *Disclosing sustainability: methodological note* page 16; *Corporate Identity* page 28*; Socio-economic relations with stakeholders* pages 52, 96, 105, 111, 114, 116, 117, 118, 125, 126; *Environmental issues* pages 148, 157, 160, 166, 169; *Environmental accounts* page 213.	✓
G4-18	**Process for defining the report content and the Aspect Boundaries. Explain how the organization has implemented the Reporting Principles for Defining Report Content.** *Disclosing sustainability: methodological note* pages 12, 13.	✓
G4-19	**List all the material Aspects identified in the process for defining report content.** *Disclosing sustainability: methodological note* pages 12, 13, 15*; GRI-G4 Table of Contents: general standards and material specific standards* pages 197 et seq.	✓
G4-20	**For each material Aspect, report the Aspect Boundary within the organization.** Response is given to this indicator, as and when required, in this Table of Content, in the second column.	✓
G4-21	**For each material Aspect, report the Aspect Boundary outside the organization.** Response is given to this indicator, as and when required, in this Table of Content, in the second column.	✓
G4-22	**Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements.** Any restatements which imply changes in respect of the matters published in 2015 are appropriately indicated and justified in the report. *Disclosing sustainability: methodological note* page 16.	✓
G4-23	**Report significant changes from previous reporting periods in the Scope and Aspect Boundaries.** *Environmental issues* page 147; *Water company data sheets page 174*.	✓
Stakeholder Engagement		
G4-24	**List of stakeholder groups engaged by the organization.** *Disclosing sustainability: methodological note* page 13; *Corporate Identity* pages 34, 46 et seq.; *Socio-economic relations with stakeholders* pages 54-61, 68, 70, 73, 75, 76, 78, 81, 88-93, 100, 101, 102, 103, 114 ss., 117, 118, 128, 130, 131, 132, 133; *Environmental issues* page 147.	✓
G4-25	**Basis for identification and selection of stakeholders with whom to engage**. *Disclosing sustainability: methodological note* page 13; *Corporate Identity* pages 46 et seq.; *Socio-economic relations with stakeholders* pages 68, 73, 75, 76, 78, 81, 82, 88-93, 114 ss., 117, 118, 128, 130; *Environmental issues* page 147.	✓
G4-26	**Organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group.** *Disclosing sustainability: methodological note* page 13; *Corporate Identity* pages 48 et seq.; *Socio-economic relations with stakeholders* pages 68, 73, 75, 76, 78, 81, 82, 88-93, 114 et seq., 117, 118, 120, 122 et seq., 124 et seq.,126, 128, 130, 131, 132, 133; *Environmental issues* page 147.	✓

G4-27	**Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.** *Disclosing sustainability: methodological note* page 13; *Corporate Identity* pages 48 et seq.; *Socio-economic relations with stakeholders* pages 54-61, 68, 70, 73, 75, 76, 78, 81, 82, 91, 99, 100, 101, 102,103, 114 et seq., 117, 118, 128, 131, 134.	✓

Report profile

G4-28	**Reporting period (such as fiscal or calendar year) for information provided.** *Disclosing sustainability: methodological note* page 12.	✓
G4-29	**Date of most recent previous report**. *Disclosing sustainability: methodological note* page 12.	✓
G4-30	**Reporting cycle (such as annual, biennial)**. *Disclosing sustainability: methodological note* page 12.	✓
G4-31	**Contact point for questions regarding the report or its contents.** *Disclosing sustainability: methodological note* page 16.	✓
G4-32	**Report the 'in accordance' option the organization has chosen. Report the GRI Content Index for the chosen option. Report the reference to the External Assurance Report, if the report has been externally assured.** *Disclosing sustainability: methodological note* page 12; *GRI-G4 Table of Contents: general standards and material specific standards* pages 197 et seq.	✓
G4-33	**Organization's policy and current practice with regard to seeking external assurance for the report (scope and basis of any external assurance provided, relationship between the organization and the assurance providers, etc.).** *Disclosing sustainability: methodological note* page 12; *Opinion Letter* pages 20 et seq.	✓

Governance

G4-34	**Governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.** *Corporate Identity* pages 38-42.	
G4-35	**Processes for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees.** The Board of Directors delegates operational authority to the CEO, who, within the sphere of the corporate macro-structure resolved by the same Board, delegates powers and authority to management, on a basis consistent with the missions and responsibilities of the various units. As a rule, the process for any type of authorisation (and therefore also for economic, environmental and social aspects) takes place by means of analysis of the need/requirement to assign a power. By way of example, the HR and Organisation Manager is assigned, among other things, authority for health and safety in the workplace.	
G4-36	**Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body.** Acea SpA's Corporate Affairs Unit, within which the CSR and Sustainable development Unit operates, is organised by the staff of the Chairman, who has responsibility for overseeing aspects relating to the environmental and social impact of the Group. The Corporate Affairs Unit's duties include the coordination and development of aspects relating to the sustainability of the Group's activities and processes. The head of this Unit is the Acea CSR manager.	
G4-37	**Processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to the highest governance body.** During the year, on a basis consistent with indications emerging from the Board *evaluation*, carried out by an independent consultant, management was invited to take part in various Board meetings, making a specific contribution in terms of information and knowledge during the meetings. *Corporate Identity* pages 38-42; *Socio-economic relations with stakeholders* page 127.	
G4-38	**Composition of the highest governance body and its committees (executive or non-executive, independence, gender, etc.).** *Corporate Identity* page 39.	
G4-39	**Report whether the Chair of the highest governance body is also an executive officer (and, if so, his or her function within the organization's management and the reasons for this arrangement).** *Corporate Identity* page 39.	
G4-40	**Nomination and selection processes for the highest governance body and its committees, and criteria used for nominating and selecting highest governance body members (whether and how diversity, independence, expertise and experience relating to economic, whether and how stakeholders - including shareholders - are involved).** The presence of women in the company's governance bodies and Committees is not motivated by a search for a balance between genders but by assessments relating to professional expertise and meeting company requirements. With regard to processes for the identification and appointment of members of the Board of Directors of the holding company, Acea's Articles of Association conforms to applicable law provisions. Italian Law 120 dated 12 July 2011 introduced in Italy the obligation to include, as from 2012, women on the Boards of Directors of listed companies, starting with at least one fifth of the board and, as from 2015, at least one third. In Acea gender percentages are met both for the Board of Directors, made up of 9 members, of whom 5 women, and the Board of Statutory Auditors, made up of 3 members, of whom 1 woman. *Corporate Identity* page 40.	
G4-41	**Processes for the highest governance body to ensure conflicts of interest are avoided and managed.** Conflicts of interest in Acea are checked by corporate governance procedures and systems (Management, organisation and control model, *Code of Ethics*, Related Party Transactions procedure, independent Directors). These tools are used in the various spheres in which a conflict of interest may occur: in dealings between controlling shareholders and minority shareholders, between Acea and Related Parties, between Acea and Public Administration Authorities. *Corporate Identity* pages 38-42.	

G4-42	**Roles of the highest governance body and senior executives 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 impacts.** *Disclosing sustainability: methodological note* page 12; *Corporate Identity* pages 36 et seq., 38-42, 43.	
G4-43	**Measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics.** *Disclosing sustainability: methodological note* page 12; *Corporate Identity* page 38.	
G4-44	**Processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics.** The non-executive Directors receive a fixed emolument, established by the Shareholders' Meeting, commensurate to the commitment required of them. *Corporate Identity* pages 38, 40.	✓
G4-45	**Role of the highest governance body in the identification and management of economic, environmental and social impacts, risks, and opportunities. Include the highest governance body's role in the implementation of due diligence processes.** *Disclosing sustainability: methodological note* page 12; *Corporate Identity* pages 36, 38-42, 43.	
G4-46	**Role of the highest governance body in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics.** *Disclosing sustainability: methodological note* page 12; *Corporate Identity* pages 36, 38, 41, 42.	
G4-47	**Frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities.** *Disclosing sustainability: methodological note* page 12; *Corporate Identity* pages 36, 38.	
G4-48	**Report the highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered.** *Disclosing sustainability: methodological note* page 12; *Corporate Identity* page 40.	✓
G4-49	**Processes for communicating critical concerns to the highest governance body.** *Corporate Identity* pages 40, 41, 42.	
G4-50	**Nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them.** The BoD receives constant information on potentially critical situations, primarily by means of the work carried out by the Risks and Control Committee, to which reports the Director in charge of the IARMS supported by the Internal Audit Unit. In addition, the activities carried out and results of Supervisory Board 231, which might reveal the risk of company liability, are the subject of information flows in the direction of the BoD. Additional sources of information of the Board of Directors are the Management reviews on certified management systems in force in the field of Quality, Environment, Safety, Energy.	
G4-51	**Remuneration policies for the highest governance body and senior executives (fixed pay and variable pay, sign-on bonuses or recruitment incentive payments, termination payments). Report how performance criteria in the remuneration policy relate to the highest governance body's and senior executives' economic, environmental and social objectives.** *Corporate Identity* pages 38-42; *Socio-economic relations with stakeholders* page 123.	
G4-52	**Processes for determining remuneration. Report whether remuneration consultants are involved in determining remuneration and whether they are independent of management.** *Corporate Identity* pages 38-42.	
G4-53	**Report how stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals, if applicable.** *Corporate Identity* page 40.	
G4-54	**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.** *Corporate Identity* page 40; see also *2015 Remuneration Report*, available on the Acea website (www.acea.it).	
G4-55	**Report the ratio of 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.** *Corporate Identity* page 40; see also *2015 Remuneration Report*, available on the Acea website (www.acea.it).	
Ethics and Integrity		
G4-56	**Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics.** *Corporate Identity* pages 32 et seq. 38-42; *Socio-economic relations with stakeholders* pages 94, 95.	
G4-57	**Internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines.** *Corporate Identity* page 38.	
G4-58	**Internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.** *Corporate Identity* page 42.	
SPECIFIC STANDARD DISCLOSURES – ONLY MATERIAL ASPECTS AND INDICATORS (INCLUDING SECTOR DISCLOSURES – EU)		
ECONOMIC		
Aspect: Economic Performance		**Acea Group**
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Corporate Identity* pages 29 et seq., 32.	
G4-EC1	**Direct economic value generated and distributed (including revenues, operating costs, employee wages and benefits, community investments, economic value retained, payments to providers of capital, payments to government).** *Corporate Identity* pages 29 et seq., 49; *Socio-economic relations with stakeholders* pages 112, 127, 130 et seq.	✓

G4-EC2	**Financial implications and other risks and opportunities for the organization's activities due to climate change.** *Corporate Identity* page 30; *Socio-economic relations with stakeholders* page 129; *Environmental issues* pages 143, 155 et seq.		
G4-EC3	**G4-EC3 Coverage of the organization's defined benefit plan obligations.** *Socio-economic relations with stakeholders* pages 112 et seq., table 34, 123.		
G4-EC4	**G4-EC4 Financial assistance received from government.** *Corporate Identity* page 49, footnote 14.		
Aspect: Market Presence		**main Group companies**	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* page 112.		
G4-EC5	**Ratio of standard entry level wage by gender compared to local minimum wage at significant locations of operation**. *Socio-economic relations with stakeholders* page 112.		
G4-EC6	**Proportion of senior management hired from the local community at significant locations of operation.** Procedures for hiring human resources in Acea do not require any particular criteria linked to geographical residence, this being potentially discriminatory and at odds with the Group's logic.		
Aspect: Indirect Economic Impacts		**Acea Group**	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Corporate Identity* page 49*; Socio-economic relations with stakeholders* pages 91, 95.		
G4-EC7	**Development and impact of infrastructure investments and services supported (impacts on communities and local economies; report whether these investments and services are commercial, in-kind, or pro bono engagements, etc.).** *Corporate Identity* page 49*; Socio-economic relations with stakeholders* pages 62, 64, 68, 71, 73, 75, 77, 89, 91, 127, 134.		
G4-EC8	**Significant indirect economic impacts, including the extent of impacts.** *Corporate Identity* page 49*; Socio-economic relations with stakeholders* pages 64, 68, 71, 75, 89, 91, 94, 95, 96, 97, 98, 99; *Environmental issues* page 155.	main Group companies; local communities; suppliers	
Aspect: Procurement Practices		main Group companies; suppliers	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 94, 95, 96.		
G4-EC9	**Proportion of spending on local suppliers at significant locations of operation.** A specific preferential strategy for locally based suppliers does not yet exist, although particularly for labour procurement, the prevalence of local suppliers occurs almost naturally. *Socio-economic relations with stakeholders* pages 95, 97, 99, table 28.		✓
Aspect *(Sector Disclosures)*: Availability and Reliability		Group companies energy and networks areas	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** Acea Energia SpA's Energy Management Unit ensures the supply of electrical energy (as well as gas and fuels) for the Group's internal and external customers, guaranteeing the balancing and optimisation of the energy portfolio, both physical and financial. The Unit handles commercial relations with the main suppliers of electrical energy and gas, Italian and foreign, and with the main financial institutions. The Unit oversees the efficiency of its operating processes and instrumentation (both operational and relating to risk monitoring). During the year, for example, with regard to the risk for consumption volumes, forecasting models have been implemented to gauge relative changes appropriately in advance and promptly handle possible exposure between volumes of energy supplied and sold. *Socio-economic relations with stakeholders* pages 62, 63, 64, 94, 96 note 65; *Environmental issues* pages 148, 153, 154.		
EU10	**Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime.** **Non-material.** The generation of electrical energy which, in Acea is of a modest dimension, by virtue of the national system for the management of the electricity market, is not suitable for direct coverage of demand.	n. m.	
Aspect (*Sector Disclosures*): Demand-Side Management		Group companies energy and networks areas	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 53, 62, 63, 64, 68, 79, 135, 136; *Environmental issues* page 153.		
Aspect (*Sector Disclosures*): Research and Development		Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 62, 63, 64, 132, 133, 134, 135, 136; *Environmental issues* page 153.		

Aspect (*Sector Disclosures*): System Efficiency		Group companies energy and environment (waste management) areas	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Environmental issues* page 154.		
EU11	**Average generation efficiency of thermal plants by energy source and by regulatory regime.** *Environmental issues* pages 150, 152 table 45.		
EU12	**Transmission and distribution losses as a percentage of total energy**. *Environmental issues* page 154.	Group companies energy and networks areas	
ENVIRONMENTAL			
Aspect: Materials		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects. (+ Sector Disclosures).** With regard to PCB, Acea had already taken steps by 31 December 2009 to dispose of all transformers with PCB exceeding the threshold of 500 ppm, in compliance with Italian Legislative Decree 209/99 and Italian Law 62/05. There were 140 transformers with PCB exceeding 50 ppm but below the aforementioned threshold in 2015, reported to Arpa, including 94 public lighting transformers. *Environmental accounts* page 213.		
G4-EN1	**Materials used by weight or volume (+Sector Disclosures).** *Environmental accounts* page 219, 220, 221 and DMA-Materials note.		
G4-EN2	**Percentage of materials used that are recycled input materials.** **Non-material**: the indicator is only partly inherent to Acea's businesses, which is mainly involved in the sale and distribution of energy, distribution of water and management of waste (waste-to-energy activities); however, in limited areas, Acea has launched a green purchasing policy. *Socio-economic relations with stakeholders* page 96.	n. m.	
Aspect: Energy		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Corporate Identity* pages 31, 32; *Environmental issues* page 148.		
G4-EN3	**Energy consumption within the organization.** In respect of standards, methodologies and conversion factors used, see the *Explanatory notes* to the *Environmental accounts*. *Environmental issues* pages 166, 167.		✓
G4-EN4	**Energy consumption outside of the organization.** *Environmental issues* page 167.	suppliers	✓
G4-EN5	**Energy intensity**. *Environmental issues* pages 155 et seq., 167.		
G4-EN6	**Reduction of energy consumption.** *Environmental issues* pages 155 et seq.		
G4-EN7	**Reductions in energy requirements of products and services.** **Non-material**: relevant initiatives such as the Water Houses, online bills and the offer of energy from certified renewable sources are marginal in relation to the Group's core business, therefore they are not considered material.	n. m.	
Aspect: Water		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects. (+Sector Disclosures).** *Corporate Identity* pages 31, 32; *Environmental issues* pages 160, 168.		
G4-EN8	**Total water withdrawal by source (+Sector Disclosures).** *Environmental issues* page 168; *Environmental accounts* pages 217 et seq.		✓
G4-EN9	**Water sources significantly affected by withdrawal of water.** *Environmental issues* pages 144 et seq.		
G4-EN10	**Percentage and total volume of water recycled and reused**. *Environmental issues* pages 168 et seq.		
Aspect: Biodiversity		Acea Group	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects. (+Sector Disclosures).** *Environmental issues* pages 144, 145.		
G4-EN11	**Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.** *Environmental issues* page 144.	main Group companies water area	
G4-EN12	**Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.** *Environmental issues* pages 144, 146, 153.		

EU13	**Biodiversity of offset habitats compared to the biodiversity of the affected areas.** *Environmental issues* page 144.		
G4-EN13	**Habitats protected or restored.** *Environmental issues* pages 144, 145.		
G4-EN14	**Total number of IUCN red list species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.** **Non-material**: as things stand, this item is not monitored, since species listed on the conservation list do not appear to be present in the areas in which the Group operates. In any event, the Group carries out its activities according to strict criteria for respecting and safeguarding the natural areas concerned and the fauna and flora present in the areas in which it operates.	n. m.	
Aspect: Emissions		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Environmental issues* pages 143, 169.		
G4-EN15	**Direct greenhouse gas (GHG) emissions (SCOPE 1) (+ Sector Disclosures).** *Environmental issues* pages 170, 173 table 61; *Environmental accounts* pages 223, 226.		✓
G4-EN16	Indirect greenhouse gas (GHG) emissions **(SCOPE 2) (+Sector Disclosures).** *Environmental issues* pages 170, 173 table 61; *Environmental accounts* pages 223, 226.		✓
G4-EN17	**Other indirect greenhouse gas (GHG) emissions (SCOPE 3).** *Environmental issues* pages 170, 173.		
G4-EN18	**Greenhouse gas (GHG) emission intensity.** *Environmental issues* pages 171, 173.		✓
G4-EN19	**Reduction of greenhouse gas (GHG) emissions.** *Environmental issues* pages 154, 155, 156.		
G4-EN20	**Emissions of ozone-depleting substances (ODS).** *Environmental issues* page 172.		
G4-EN21	**NO_x, SO_x and other significant air emissions.** *Environmental issues* pages 171 table 60; *Environmental accounts* pages 223, 226.		
Aspect: Effluents and Waste		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Environmental issues* page 164.	Group companies water area	
G4-EN22	**Total water discharge by quality and destination (+ Sector Disclosures).** Wastewater treated by Group companies in 2015 amounted to approximately 650 Mm^3. The water which is used by Acea structures for "non-industrial/sanitary" use undergoes the same standard treatment used for all civil wastewater, and in 2015 amounted to around 2 Mm^3. The environmental impact produced on the receiving water body by the outflow of the treated water is particularly modest. *Environmental accounts* page 218.		✓
G4-EN23	**Total weight of waste by type and disposal method.** The total hazardous waste produced amounted to 56,590 t; the total non-hazardous waste produced was 40,454 t. The percentage of hazardous and non-hazardous waste sent for recovery was 44%. The Separated collection of waste in 2015 achieved a recovery of around 750 tonnes of paper (+63% vis-à-vis 2014) and 444 tonnes of plastic (+69% vis-à-vis 2014). With regard to waste containing PCB: 12 Acea Distribuzione transformers were disposed of (around 17 t) *Environmental accounts* pages 223, 224, 225.		✓
G4-EN24	**Total number and volume of significant spills.** In 2015, there were no significant spills of pollutants such as mineral oil, fuels or chemical products.		
G4-EN25	**Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the basel convention annex I, II, III, and VIII, and percentage of transported waste shipped internationally.** **Non-material**: the flows of waste abroad are monitored for each company. No great movements of waste were noted, except for 3,970 tonnes of hazardous waste (12% of heavy ash - CER 190111 - produced by the San Vittore del Lazio plant), sent in 2015 to plants in Germany, for recovery.	n. m.	
G4-EN26	**Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff.** No discharge significantly affecting the habitats or biodiversity is reported.		
Aspect: Products and Services		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Environmental issues* pages 169 et seq.		
G4-EN27	**Extent of impact mitigation of environmental impacts of products and services.** Initiatives focus on reduction of atmospheric emissions due to thermoelectric generation and waste-to-energy activities, and the production of electrical energy from renewable sources. Environmental impacts are generally attributable to the services offered, such as: generation and distribution of electricity; cogeneration; management of integrated water services; waste management, including waste-to-energy activities; environmental conduct of contractors and sub-contractors. The Group is obliged to limit impacts in all situations. *Environmental issues* pages 169 et seq.	main Group companies and suppliers	
G4-EN28	**Percentage of products sold and their packaging materials that are reclaimed by category.** Not applicable.	n.a.	

Aspect: Compliance		main Group companies
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Environmental issues* page 146.	
G4-EN29	**Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.** *Environmental issues* page 146.	
Aspect: Transport		main Group companies
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Environmental issues* page 172.	
G4-EN30	**Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce.** *Environmental issues* pages 147, 172, 176 and table 61.	
Aspect: Overall		main Group companies
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Environmental issues* page 147.	
G4-EN31	**Total environmental protection expenditures and investments by type.** *Environmental issues* page 147.	
Aspect: Supplier Environmental Assessment		main Group companies and suppliers
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 99, 102; *Environmental issues* pages 167, 170.	
G4-EN32	**Percentage of new suppliers that were screened using environmental criteria.** 100%. As a mandatory requisite for enrolment in Qualification systems, all suppliers must fill in the TenP Questionnaire and QAS Questionnaire. *Socio-economic relations with stakeholders* pages 95, 96, 99, 100, 101, 102, 103; *Environmental issues* pages 143, 167, 170.	
G4-EN33	**Significant actual and potential negative environmental impacts in the supply chain and actions taken.** *Socio-economic relations with stakeholders* pages 95, 96, 99, 100, 101, 102, 103; *Environmental issues* pages 143, 167, 170.	
Aspect: Environmental Grievance Mechanisms		main Group companies
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Environmental issues* page 146.	
G4-EN34	**Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms.** *Environmental issues* page 146.	main Group companies, local communities
SOCIAL		
Labor Practices and Decent Work		
Aspect: Employment		main Group companies
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects. (+Sector Disclosures).** *Socio-economic relations with stakeholders* pages 95, 99, 101, 102, 105, 119.	
G4-LA1	**Total number and rates of new employee hires and employee turnover by age group, gender, and region. (+Sector Disclosures).** *Socio-economic relations with stakeholders* pages 104 et seq. table 30, 105, 109 table 31, 110, table 32.	
G4-LA2	**Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.** *Socio-economic relations with stakeholders* page 123.	
G4-LA3	**Return to work and retention rates after parental leave, by gender.** Acea operates in observance of the Consolidated Law regarding the protection and support of maternity and paternity (Italian Legislative Decree 151/2001, as amended), which governs leave, sick leave, time off and economic support for male and female workers associated with the maternity and paternity of natural, adopted or fostered children. The legislation prohibits any discrimination for reasons associated with gender, with particular regard to any less favourable treatment in relation to pregnancy, maternity or paternity. It establishes obligatory maternity leave for a period of between two months prior to and three months after the birth, and guarantees the maintenance of the employment position during this period, imposing the prohibition of dismissal. It also establishes the re-employment of the human resource with the duties performed before the period of leave or equivalent duties, and lays down sanctions for employers who violate this legislation. Therefore, 100% of employees granted such leave will keep their job and return to work. In 2015, **251 employees** took **parental leave**, of whom 48 men and 203 women. They all returned to work at the end of the period of leave.	

EU15	**Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region.** With reference to Group companies operating in the electricity sector (Acea Distribuzione, Acea Energia and Acea Produzione, mainly located in Lazio) employees eligible for retirement **in the next 5 years** make up 3.9% of the total workforce of companies included in the reporting boundary for the paragraph *Composition and turnover*, broken down into: 0.1% executives, 0.3% managers, 2.9% white-collar workers and 0.6% blue-collar workers; 21.8% of the workforce is by contrast eligible for retirement **in the next 10 years**, broken down into: 0.3% executives, 1.2% managers, 16.1% white-collar workers and 4.2% blue-collar workers.	Group companies energy and networks areas	
EU17	**Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities.** In 2015 Acea Distribuzione, with a workforce of 1,196 resources working for a total of approximately 208,000 men days, resorted to roughly **70,000 men days worked by the personnel of contractor firms to perform works**. In addition, in 2015, Acea Ato 2 (water sector) outsourced **34,957 jobs** (for scheduled repairs and repair of breakdowns) in the aqueduct network to contractors out of a total of **63,000 jobs,** and **10,057** jobs (for scheduled repairs and repairs of breakdowns), in the sewer network out of a total of **14,000** jobs. Finally, Acea Ato 5 (water sector) assigned **339** jobs to outside contractors.	suppliers	
EU18	**Percentage of contractor and subcontractor employees that have undergone relevant health and safety training**. Acea checks and promotes training on health and safety for the workers of suppliers and sub-contractors. In 2015, the parent company's Suppliers Qualification Unit conducted a survey on a sample of suppliers aimed at analysing their awareness of and ability to handle such aspects. A "safety team" has been set up in Acea Elabori with the aim of ensuring the highest standards concerning safety in the workplace in relation to activities assigned by means of Single Procurements. At year end, the team held an initial meeting with the Prevention and Protection Service Officers of contractor and sub-contractor firms. *Socio-economic relations with stakeholders* pages 101, 103.		
Aspect: Labor/Management Relations		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 114, 116.		
G4-LA4	**Minimum notice periods regarding operational changes, including whether these are specified in collective agreements**. *Socio-economic relations with stakeholders* pages 115.		
Aspect: Occupational Health and Safety		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 116, 117.		
G4-LA5	**Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs**. Acea complies with the provisions of Italian Legislative Decree 81/2008 concerning workplace health and safety. *Socio-economic relations with stakeholders* page 117.		
G4-LA6	**Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work related fatalities, by region and by gender. (+Sector Disclosures)** *Socio-economic relations with stakeholders* pages 116, 117 table 35.		✓
G4-LA7	**Workers with high incidence or high risk of diseases related to their occupation.** *Socio-economic relations with stakeholders* page 118.		
G4-LA8	**Health and safety topics covered in formal agreements with trade unions.** *Socio-economic relations with stakeholders* page 117.		
Aspect: Training and Education		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 118, 119, 124.		
G4-LA9	**Average hours of training per year per employee by gender, and by employee category.** *Socio-economic relations with stakeholders* pages 120, 121 and chart 37 and table 36.		✓
G4-LA10	**Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings**. *Socio-economic relations with stakeholders* pages 118, 119.		
G4-LA11	**Percentage of employees receiving regular performance and career development reviews, by gender and by employee category.** In 2015, within the sphere of the new HR Management System, all the employees of the main Group companies were subject to assessments. *Socio-economic relations with stakeholders* pages 123, 124.		
Aspect: Diversity and Equal Opportunity		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* page 125.		

G4-LA12	**Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.** *Corporate Identity* page 38; *Socio-economic relations with stakeholders* pages 108 and chart 33, 109 and table 31, 110 table 33, 125 et seq.		✓
Aspect: Equal Remuneration for Women and Men		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 112, 123.		
G4-LA13	**Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.** *Socio-economic relations with stakeholders* page 112.		
Aspect: Supplier Assessment for Labor Practices		main Group companies and suppliers	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 99, 102, 103.		
G4-LA14	**Percentage of new suppliers that were screened using labor practices criteria.** 100%. As a mandatory requisite for enrolment in Qualification systems, all suppliers must fill in the TenP Questionnaire and the QAS Questionnaire. *Socio-economic relations with stakeholders* pages 95, 99, 100, 101, 102, 103.	suppliers	
G4-LA15	**Significant actual and potential negative impacts for labor practices in the supply chain and actions taken.** *Socio-economic relations with stakeholders* pages 99, 100, 101, 102, 103.	suppliers	
Aspect: Labor Practices Grievance Mechanisms		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** Out-of-court disputes between employees and the company are handled by appointed third parties - for example the Territorial Headquarters of the Department of Labour with the Conciliation Boards, trade unions or arbitration bodies - which operate in compliance with procedures set forth in collective national labour agreements (CCNL).		
G4-LA16	**Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms.** No reports were received in 2015.		
Society			
Aspect: Local Communities		main Group companies and different types of stakeholder	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects. (+Sector Disclosures).** *Corporate Identity* page 32; *Socio-economic relations with stakeholders* pages 61, 68, 69, 71, 73, 75, 76, 88, 130, 132.		
G4-SO1	**Percentage of operations with implemented local community engagement, impact assessments, and development programs.** 100% of the main Group companies adopt initiatives for involving the parties concerned. *Corporate Identity* pages 42, 44 table 7, 46 et seq.; *Socio-economic relations with stakeholders* pages 54 et seq., 68, 69, 71, 73, 75, 76, 78, 88 et seq., 94 et seq., 99, 100, 101, 102, 103, 134.		
G4-SO2	**Operations with significant actual or potential negative impacts on local communities.** *Corporate Identity* page 49; *Socio-economic relations with stakeholders* pages 61 et seq., 69, 75, 130,131, 132, 133; *Environmental issues* pages 153, 168.		
EU22	**Number of people physically or economically displaced and compensation, broken down by type of project.** No episodes of this type took place.		
Aspect: Anti-corruption		Acea Group	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Corporate Identity* page 38.		
G4-SO3	**Total number and percentage of operations assessed for risks related to corruption and the significant risks identified.** *Corporate Identity* page 38.		
G4-SO4	**Communication and training on anti-corruption policies and procedures.** *Socio-economic relations with stakeholders* page 120.	main Group companies	
G4-SO5	**Confirmed incidents of corruption and actions taken.** There have been no episodes of corruption.		
Aspect: Public Policy		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* page 130.		
G4-SO6	**Total value of political contributions by country and recipient/beneficiary.** *Socio-economic relations with stakeholders* page 130.		

Aspect: Anti-competitive Behavior		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* page 130.		
G4-SO7	**Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.** *Socio-economic relations with stakeholders* page 131.		
Aspect: Compliance		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* page 130.		
G4-SO8	**Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.** *Socio-economic relations with stakeholders* page 131; *Environmental issues* page 146.		
Aspect: Grievance Mechanisms for Impacts on Society		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 85, 91.		
G4-SO11	**Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms.** *Socio-economic relations with stakeholders* pages 65 table 12, 67 table 13, 85, 91.		
Aspect *(Sector Disclosures)*: Disaster/ Emergency Planning and Response		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects. (+Sector Disclosures).** *Socio-economic relations with stakeholders* pages 131, 132.		
Product Responsibility			
Aspect: Customer Health and Safety		main Group companies; customers; the community	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects. (+Sector Disclosures).** *Socio-economic relations with stakeholders* pages 74, 75, 76, 78; *Environmental issues* pages 153, 161.		
G4-PR1	**Percentage of significant product and service categories for which health and safety impacts are assessed for improvement.** *Corporate Identity* pages 42 et seq., 44 table 7; *Socio-economic relations with stakeholders* pages 74, 76, 78, 134; *Environmental issues* page 153.		
EU25	**Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases.** No such episodes were recorded in 2015.		
G4-PR2	**Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes.** No cases of non-compliance have been recorded.		
Aspect: Product and Service Labeling		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 55, 70, 72, 81, 82, 84, 85.		
G4-PR3	**Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements.** *Socio-economic relations with stakeholders* pages 64, 65 table 12, 67 tables 13 and 14, 70 table 18, 72, 75, 78, 82, 84, 85, 86 table 26, 131.		
G4-PR4	**Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.** *Socio-economic relations with stakeholders* pages 64, 65 table 12, 67 table 14, 70 table 18, 81, 84, 85, 86 table 26, 131.		
G4-PR5	**Results of surveys measuring customer satisfaction.** *Socio-economic relations with stakeholders* pages 54-60 table 11, 68, 75, 78.		✓
Aspect: Marketing communications		main Group companies	
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 81, 103.		
G4-PR6	**Sale of banned or disputed products.** Not applicable.	n. a.	
G4-PR7	**Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes.** *Socio-economic relations with stakeholders* pages 103, 131.		

Aspect: Customer Privacy		main Group companies
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Corporate Identity* page 44; *Socio-economic relations with stakeholders* pages 82, 134.	
G4-PR8	**Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data**. In 2015 there were 6 recorded casas of documented claims against Acea companies concerning breaches of privacy and loss of consumer data, for which the Privacy Watchdog sought information or inspections. Some of these proceedings are ongoing, others concluded without penalties being imposed on companies.	
Aspect: Compliance		main Group companies
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* pages 70, 79, 81, 82.	
G4-PR9	**Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.** *Socio-economic relations with stakeholders* pages 70 footnote 36, 82, 131; *Environmental issues* page 146.	
Aspect *(Sector Disclosures)*: Access		Group companies networks area
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** *Socio-economic relations with stakeholders* page 79.	
EU26	**EU26 Percentage of population unserved in licensed distribution or service areas.** The distribution grid covers the whole territory served.	
EU27	**Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime**. Only figures relating to re-connection after disconnection due to arrears are available, as established by the Authority for electricity, gas and the water system. *Socio-economic relations with stakeholders* page 65 table 12.	
EU28	**Power outage frequency.** *Socio-economic relations with stakeholders* page 67 table 14.	
EU29	**Average power outage duration.** *Socio-economic relations with stakeholders* pages 67 table 14, 70 and table 18.	
EU30	**Average plant availability factor by energy source and by regulatory regime**. *Environmental issues* page 150 table 44.	
Aspect (*Sector Disclosures*): Provision of Information		main Group companies
G4-DMA	**The DMA (Disclosure on Management Approach) should contain sufficient information to explain an organization's response to material Aspects.** There are counters dedicated to disabled persons at the company's headquarters.	

INDEX OF CHARTS AND TABLES

CHARTS

TABLES

2.

ENVIRONMENTAL ACCOUNTS

Castel Sant'Angelo · Rome

Contents

BOUNDARIES

The 2015 boundaries include Acea SpA, Acea Distribuzione, Acea Reti e Servizi Energetici, Acea Produzione, Acea Energia, Local Unit 3 of San Vittore del Lazio and Local Unit 1 of Terni, both of A.R.I.A, the company SAO, controlled by A.R.I.A, Aquaser, Acea Elabori, Acea Ato 2, Acea Ato 5.
The water companies Acque, Gori, Acquedotto del Fiora, Publiacqua and Umbra Acque, participated by Acea, consolidated in the financial statements under the equity method for the second year– are included marginally in the environmental accounts and only for items that are precisely reported. Water balances of these companies can be found in chapter Water companies.

The *Environmental Accounts*, an integral part of the Sustainability Report, bring together and systematically present the information and data on Acea Group's environmental performance in an in-depth manner.
Figures are separated into "product systems" for the energy, environment and water sectors according to the Life Cycle Assessment approach (ISO standard 14040 series), which assesses the entire life cycle of the systems.
The substances used by the Group, both natural as water, and not natural as the chemicals, as well as the "products" and emissions/effluents/wastes of the Business areas, are reported for the three-year period as relevant to produce and distribute energy, to collect and distribute drinking water, for the treatment processes and for all processes related to waste management including waste-to-energy ones. Each use is kept to a minimum in terms of quantity and all substances are carefully chosen considering quality, safety and environmental sustainability.
Additional information is provided in the *Explanatory Notes* concerning the quality of the figures presented herein, especially when such are measured, estimated or calculated, and the items of the *Environmental Accounts* (indicated in the tables and in the text by a number in brackets) are accompanied by a brief illustrative description.

PRODUCT SYSTEMS

ENERGY

ENERGY GENERATION (THERMOELECTRIC + HYDROELECTRIC + PHOTOVOLTAIC + WASTE TO ENERGY)

ELECTRICITY DISTRIBUTION

HEAT PRODUCTION AND DISTRIBUTION

PUBLIC LIGHTING

TESTS AND INSPECTIONS

ENVIRONMENT

DISPOSED MSW (MUNICIPAL SOLID WASTE)

COMPOST PRODUCTION

ANALYSIS AND MEASUREMENTS

WATER

DRINKING WATER SUPPLY

NON-DRINKING WATER SUPPLY

WATER DISTRIBUTION

WASTE WATER TRANSPORTATION/TREATMENT

ANALYSIS AND MEASUREMENTS

The figures are provided for the three-year period 2013-2015 and are grouped together in three similar categories:

- **the product supplied;**
- **the resources used;**
- **the waste produced.**

The performance indicators and the key environmental performance indicators are illustrated for each sector below.

THE PRODUCTS – ENERGY

Electricity generation figures refer to Acea Produzione (AP) (100% Acea SpA), A.R.I.A (100% Acea SpA) and Acea Reti e Servizi Energetici (100% Acea SpA).

ELECTRICITY – GENERATION	u. m.	2013	2014	2015	Δ% 2015/2014
Summarized figures					
Total gross electricity produced (1) = (3+11+16)	**GWh**	**785.69**	**807.93**	**783.07**	**-3.1**
Total net electricity produced (2) = (10+15+18)	**GWh**	**735.50**	**756.13**	**728.07**	**-3.7**
from fossil sources (thermoelectric) (5+0.48x 12 San Vittore +0.60x13 Terni)	*GWh*	*152.00 19.3% of (1)*	*161.14 19.9% of (1)*	*170.16 21.7 of (1)*	*5.6*
from renewable sources (hydroelectric, solar, biodegradable fraction of waste) (4+0.52x12 San Vittore +0.40x13 Terni +16)	*GWh*	*633.69 8.7% of (1)*	*646.79 80.1% of (1)*	*612.91 78.3% of (1)*	*-5.2*
Acea Produzione					
total gross electricity produced (3) = (4+5)	**GWh**	**508.28**	**505.43**	**462.26**	**-8.5**
total gross hydroelectric energy (4)	**GWh**	**496.73**	**495.18**	**449.19**	**-9.3**
A. Volta Castel Madama	*GWh*	*30.38*	*27.37*	*15.67*	*-42.7*
G. Ferraris Mandela	*GWh*	*23.05*	*19.75*	*12.21*	*-38.2*
G. Marconi Orte	*GWh*	*80.91*	*75.25*	*62.53*	*-16.9*
Sant'Angelo	*GWh*	*179.15*	*188.30*	*177.19*	*-5.9*
Salisano	*GWh*	*180.95*	*182.41*	*179.21*	*-1.8*
other minor plants	*GWh*	*2.29*	*2.11*	*2.38*	*12.8*
total gross thermoelectric energy (5)	**GWh**	**11.55**	**10.25**	**13.08**	**27.6**
from gas oil	*GWh*	*1.28*	*0.05*	*1.84*	-
Montemartini Plant (*)	GWh	1.28	0.05	1.84	-
from natural gas	GWh	10.27	10.20	11.24	10.2
Tor di Valle combined cycle	*GWh*	*0.00*	*0.00*	*0.00*	-
Tor di Valle co-generation plant	*GWh*	*10.27*	*10.20*	*11.24*	*10.2*
total electricity losses (6) = (7+8+9)	**GWh**	**14.22**	**12.98**	**12.81**	**-1.3**
internal consumption - hydroelectric plants (7)	*GWh*	*2.54*	*2.43*	*2.29*	*-5.8*
internal consumption - heat plants (Tor di Valle, Montemartini) (8)	*GWh*	*5.45*	*3.89*	*4.18*	*7.5*
initial transformation losses (9)	*GWh*	*6.22*	*6.66*	*6.34*	*-4.8*
total net electricity produced by Acea Produzione (10) = (3-6)	**GWh**	**494.06**	**492.45**	**449.46**	**-8.7**
A.R.I.A. (waste-to-energy)					
total gross electricity produced (11) = (12)+(13)	**GWh**	**260.09**	**287.04**	**306.87**	**6.9**
San Vittore del Lazio plant (12)	*GWh*	*202.23*	*205.09*	*225.35*	*9.9*
Terni plant (13)	*GWh*	*57.86*	*81.95*	*81.52*	*-0.5*
internal consumptions + initial transformation losses (14)	**GWh**	**35.46**	**38.51**	**41.91**	**8.8**
San Vittore del Lazio plant	*GWh*	*28.42*	*29.64*	*32.88*	*10.9*
Terni plant	*GWh*	*7.04*	*8.87*	*9.03*	*1.8*
total net electricity produced (15) =(11-14)	**GWh**	**224.63**	**248.53**	**264.96**	**6.6**
Acea Reti e Servizi Energetici					
gross photovoltaic energy (16)	**GWh**	**17.33**	**15.46**	**13.93**	**-9.9**
total electricity losses (**17**)	*GWh*	*0.52*	*0.31*	*0.28*	*-9.7*
net photovoltaic energy (18) = (16-17)	**GWh**	**16.81**	**15.15**	**13.65**	**-9.9**

(*) The Montemartini plant remains operational but only as a standby.

THERMAL ENERGY – GENERATION	u. m.	2013	2014	2015	Δ% 2015/2014
Acea Produzione					
gross thermal energy produced Tor di Valle plant (19)	**GWh_t**	**99.33**	**92.03**	**80.20**	**-12.9**
total thermal electricity losses (**20**)	GWh_t	22.76	18.89	7.98	-57.8
distribution losses	*GWh_t*	*19.69*	*16.65*	*5.82*	-65.1
production losses	*GWh_t*	*3.07*	*2.24*	*2.16*	-3.5
energinet thermal energy sold (21) = (19-20)	**GWh_t**	**76.57**	**73.13**	**72.21**	**-1.3**

ELECTRICITY – TRANSPORT AND SALE	u. m.	2013	2014	2015	Δ% 2015/2014
Rome and Formello - Summarized figures					
supply from Acea Group (22)	GWh	1.96	2.12	2.35	10.8
electricity from the market (23)	GWh	11,383.35	10,951.49	11,197.77	2.2
from sole buyer	*GWh*	*3,107.76*	*2,852.89*	*2,839.87*	*-0.5*
from imports	*GWh*	*431.50*	*432.05*	*389.12*	*-9.9*
from wholesalers + other producers	*GWh*	*7,844.09*	*7,666.55*	*7,968.78*	*3.9*
electricity demand on the network (24) = (22+23) = (25 +26 +27+28+29)	**GWh**	**11,385.31**	**10,953.61**	**11,200.12**	**2.3**
distribution, transport and commercial losses (25)	*GWh*	*701.72 6.16% of (24)*	*673,59 6.15% of (24)*	*690.62 6.17% of (24)*	*2.5*
internal transmission and distribution (26)	*GWh*	*30.43*	*29.80*	*30.05*	*0.8*
net electricity sold to third parties (27)	*GWh*	*2.15*	*2.90*	*2.67*	*-7.9*
net electricity conveyed by Acea to free market customers (28)	**GWh**	**7,416.84**	**7,247.28**	**7,525.98**	**3.8**
net electricity sold by Acea Elettricità to free market customers on Acea Distribuzione network	*GWh*	*4,982.27*	*5,115.86*	*5,644.24*	*10.3*
net electricity sold by Other Sellers to free market customers on Acea Distribuzione network	*GWh*	*2,434.57*	*2,131.42*	*1,881.74*	*-11.7*
net electricity sold to protected customers (29)	**GWh**	**3,234.19**	**3,000.05**	**2,950.80**	**-1.6**
sale in Italy - summarized figures					
net electricity sold by Acea on the free market - including sale on Rome (30)	**GWh**	**9,381.9**	**7,887.0**	**6,467.5**	**-18.0**
Acea Energia	*GWh*	*8,600.6*	*7,343.6*	*6,092.0*	*-17.0*
other investee companies	*GWh*	*781.3*	*543.4*	*375.5*	*-30.9*
net electricity sold by Acea in Italy (free market + protected customers) (29+30)	**GWh**	**12,616.1**	**10,887.0**	**9,418.3**	**-13.5**

PUBLIC LIGHTING	u. m.	2013	2014	2015	Δ% 2015/2014
lighting flux in Rome (31)	**Mlumen**	**3,275**	**3,377**	**3,376**	**-0.03**

MONITORING AND GAUGING	u. m.	2013	2014	2015	Δ% 2015/2014
monitoring and gauging activities (32)	**No.**	**392**	**393**	**371**	**-5.6**
electromagnetic field measures	*No.*	*40*	*30*	*22*	*-26.7*
noise monitoring	*No.*	*12*	*5*	*14*	*180.0*
chemical analysis of PCB	*No.*	*55*	*102*	*75*	*-26.5*
waste classification	*No.*	*45*	*36*	*43*	*19.4*
transformer diagnostics	*No.*	*190*	*208*	*199*	*-4.3*
other	*No.*	*50*	*12*	*18*	*50.0*

THE PRODUCTS - ENVIRONMENT

Data refer to the companies Kyklos, Solemme, and Samace (plant assimilated at the end of 2013 and acquired by Solemme in July 2015) all in Aquaser Srl (100% Acea SpA) and to the company SAO srl, controlled by A.R.I.A. (100% Acea SpA). It should be noted that, following a serious incident at the plant of Kyklos, from July 30th 2014 the latter was placed under sequestration, preventing further contributions until December 2015.

NON-HAZARDOUS WASTE, DISPOSED OF AND RECOVERED – SAO SRL	u. m.	2013	2014	2015	Δ% 2015/2014
incoming waste to plant (33)	**t**	**120,059**	**97,927**	**93,865**	**-4.1**
landfilled waste (34)	*t*	*99,953*	*89,348*	*83,479*	*-6.6*
recovered waste (35)	*t*	*260*	*6.313*	*7,031*	*11.4*
compost (36)	*t*	*439*	*658*	*0*	*-*
reduction for stabilisation (37) = (33 - 34 - 35 - 36)	*t*	*19,407*	*1,608*	*3,355*	*108.6*

PRODUCTION OF COMPOST	u. m.	2013	2014	2015	Δ% 2015/2014
total incoming organic waste = (38+39+40)	**t**	**63,271.4**	**55,769.4**	**19,509.9**	**-65.0**
incoming sludge (**38**)	t	15,491.54	15,924.25	11,390.98	-28.5
Kyklos	*t*	*10,322.30*	*2,330.09*	*0.00*	*-*
Solemme	*t*	*5,169.24*	*5,420.78*	*4,986.98*	*-8.0*
Samace	*t*	*-*	*8,173.38*	*6,404.00*	*-21.6*
incoming green (**39**)	t	6,923.14	15,806.38	8,118.94	-48.6
Kyklos	*t*	*3,416.40*	*4.898.20*	*0.00*	*-*
Solemme	*t*	*3,506.74*	*2,660.88*	*2,155.94*	*-19.0*
Samace	*t*	*-*	*8,247.30*	*5,963.00*	*-27.7*
incoming organic fraction from waste collection system (**40**)	t	40,856.75	24,038.74	0.00	-
Kyklos	*t*	*40,856.75*	*24,038.74*	*0.00*	*-*
High Quality compost produced (41)	**t**	**18,389.1**	**14,101.1**	**7,203.0**	**-48.9**
Kyklos	*t*	*14,370.0*	*6,026.1*	*0.00*	*-*
Solemme	*t*	*4,019.1*	*4,000.0*	*3,167.0*	*-20.8*
Samace	*t*	*n.a.*	*4,075.0*	*4,036.0*	*-1.0*
non-compostable material to disposal (42)	**t**	**4,671.9**	**4,361.2**	**0.0**	**-**
Kyklos	*t*	*4,671.95*	*4,361.16*	*0.00*	*-*
Solemme	*t*	*n.a.*	*0.00*	*0.00*	*-*
reduction for stabilisation = (38+39+40-41-42)	**t**	**40,210.4**	**37,307.1**	**12,306.9**	**-67.0**

ANALYTICAL CONTROLS ON WASTE AND ON HIGH QUALITY COMPOST	u. m.	2013	2014	2015	Δ% 2015/2014
total analytical controls (43)	**No.**	**110**	**90**	**73**	**-18.9**
analytical controls on compost - SAO	*No.*	*10*	*5*	*0*	*-100.0*
analytical controls on compost – Solemme, Samace (from 2015) and Kyklos	*No.*	*50*	*25*	*17*	*-32.0*
analytical controls on waste - SAO	*No.*	*50*	*60*	*56*	*-6.7*

THE PRODUCTS - WATER

Summarized water figures include the main water companies in the Acea Group - Acea Ato 2 and Acea Ato 5 (Lazio Region), Gori (Campania Region), Umbra Acque (Umbria Region), Acque, Publiacqua and Acquedotto del Fiora (Tuscany).
Details of water balances are presented only for the operating companies in Lazio, the only companies that have been consolidated proportionally for 2015, as previously for 2014.
You can read the data of the water balance of the Group companies consolidated differently in chapter Water Companies.

The **items of water balance** were calculated, **for the last two years, according to the criteria provided by the AEEGSI (Resolution n. 5/2014)**. Such items are not comparable with the ones of previous years. Some data of 2014 have been adjusted to account for slight settling accounting closure occurring after 2014.

GROUP WATER BALANCE IN ITALY	u. m.	2013	2014	2015	Δ% 2015/2014
summarized figures					
total drinking water withdrawn from the environment or from other systems (44)	**Mm³**	**1,416.2**	**1,392.9**	**1,411.2**	**1.3**
total drinking water introduced onto the network (45)	**Mm³**	**1,268.3 (*)**	**1,301.0**	**1,316.6**	**1.2**
total drinking water supplied (46)	**Mm³**	**645.8 (*)**	**659.2**	**657.6**	**-0.3**

(*) Data adjusted in 2015.

WATER BALANCE OF THE COMPANIES OPERATING IN THE REGION OF LAZIO	u. m.	2013	2014	2015	Δ% 2015/2014
Acea Ato 2 for Rome historic network					
drinking water withdrawn from the environment (47)	**Mm³**	**618.5**	**611.5**	**618.9**	**1.2**
from lake Bracciano, treated	*Mm³*	*7.3*	*19.8*	*36.7*	*85.4*
from wells	*Mm³*	*16.9*	*18.8*	*19.7*	*4.8*
from springs	*Mm³*	*594.3*	*572.9*	*562.5*	*-1.8*
drinking water sold to municipal retailers situated on the path of aqueducts (**48**)	Mm³	96.1	80.0	75.5	-5.6
drinking water introduced onto non-drinking water network (**49**)	Mm³	15.9	14.6	11.4	-21.9
drinking water returned to the environment /technical operating volumes (**50**)	**Mm³**	**33.4**	**34.2**	**39.3**	**14.9**
drinking water introduced onto the Rome historic network (51) = (47)–(48+49+50)	**Mm³**	**473.1**	**482.9**	**492.6**	**2.0**
drinking water supplied via the Rome historic network (52)	**Mm³**	**295.0**	**266.3**	**263.9**	**-0.9**
assessment of losses according to Italian Ministerial Decree No. 99/97 and, from 2014, also to the Resolution no 5/2014 of the Italian Authority AEEGSI					
overall losses (parameter A17 MD 99/97) (**53**)	Mm³	162.8	203.7	217.0	6.5
effective losses (from 2014: item A13+A15 as per Resolution no 5/2014 of the AEEGSI) (**54**)	Mm³	125,9 26.6% of (51)	192,5 39.9% of (51)	205,9 41.8% of (51)	7.0
water balance - Rome non-drinking water network					
non-drinking water withdrawn from the environment (55)	**Mm³**	**25.6**	**25.2**	**25.9**	**2.8**
from the River Tiber, treated (Grottarossa plant)	*Mm³*	*2.2*	*0.7*	*4.7*	-
from springs	*Mm³*	*7.5*	*9.9*	*9.8*	*-1.0*
drinking water introduced onto non-drinking network	*Mm³*	*15.9*	*14.6*	*11.4*	*-21.9*
non-drinking water supplied to the Municipality of Rome (56)	**Mm³**	**14.3**	**14.0**	**13.2**	**-5.7**
non-drinking water supplied to other Municipalities (57)	**Mm³**	**0.03**	**0.03**	**0.03**	-
Acea Ato 2 for ATO 2 – Central Lazio (Rome + municipalities acquired as of 31 Dec. 2015)					
drinking water withdrawn from the environment (58)	**Mm³**	**728.5**	**722.2**	**733.2**	**1.5**
from Lake Bracciano, treated	*Mm³*	*7.3*	*19.8*	*36.7*	*85.4*
from wells	*Mm³*	*76.2*	*84.4*	*90.7*	*7.5*
from springs	*Mm³*	*642.4*	*612.1*	*600.5*	*-1.9*
from other aqueduct systems	*Mm³*	*2.6*	*5.9*	*5.3*	*-10.2*
drinking water sold to other aqueduct systems (**59**)	Mm³	74.5	41.3	35.7	-13.6
drinking water introduced onto non-drinking water network (**60**)	Mm³	15.9	14.6	11.4	-21.9
drinking water returned to the environment /technical operating volumes (**61**)	Mm³	33.4	57.2	61.7	7.9
drinking water introduced onto the ATO 2 network (62) = (58) - (59+60+61)	**Mm³**	**604.6**	**609.1**	**624.4**	**2.5**
drinking water introduced onto the distribution network: introduced onto the ATO 2 network + delivered to other aqueduct systems, as per Resolution no 5/2014 of the AEEGSI **(62 A)**	**Mm³**	**-**	**650.6**	**660.0**	**1.4**
total drinking water supplied to the ATO 2 network (63)	**Mm³**	**346.4**	**357.2**	**350.5**	**-1.9**

WATER BALANCE OF THE COMPANIES OPERATING IN THE REGION OF LAZIO	u. m.	2013	2014	2015	Δ% 2015/2014
assessment of losses according to Italian Ministerial Decree No. 99/97 and, from 2014, also to the Resolution no 5/2014 of the Italian Authority AEEGSI					
overall losses (parameter A17 MD 99/97) (**64**)	Mm^3	235.9	279.2	295.5	5.8
Effective losses (from 2014: item A13+A15 as per Resolution no 5/2014 of the AEEGSI) (**65**)	Mm^3	183.4 (30.3% of 62)	264.2 (40.6% of 62A)	280.7 (42.5% of 62A)	6.2
Acea Ato 5 for ATO 5 – Southern Lazio - Frosinone (85 municipalities)					
drinking water withdrawn from the environment (66)	**Mm^3**	**110.6**	**109.9**	**107.7**	**-2.0**
from lakes /rivers	*Mm^3*	*0.0*	*0.0*	*0.0*	*0.0*
from wells	*Mm^3*	*80.5*	*60.2*	*60.2*	*0.0*
from springs	*Mm^3*	*30.1*	*49.7*	*47.5*	*-4.4*
drinking water introduced onto network (67)	**Mm^3**	**105.3**	**105.4**	**103.3**	**-2.0**
drinking water supplied (68)	**Mm^3**	**21.0**	**22.0**	**27.0**	**22.7**
assessment of losses according to Italian Ministerial Decree No. 99/97 and, from 2014, also to the Resolution n.5/2014 of the Italian Authority AEEGSI					
overall losses (parameter A17 MD 99/97) (**69**)	Mm^3	81.6	80.6	74.96	-7.0
effective losses (from 2014: item A13+A15 as per Resolution no 5/2014 of the AEEGSI) (**70**)	Mm^3	66.3 (63.0% of 67)	65.2 (61.9% of 67)	69.60 (67.4% of 67)	6.7

TOTAL WASTE WATER TREATED BY THE GROUP COMPANIES, IN ITALY	u. m.	2013	2014	2015	Δ% 2015/2014
summarized figures					
waste water treated in main purification plants of the Group companies in Italy (71)	**Mm^3**	**917.1**	**940.7**	**895.9**	**-4.8**

WASTE WATER TREATED BY ACEA ATO 2	u. m.	2013	2014	2015	Δ% 2015/2014
waste water treated in main purification plants (72)	**Mm^3**	**560.2**	**563.8**	**528.1**	**-6.3**
Rome South	*Mm^3*	*331.8*	*329.6*	*296.7*	*-10.0*
Rome North	*Mm^3*	*96.2*	*95.6*	*96.5*	*0.9*
Rome East	*Mm^3*	*94.0*	*98.4*	*96.1*	*-2.3*
Rome Ostia	*Mm^3*	*26.8*	*27,0*	*26.6*	*-1.5*
CoBIS	*Mm^3*	*7.3*	*8,8*	*7.5*	*-14.8*
Fregene	*Mm^3*	*4.1*	*4.4*	*4.7*	*6.8*
other – Municipality of Rome	**Mm^3**	**14.1**	**13.5**	**16.0**	**18.5**
other – outside Municipality of Rome	**Mm^3**	**65.3**	**74.3**	**79.0**	**6.3**
total waste water treated by Acea Ato 2 (73)	**Mm^3**	**639.6**	**651.6**	**623.1**	**-4.4**

WASTE WATER TREATED BY ACEA ATO 5	u. m.	2013	2014	2015	Δ% 2015/2014
waste water treated in main purification plants (74)	**Mm^3**	**26.5**	**26.6**	**27.0**	**1.5**

ANALYTICAL CHECKS ON DRINKING WATER AND WASTE WATER FOR ACEA GROUP IN ITALY (*)	u. m.	2013	2014	2015	Δ% 2015/2014
summarized figures					
Group total analytical checks on drinking water (75)	**No.**	**1,200,924 (**)**	**1,234,161**	**1,167,959**	**-5.4**
Group total analytical checks on waste water (76)	**No.**	**467,077**	**465,996**	**490,407**	**5.2**
ACEA ATO 2 ANALYTICAL CHECKS	**u. m.**	**2013**	**2014**	**2015**	**Δ% 2015/2014**
analytical checks on drinking water – Acea Ato 2	**No.**	**339,229**	**342,141**	**379,333**	**10.9**
analytical checks on waste water - Acea Ato 2	**No.**	**178,262**	**181,940**	**191,552**	**5.3**
ACEA ATO 5 ANALYTICAL CHECKS	**u. m.**	**2013**	**2014**	**2015**	**Δ% 2015/2014**
analytical checks on drinking water - Acea Ato 5	**No.**	**78,830**	**71,842**	**83,910**	**16.8**
analytical checks on waste water - Acea Ato 5	**No.**	**24,820**	**24,611**	**21,681**	**-11.9**

(*) The number includes the controls carried out independently by each Company, and those carried out by Acea Elabori in-house. Some data of the previous biennium have been adjusted.

(**) Value adjusted in 2015.

THE RESOURCES USED
ENERGY

The figures of the resources used refer to Acea Produzione (AP) (100% Acea SpA), A.R.I.A. (100% Acea SpA) and Acea Distribuzione (100% Acea SpA).

GENERATION, TRANSPORT AND SALE OF ELECTRICITY, HEAT AND PUBLIC LIGHTING	u. m.	2013	2014	2015	Δ% 2015/2014
natural gas					
electricity and heat generation (77) = (78+79)	**Nm³ x 1,000**	**19,155**	**15,093**	**14,853**	**-1.6**
thermoelectric and heat production AP (78)	**Nm³ x 1,000**	**14,113**	**11,063**	**11,363**	**2.7**
Tor di Valle reserve boilers - for district heating	*Nm³ x 1,000*	*10,071*	*7,306*	*7,247*	*-0.8*
Tor di Valle co-generation plant	*Nm³ x 1,000*	*4,042*	*3,757*	*4,116*	*9.6*
Tor di Valle combined cycle	*Nm³ x 1,000*	*0*	*0*	*0*	*-*
waste to energy (79)	**Nm³ x 1,000**	**5,042**	**4,030**	**3,490**	**-13.4**
San Vittore del Lazio waste to energy plant	*Nm³ x 1,000*	*3,460*	*2,711*	*2,109*	*-22.2*
Terni waste to energy plant	*Nm³ x 1,000*	*1,582*	*1,319*	*1,381*	*4.7*
gas oil for thermoelectric generation					
thermoelectric generation and Terni plant (80)	**l x 1,000**	**512**	**106**	**757**	**614.2**
Montemartini plant	*l x 1,000*	*512*	*46*	*748*	*-*
Terni plant	*l x 1,000*		*60*	*9*	*-85.0*
refuse derived fuel (RDF) burnt					
San Vittore del Lazio waste to energy plant **(81)**	**t x 1,000**	**224.220**	**224.336**	**239.871**	**6.9**
pulper from paper industry waste burnt					
Terni waste to energy plant **(82)**	**t x 1,000**	**69.417**	**99.397**	**99.892**	**0.5**
water					
offtake for hydroelectric production (83)	**Mm³**	**4,436.62**	**4,222.16**	**3,514.77**	**-4.8**
process water (84) (*)	Mm³	0.1125	0.1067	0.1179	10.5
domestic/sanitary uses (85) (*)	**Mm³**	**0.3358**	**0.2818**	**0.2770**	**-1.7**
sundry materials					
dielectric mineral oil in operation (86)	**t**	**9,462**	**9,706**	**9,885**	**1.8**
dielectric mineral oil - oil loss make-up (*)	t	2.69	3.26	3.21	-1.5
SF_6 in operation (87)	**t**	**29.68**	**29.53**	**29.64**	**0.4**
SF_6 - gas loss make-up	t	0.7	0.7	0.6	-14.3
coolants (HCFC type) loss replacement/make-up (88)	**t**	**0.040**	**0.005**	**0.008**	**50.0**
chemicals (89)	**kg**	**6,807,934**	**7,250,060**	**7,993,950**	**10.3**
acidity corrector	*kg*	*780*	*60*	*60*	*-*
sodium chloride	*kg*	*72,000*	*55,500*	*53,000*	*-4.5*
caustic soda	*kg*	*98,630*	*100,710*	*105,410*	*4.7*
sodium hypochlorite	*kg*	*620*	*360*	*420*	*16.7*
sodium bicarbonate	*kg*	*5,983,440*	*6,165,570*	*6,731,810*	*9.2*
hydrochloric acid	*kg*	*101,759*	*99,810*	*109,310*	*9.5*
ammonia solution	*kg*	*550,705*	*567,730*	*655,440*	*15.4*
activated carbon	*kg*	*-*	*260,320*	*338,500*	*30*
oil and greases / lubricants (90) (*)	**kg**	**5,125**	**5,117**	**6,332**	**23.7**
electricity					
consumed for electricity distribution (91) = (25)	*GWh*	*701.72*	*673.59*	*690.62*	*2.5*
consumed for electricity production (92) = (1)-(2)	*GWh*	*50.20*	*51.80*	*55.00*	*6.2*
Consumed for offices (50% of the electricity consumed by the Parent Company) (93)	*GWh*	*5.77*	*4.61*	*5.10*	*10.6*
other internal uses (94)	*GWh*	*30.43*	*29.80*	*30.05*	*0.8*
total (95) = (91+92+93+94)	**GWh**	**788.11**	**759.80**	**780.77**	**2.8**
public lighting					
consumption for public lighting (96)	**GWh**	**185.93**	**185.93**	**167.34**	**-10.0**

(*) 2013 and/or 2014 figures have been adjusted due to the improvement of the reporting process.

THE RESOURCES USED
ENVIRONMENT

The figures of the resources used refer to Kyklos, Solemme and Samace (acquired by Solemme in July 2015), both of Aquaser Srl (100% Acea SpA) and to SAO, controlled by A.R.I.A. It should be noted that, following a serious incident at the plant of Kyklos, from July 30th 2014 the latter was placed under sequestration, preventing further contributions until December 2015. SAO underwent a large reduction of the activities because of the revamping process (January-November 2015).

LANDFILL WASTE DISPOSAL - SAO	u. m.	2013	2014	2015	Δ% 2015/2014
process water (97)	m^3	1,208	1,241	2,468	98.9
sundry chemicals (98)	l	7,000	7,000	1,916	-72.0
electricity (99)	GWh	1.605	0.800	0.600	-25.0
gas oil (100)	l	295,753	254,744	262,618	3.1
domestic/sanitary water uses (101)	m^3	1,476	1,292	1,353	4.7

COMPOST PRODUCTION	u. m.	2013	2014	2015	Δ% 2015/2014
Process water (Kyklos, Solemme and Samace) (102)	m^3	0	0	0	-
sundry chemicals (Kyklos, Solemme and Samace) (103)	t	265.32	109.31	53.20	-51.3
sodium hydroxide	*t*	*14.83*	*4.82*	*0.00*	*-*
hypochlorite	*t*	*n.a.*	*8.40*	*6.20*	*-26.2*
sulphuric acid	*t*	*250.49*	*96.09*	*47.00*	*-51.1*
electricity (Kyklos, Solemme and Samace) (104)	GWh	3.492	2.620	1.551	-40.8
fuels (Kyklos, Solemme and Samace) (105)	l x 1.000	148.76	99.08	91.60	-7.6

THE RESOURCES USED
WATER

The figures of the resources used refer to the water Group companies: Acea Ato 2, Acea Ato 5.

CATCHMENT, TRANSPORTATION AND DISTRIBUTION OF DRINKING AND NON-DRINKING WATER	u. m.	2013	2014	2015	Δ% 2015/2014
sundry materials and natural resources					
reagents for purification and disinfection (106)	t	2,033.14	1,819.00	2,367.70	30.2
reagents used in chemical analyses (107)	t	1.40	1.50	1.50	-
gas used in chemical analyses (108)	MNm^3	4.06	5.01	5.24	4.6
coolants (HCFC type) replacement/make-up (109)	t	0.040	0.005	0.008	50.0
electricity					
water pumping plants (110)	*GWh*	*196.42*	*193.15*	*217.85*	*12.8*
offices /internal use (50% of energy consumed by the Parent Company) (111) = (93)	*GWh*	*5.77*	*4.61*	*5.10*	*10.6*
chemical laboratory (112)	*GWh*	*1.22*	*1.09*	*1.23*	*11.4*
total electricity consumed (113) = (110+111+112)	GWh	203.41	198.85	224.18	12.7
drinking water					
domestic/sanitary uses (114)	*Mm^3*	*0.99*	*1.32*	*1.63*	*23.4*
offices (50% of drinking water consumed by the Parent Company) (115)	*Mm^3*	*0.15*	*0.13*	*0.13*	*-*
total drinking water consumed(116) =(114+115)	Mm^3	1.15	1.45	1.76	21.6

WASTE WATER TREATMENT	u. m.	2013	2014	2015	Δ% 2015/2014
sundry materials and natural resources used					
reagents used in waste water treatment (117)	t	6,620	6,534	6,690	2.4
polyelectrolytes used to dehydrate sludge	*t*	*1,234*	*1,222*	*1,257*	*2.9*
sodium hypochlorite for final disinfection	*t*	*3,047*	*3,042*	*3,027*	*-0.5*
ferric chloride used to dehydrate sludge	*t*	*617*	*568*	*642*	*13.0*
peracetic acid	*t*	*1,604*	*1,667*	*1,729*	*3.7*
others (anti-foaming agents, etc.)	*t*	*118*	*35*	*35*	*-*
electricity					
sewage and purification systems (118)	GWh	179.7	191.6	190.3	-0.6

FUELS USED BY THE GROUP COMPANIES FOR AUTOMOTIVE AND HEATING PURPOSES

The figures concerning the Vehicle Pool refer to the main Group companies: Acea Ato 2, Acea Ato 5, Acea Distribuzione, Acea Illuminazione Pubblica, Acea SpA, Acea Energia, Acea Produzione, Acea Elabori, Acea Reti e Servizi Energetici.
The figures concerning heating purposes refer to Acea SpA, Acea Ato 2, Acea Distribuzione and Acea Produzione.

FUEL TYPE	u. m.	2013	2014	2015	Δ% 2015/2014
automotive (Group Vehicle Pool) (*)					
petrol (119)	l x 1,000	643.9	406.0	406.0	-
diesel (120)	l x 1,000	697.7	984.5	984.5	-
heating					
gas oil (121)	l x 1,000	4.4	10.8	2.3	-78
natural gas (122)	Nm^3 x 1,000	386.0	488.5	766.4	56.9
LPG (123)	l x 1,000	24.9	34.3	23.9	43.7

(*) Fleet data are estimated equal to 2014 figures for non-availability of data at time of publication.

EMISSIONS AND WASTE
ENERGY

The figures concerning emissions and waste refer to Acea Produzione (AP), waste to energy plants of A.R.I.A. and Acea Distribuzione.

AIR EMISSIONS	u. m.	2013	2014	2015	Δ% 2015/2014
CO_2 (124) = (125+126+127) (*)	**t**	**242,048**	**267,759**	**258,266**	**-3.5**
Acea Produzione (125) (*)	*t*	*30,404*	*23,843*	*25,440*	*6.7*
Acea Distribuzione – from SF_6 (126)	*t*	*16,644*	*16,188*	*12,540*	*-22.5*
A.R.I.A. (127) (*)	*t*	*195,000*	*227,728*	*220,286*	*-3.3*
NO_x (128) = (129+130)	**t**	**155.03**	**177.12**	**190.86**	**7.8**
Acea Produzione (129)	*t*	*48.04*	*40.05*	*55.20*	*37.8*
A.R.I.A. (130)	*t*	*106.99*	*137.07*	*135.66*	*-1.0*
CO (131) = (132+133)	**t**	**9.94**	**6.81**	**6.75**	**-0.9**
Acea Produzione (132)	*t*	*2.76*	*2.15*	*3.61*	*67.9*
A.R.I.A. (133)	*t*	*7.18*	*4.66*	*3.14*	*-32.6*
SO_2 (134) = (135+136)	**t**	**0.23**	**0.20**	**0.22**	**11.0**
Acea Produzione (135)	*t*	*0.02*	*0.00*	*0.03*	*-*
A.R.I.A. (136)	*t*	*0.21*	*0.20*	*0.19*	*-4.0*
dust (137) = (138+139)	**t**	**0.46**	**0.50**	**0.32**	**-36.9**
Acea Produzione (138)	*t*	*0.03*	*0.01*	*0.04*	*300.0*
A.R.I.A. (139)	*t*	*0.43*	*0.49*	*0.28*	*-42.9*
HCl (A.R.I.A.)	**t**	**2.29**	**2.45**	**2.65**	**8.0**
HF (A.R.I.A.)	**t**	**0.10**	**0.18**	**0.20**	**9.3**

(*) 2014 figures were adjusted after the declaration presented in accordance with ETS Directive for Terni and Tor Di Valle plants.

OTHER EMISSIONS AND WASTE	u. m.	2013	2014	2015	Δ% 2015/2014
waste water treated (140)	**Mm^3**	**0.0007**	**0.0008**	**0.0006**	**-25.0**
cooling water returned (141)	**Mm^3**	**0.000**	**0.000**	**0.000**	**-**
50 Hz electric fields	**kV**	**Monitored** commitment to keep within the legal limits			
50 Hz magnetic fields	**µT**	**Monitored** commitment to keep within the legal			
noise	**dB**	**Monitored** commitment to keep within the legal limits			
dispersed luminous flux	**Mlumen**	commitment to design the plants in order to limit to the maximum the percentage of emissions dispersed towards the sky			

WASTE (EX LEG. DEC. NO 152/06)	u. m.	2013	2014	2015	Δ% 2015/2014
hazardous waste - excluding waste to energy area (142)	**t**	**849.98**	**1,594.57**	**1,254.34**	**-21.3**
energy sector production	*t*	*847.97*	*1,593.40*	*1,252.80*	*-21.8*
portion deriving from activities carried out by Parent Company (*)	*t*	*2.01*	*1.17*	*1.54*	*31.6*
hazardous waste of waste to energy area (143) (**)	**t**	**44,561.7**	**47,158.90**	**54,405.71**	**15.4**
non-hazardous waste - excluding waste to energy area (144)	**t**	**993.1**	**870.46**	**958.34**	**10.1**
energy sector production	*t*	*966.4*	*844.40*	*920.50*	*9.0*
portion deriving from activities carried out by Parent Company (*)	*t*	*26.74*	*26.06*	*37.84*	*45.2*
non-hazardous waste of waste to energy area (145)	**t**	**10,408.7**	**13,720.30**	**8,011.30**	**-41.6**

(*) 50% of waste produced by the Parent Company.

(**) In 2015, 3.970 tonnes of hazardous waste (CER 190111), representing 12% of bottom ash produced at San Vittore del Lazio (FR) plant, were sent to factories in Germany, to be recovered.

EMISSIONS AND WASTE
ENVIRONMENT

The figures refer to Kyklos, Solemme and Samace (acquired by Solemme in July 2015), of Aquaser Srl (100% Acea SpA) and to SAO, controlled by Aquaser, unless otherwise specified. It should be noted that, following an incident at the plant of Kyklos, from July 30th 2014 the latter was placed under sequestration, preventing further contributions until December 2015.

WASTE (LEG. DEC. NO. 152/06)	u. m.	2013	2014	2015	Δ% 2015/2014
hazardous waste of Kyklos, Samace (from 2015) + Solemme, including leachate (146)	t	1.79	48.90	847.66	-
non-hazardous waste of Kyklos, Samace (from 2015) + Solemme, including leachate (147)	t	4,789.60	15,265.93	5,676.57	-62.8
hazardous waste of SAO (148)	t	0.7	1.4	1.0	-28.6
non-hazardous waste of SAO including leachate (149)	t	20,650.00	21,634.00	18,641.32	-13.8

AIR EMISSIONS (KYKLOS)	u. m.	2013	2014	2015	Δ% 2015/2014
dust (150)	t	6.30	11.15	2,58	-76.9
Total Organic Compound (151)	t	6.15	5.98	≤9.64	-
ammonia (152)	t	1.74	6.23	≤0.58	-
volatile inorganic acids (153)	t	1.91	1.32	≤4.05	-

EMISSIONS AND WASTE
WATER

The figures refer to the water companies Acea Ato 2 and Acea Ato 5.

WASTE	u. m.	2013	2014	2015	Δ% 2015/2014
specific waste from waste water treatment					
total treatment sludge (154) = (155+156)	**t**	**151,673**	**158,921**	**151,197**	**-4.9**
treatment sludge - Acea Ato 2 (155)	*t*	*136,305*	*150,533*	*139,341*	*-7.4*
treatment sludge - Acea Ato 5 (156)	*t*	*15,368*	*8,388*	*11,856*	*41.3*
total sand and sediment from treatment (157)	**t**	**10,736**	**11,375**	**24,602**	**116.3**
sand and sediment - Acea Ato 2 (158)	*t*	*10,442*	*11,282*	*24,418*	*116.4*
sand and sediment - Acea Ato 5 (159)	*t*	*294*	*93*	*184*	*97.8*
waste (ex Leg. Dec. No. 152/06)					
total hazardous waste (160)=(161+162+163)	**t**	**201.0**	**119.0**	**81.1**	**-31.9**
production from Acea Ato 2 and Acea Elabori (161)	*t*	*194.3*	*117.1*	*79.1*	*-32.5*
production from Acea Ato 5 (162)	*t*	*4.7*	*0.8*	*0.5*	*-37.5*
portion deriving from activities carried out by Parent Company (163) (*)	*t*	*2.0*	*1.2*	*1.5*	*28.2*
total non-hazardous waste (164) =(165+166+167+168)	**t**	**4,875.2**	**7,466.9**	**7,166.2**	**-4.0**
production from Acea Ato 2 and Acea Elabori (165)	*t*	*251.4*	*372.8*	*367.5*	*-1.4*
production from Acea Ato 5 (166)	*t*	*4,386.0*	*7,027.0*	*6,570.0*	*-6.5*
portion deriving from activities carried out by Parent Company (167) (*)	*t*	*26.7*	*26.1*	*37.8*	*45.2*
inert material (168)	*t*	*211.0*	*41.0*	*191.3*	*365.8*
other emissions and waste					
noise	**dB**	**Monitored** Commitment to keep within the legal limits			
smells		**Monitored** Commitment to keep within the limit of perception in areas nearby treatment plants			

(*) 50% of waste produced by Parent Company.

EMISSIONS FROM VEHICLES AND AIR-CONDITIONING

The figures concerning the Car Pool refer to the main companies of the Group: Acea Ato 2, Acea Ato 5, Acea Distribuzione, Acea Illuminazione Pubblica, Acea SpA, Acea Energia, Acea Produzione, Acea Elabori, Acea Reti e Servizi Energetici.
The figures concerning heating purposes refer to Acea SpA, Acea Ato 2, Acea Distribuzione and Acea Produzione.

GROUP COMPANIES	u. m.	2013	2014	2015	Δ% 2015/2014
vehicles (*)					
CO_2 (169)	t	3,166.6	3,051.4	3,051.4	-
NO_x (170)	t	6.4	8.2	8.2	-
CO (171)	t	30.7	20.5	20.5	-
SO_2 (172)	t	n.a.	n.a.	n.a.	-
heating					
CO_2 (173)	t	1,003	1,368	1,644	-

(*) 2015 fleet data have been estimated equal to 2014 data due to the non- availability of the figures at the time of publication.

ENVIRONMENTAL SUSTAINABILITY PERFORMANCE
ENERGY

Key environmental performance indicators (Key Performance Indicators).

INDICATOR	u. m	2013	2014	2015
energy used in processes				
A consumption for electricity distribution	TJoules (GWh)	1,512.7 (420.2)	1,332.4 (370.1)	1,341.8 (373.0)
B consumption for electricity production (item 92)	TJoules (GWh)	182.6 (50.71)	186.5 (51.80)	197.1 (54.72)
C heat loss on district heating network (item 20)	TJoules (GWh)	82.1 (22.8)	68.0 (18.9)	28.7 (7.98)
D consumption for public lighting (item 96)	TJoules (GWh)	669.3 (185.93)	669.3 (185.93)	602.42 (167.34)
E consumption for Environment (item 99+104)	TJoules (GWh)	18.4 (5.1)	12.6 (3.5)	7.9 (2.2)
F water distribution (item 113 – 111)	TJoules (GWh)	711.6 (197.7)	699.5 (194.3)	788.8 (219.1)
G waste water treatment (item 118)	TJoules (GWh)	646.9 (179.7)	689.8 (191.6)	685.1 (190.3)
H electricity for offices (item 93 + 111)	TJoules (GWh)	41.4 (11.5)	33.12 (9.2)	36.7 (10.2)
I consumption for office heating	TJoules (GWh)	14.0 (3.9)	19.1 (5.3)	29.2 (8.1)
L vehicles (item 119 + 120)	TJoules (GWh)	45.2 (12.6)	48.4 (13.4)	48.4 (13.4)
indirect consumption + consumption from vehicles + heating	**TJoules (GWh)**	**3,924.2 (1,090.1)**	**3,758.7 (1,044.1)**	**3,765.3 (1,046.1)**
M - energy losses when converting from primary sources to electricity	TJoules (GWh)	3,976.6 (1,104.6)	4,492.4 (1,287.8)	4,887.5 (1,408.3)
total energy use (sum A : M)	**TJoules (GWh)**	**7,900.8 (2,194.7)**	**8,251.1 (2,331.8)**	**8,653.6 (2,454.6)**
EMISSIONS, EFFLUENT, AND WASTE				
greenhouse gas emissions (CO_2) (item (124+169+173) (*)	t	246,218	272,178	262,961
emissions of SO_2, NO_x and other significant gases by type				
NO_x (item 128+170)	t	161.43	185.32	199.06
CO_2 (item 131+171)	t	40.64	27.31	27.25
SO_2 (item 134+172)	t	0.23	0.20	0.22
Acea (Acea Produzione and A.R.I.A.) emission/production indicators				
NO_x /thermoelectric production	**g/kWh**	**1.02**	**1.10**	**1.12**
CO_2/thermoelectric production	**g/kWh**	**830**	**846**	**768**
CO_2/total gross production	**g/kWh**	**286.9**	**311.4**	**313.8**
SO_2/thermoelectric production	**g/kWh**	**0.0**	**0.0**	**0.0**

(*) 2014 figure has been corrected after emission certification of Acea Produzione (March 2015). The fleet's 2015 figure (item 169) was considered equal to 2014 for data unavailability at the time of publication.

INDICATOR	u. m.	2013	2014	2015
PRODUCTS AND SERVICES: ELECTRICITY				
electricity production process efficiency - Acea Produzione figures (*)				
gross average efficiency of thermoelectric production (calculation 1)	%	**24.1**	**25.7**	**25.8**
Tor di Valle plant (combined cycle)	%	0.0	0.0	0.0
Tor di Valle plant (co-generation – solely electricity efficiency)	%	24.0	25.8	26.0
Montemartini plant	%	25.4	11.3	24.9
gross average efficiency of thermoelectric production including recovered thermal energy (calculation 2)	%	**57.4**	**63.6**	**59.6**
gross average efficiency of hydroelectric production (calculation 3)	%	**83.1**	**81.2**	**81.5**
gross average efficiency of total production (calculation 4)	%	**81.8**	**80.1**	**79.1**
gross average efficiency of total production including recovered heat (calculation 5)	%	**82.4**	**80.7**	**79.8**
electricity generation process efficiency – Waste to energy plants				
San Vittore del Lazio plant				
Refuse derived fuel/gross electricity produced-San Vittore	kt/GWh	**1.109**	**1.094**	**1.064**
gross efficiency of RDF conversion in electricity (calculation 6)	kWh /kg CSS	**0.90**	**0.91**	**0.94**
Electric efficiency (calculation 7)	%	**20.9**	**20.0**	**19.5**
total waste produced /hours worked	t/h	**n.a.**	**2.66**	**2.74**
Terni plant				
gross efficiency of pulper conversion in electricity (calculation 8)	kWh /kg pulper	**0.83**	**0.82**	**0.82**
electric efficiency (calculation 9)	%	**18.7**	**18.3**	**18.1**
total waste produced /hours worked	t/h	**n.a.**	**2.2**	-
electricity generation process efficiency - photovoltaic plants				
average efficiency of photovoltaic units	%	**14.0**	**14.0**	**14.0**
other indicators (territory, public lighting, checks, losses)				
specific production of waste	g/kWh	**0.57**	**0.82**	**0.75**
protection of the surrounding areas total length of HV lines in cables / (length of HV overhead and in cable lines) x 100	%	**42.93**	**42.42**	**42.53**
public lighting flux efficiency (item 31 / item 96)	Lumen/ kWh	**17.6**	**18.2**	**20.2**
average efficiency of installed lamps (item 31 / wattage)	Lumen/W	**82.7** (39,590 kW)	**84.3** (40,069 kW)	**84.9** (39,759 kW)
specific consumption per lighting point (item 96 / no. lighting points)	kWh/lighting point (No. lighting points x year)	**981.88** (189,361)	**964.92** (192,690)	**858.09** (195,176)
percentage of illuminated roads (**)	% (km of lighted roads/km of total roads)	**84.8** % (6,032/7,110)	**85.9** % (6,107/7,110)	**86.7** % (6,156/7,110)
No. of operating and laboratory checks /GWh net electricity sold (item 32) / (item 29)	n./GWh	**0.12**	**0.13**	**0.13**
SF_6 gass loss make-up /km of electricity distribution network	kg/km	**0.0243**	**0.0234**	**0.0181**
total electricity losses (item 25) / (item 24) (***)	% of required energy	**6.2**	**6.1**	**6.2**

(*) The thermoelectricity generation efficiencies, calculated using computation as described before the explanatory notes at the end of the document, are strongly affected by the low level of production recorded also in 2015 at the combined cycle power plant of Tor di Valle. Such calculations therefore have to be evaluated cautiously because not complying with typical values of the plant technologies used.

(**) This is an estimate.

(***) The total electricity losses include: initial transformation loss, transport loss, internal consumptions and technical and commercial losses, these due to incorrect measurements and fraud.

ENVIRONMENTAL SUSTAINABILITY PERFORMANCE
WATER

Key environmental performance indicators (Key Performance Indicators).
Boundary: Acea Ato 2 and Acea Ato 5.

INDICATOR	u. m.	2013	2014	2015
carbon footprint				
WATER SERVICE IN ITALY				
total CO_2/m³ of water supplied (integrated water service) (*)	**kg CO_2/m³**	**0.42**	**0.41**	**0.41**
CO_2/m³ of water supplied (distribution process)	**kg CO_2/m³**	**0.22**	**0.21**	**0.22**
CO_2/m³ of treated water (treatment process)	**kg CO_2/m³**	**0.11**	**0.11**	**0.11**
DRINKING WATER SERVICE **(Assessment parameters as per Italian Ministerial Decree No. 99/97 and from 2014 also according to the Resolution n. 5/2014 of the AEEGSI)**				
Acea Ato 2 network				
primary efficiency (R1): (item 63) / (item 62)	%	57.3	58.6	56.13
efficiency at consumption level (R2): (item 63 + A 11) / (item 62) A 11 =12,29 Mm³ for 2015	%	58.4	60.7	58.1
rendimento netto (R3): (item 63 + A 11 + A 12) / (item 62) A 12 = 0,005% di (dato 63)	%	60.4	61.0	58.4
"historic" network (Rome + Fiumicino)				
primary efficiency (R1) rete "historic" network: (item 52) / (item 51)	%	62.4	55.2	53.6
efficiency at consumption level (R2): (item 52+ A 11) / (item 51) A 11 = 10,44 Mm³ for 2015	%	63.6	57.6	55.68
net efficiency (R3): (item 52 + A 11 + A 12) / (item 51) A 12 = 0,005% of (item 52)	%	65.6	57.9	55.9
PRODUCT: DRINKING WATER				
Acea Ato 2 network				
linear index of overall drinking water losses (as per MD No. 99/97: A 17 / km network) (item 64) / km of Rome and Fiumicino network, branches included) (**)	**m³x1,000/km**	**22.3** (10,568.9 km)	**25.3** (11,006.9 km)	**26.0** (11,346.3 km)
linear index of effective distribution losses (as per MD no 99/97 and the AEEGSI Resolution no 5/2014): (A15+A13) / km of network) (item 65) / (km of Rome and Fiumicino network, branches included) (**)	**m³x1,000/km**	**17.4** (10,568.9 km)	**24.0** (11,006.9 km)	**24.7** (11,346.3 km)
specific electricity consumption for water network (Ato 2 energy network consumption) / (item 62)	**kWh/m³**	**0.226**	**0.221**	**0.250**
No. of checks on drinking water distributed (item 75 - drinking water Acea Ato 2) / (item 62)	**n./Mm³**	**561**	**562**	**608**
additive index of drinking water (item 106 - network of Acea Ato 2) / (item 62)	**g/m³**	**3.0**	**2.6**	**3.3**
"historic" network (Rome + Fiumicino)				
linear index of overall drinking water losses (as per MD no 99/97: A17 / km of network)) (item 53) / (km of network) (**)	**m³x1,000/ km**	**22.4** (7,258.7)	**27.9** (7,310.9 km)	**29.6** (7,324.4 km)
Linear index of effective distribution losses (as per MD No. 99/97 and the AEEGS Resolution no 5/2014): (A15 + A13)/ (km of network) (item 54) / (km of network) (**)	**Mm³x 1,000 /km**	**17,3** (7,258.7)	**26,3** (7,310.9 km)	**28,1** (7,324.4 km)
specific electricity consumption for water network (Acea Ato 5 energy network consumption) / (item 67)	**kWh/m³**	**0.570**	**0.554**	**0.597**
No. of checks on drinking water distributed (item 75 - Acea Ato 5 drinking water) / (item 67)	**n./Mm³**	**749**	**682**	**812**
additive index of drinking water (item 106 - network of Acea Ato 5) / (item 67)	**g/m³**	**2.2**	**2.5**	**2.9**

INDICATOR	u. m.	2013	2014	2015
SERVICE: WASTE WATER TREATMENT				
Acea Ato 2				
total sludge disposed of (item 155)	t	136,305	150,533	139,341
sand and sediment removed (item 158)	t	10,442	11,282	24,418
COD in	t	158,354	152,994	166,054
COD removed	t	124,339	122,976	145,914
COD removal efficiency	%	79	80	88
SST in	t	95,641	89,887	103,391
SST removed	t	77,430	74,243	92,876
SST removal efficiency	%	81	83	90
N in	t	na	na	14,375
N removed	t	na	na	8,157
N removal efficiency	%	na	na	57
P in	t	na	na	2,865
P removed	t	na	na	1,831
P (PO_4^{-3}) removal efficiency	%	na	na	64
additive process index -Acea Ato 2	g/m³	9.89	9.06	9.67
specific electricity consumption for treatment process - Acea Ato 2	kWh/m³	0.257	0.270	0.279
Acea Ato 5				
total sludge disposed of (item 156)	t	15,368	8,388	11,856
sand and sediment removed (item 159)	t	294	93	184
COD in	t	na	na	7,020
COD removed	t	na	na	5,805
COD removal efficiency	%	79	84	81
SST removal efficiency	%	69	81	80
N (NH_4^+) removal efficiency	%	64	84	85
P (PO_4^{-3}) removal efficiency	%	61	86	66
additive process index -Acea Ato 5	g/m³	11.15	23.73	24.56
specific electricity consumption for treatment process - Acea Ato 5	kWh/m³	0.589	0.595	0.619
COMPLIANCE				
penalty paid for non-compliance with environmental regulations/agreements (***)	euro	98,770	91,002	75,469

(*) "Scope 2" emissions, arising from electricity consumption of the water companies considered.

(**) These are the kilometres of distribution and transportation network. From 2014 the losses are calculated considering the AEEGSI Resolution n.5/2014 and that no comparison can be made with previous years.

(***) Penalties paid by Acea Ato 2, Acea Ato 5, Acea Produzione, ARIA, Acea Distribuzione.

ENVIRONMENTAL SUSTAINABILITY PERFORMANCE
ENVIRONMENT

Key environmental performance indicators (Key Performance Indicators).

INDICATOR	u. m.	2013	2014	2015
non-hazardous waste disposed in landfill / t total waste entered at plan (item 34)/(item 33)	t/t	0.83	0.91	0.89
waste disposed in landfill / energy consumed (item 34)/(item 99)	t/kWh	0.06	0.11	0.14
waste disposed in landfill / energy consumed net of photovoltaic production	t/kWh	0.08	0.15	0.14
compost/ incoming waste (item 41)/(item 38 + item 39 + item 40)	t/t	0.29	0.27	0.37
compost produced/electricity consumed (item 41)/(item 104)	kg/kWh	5.27	5.58	4.64

DESCRIPTION OF THE CALCULATIONS USED TO DETERMINE ELECTRICITY GENERATION EFFICIENCY

calculation 1

$$efficiency\ (thermoelectric) = \frac{Energy_{thermoelectric}\ (kWh)}{Energy_{diesel\ oil}\ (kWh) + Energy_{natural\ gas}\ (kWh)}$$

where:

$Energy_{thermoelectric}$ = gross electricity produced using thermoelectric cycle

$$Energy_{diesel\ oil}\ (kWh) = \frac{diesel\ oil\ (l) \times 0.835 \times NCV_d\ (kCal/kg)}{860\ (kCal/kWh)}$$

Energy equivalent to diesel oil consumed (80)

$$Energy_{natural\ gas}\ (kWh) = \frac{natural\ gas\ (Nm^3) \times NCV_m\ (kCal/Nm^3)}{860\ (kCal/kWh)}$$

Energy equivalent to natural gas consumed (78)

NCV_m = 8,500 kCal/Nm³ (net calorific value of natural gas)
NCV_d = 10,000 kCal/kg (net calorific value of diesel oil)
860 = energy conversion factor from kcal to kWh
0,835 = specific weight of diesel oil (kg/l)

Note: *The calorific values used for Acea Produzione are the effective ones taken from the gaugings of the natural gas and diesel oil suppliers.*

calculation 2

$$efficiency\ (thermoelectric) = \frac{Energy_{thermoelectric}\ (kWh) + Energy_{thermal}\ (kWh)}{Energy_{diesel\ oil}\ (kWh) + Energy_{natural\ gas}\ (kWh)}$$

$Energy_{thermal}$ = Gross thermal energy produced

$Energy_{thermoelectric}$ = Gross thermoelectric energy produced

$$Energy_{diesel\ oil}\ (kWh) = \frac{diesel\ oil\ (l) \times 0.835 \times NCV_d\ (kCal/kg)}{860\ (kCal/kWh)}$$

Energy equivalent to diesel oil consumed (80)

$$Energy_{natural\ gas}\ (kWh) = \frac{natural\ gas\ (Nm^3) \times NCV_m\ (kCal/Nm^3)}{860\ (kCal/kWh)}$$

Energy equivalent to natural gas consumed (78)

NCV_m = 8,500 kcal/Nm^3 (net calorific value of natural gas)
NCV_d = 10,000 kcal/kg (net calorific value of diesel oil)
860 = energy conversion factor from kcal to kWh
0.835 = specific weight of diesel oil (kg/l)

Note: *The calorific values used for Acea Produzione are the effective ones taken from the gaugings of the natural gas and diesel oil suppliers.*

calculation 3

$$efficiency\ (hydroelectric) = \frac{Energy_{hydroelectric}\ (MWh) \times 3.6 \times 10^9}{\left[m(kg) \bullet 9.8\ \left(m/s^2\right) \bullet h(m)\right]\ (Joule)}$$

Where:

3.6 x10 = water energy conversion factor from MWh to Joules

m = offtake water for hydroelectric production

9,8 = gravitation acceleration at sea level

h = height of water drop (free surface reservoir– turbine)

$Energy_{hydroelectric}$ = energy produced in the hydroelectric cycle

calculation 4

$$\frac{(E_i)}{(E_i + E_t)} \bullet \in_i + \frac{(E_t)}{(E_i + E_t)} \bullet \in_t = \in_{average}$$

where:

E_i = total hydroelectricity produced

E_t = total thermoelectricity produced

$\in_i$ = hydroelectric efficiency

$\in_t$ = thermoelectric efficiency

$\in_{average}$ = average production efficiency

calculation 5

$$\frac{(E_i)}{(E_i + E_T)} \bullet \in_i + \frac{(E_T)}{(E_i + E_T)} \bullet \in_T = \in_{average}$$

where:

E_i = total hydroelectricity produced

E_t = sum of total energy (thermoelectric and thermal) produced

$\in_i$ = hydroelectric efficiency

$\in_t$ = efficiency (thermoelectric and thermal)

$\in_{medio}$ = average production efficiency

calculation 6

$$\textit{recovery efficiency (kWh/kg)} = \frac{\textit{Gross electricity produced (kWh)}}{\textit{RDF (kg)}}$$

Gross electricity produced (kWh) = gross electricity produced at S. Vittore = (item 12)

calculation 7

$$\textit{electric efficiency (\%)} = \frac{\textit{Net electricity produced (kWh)}}{\textit{RDF internal energy (kWh)+Natural gas internal energy (kWh)}}$$

where:

Net electricity produced at S. Vittore (item 12)

$$\text{Natural gas internal energy (kWh)} = \frac{\text{Natural gas (Sm}^3\text{) x NCVn(kCal/Sm}^3\text{)}}{\text{860 (kCal/kWh)}}$$

NCV_n = about 8,500 kCal/Sm³ (net calorific value of natural gas)

860 = energy conversion factor from kcal to kWh

$$\text{RDF internal energy (kWh)} = \frac{\text{RDF (kg) x NCVw(kCal/kg)}}{\text{860 (kCal/kWh)}}$$

NCV_w = 3,583 kCal/kg (15,000 kJ/kg) – RDF average net calorific value

860 = energy conversion factor from kCal to kWh

calculation 8

$$\textit{recovery efficiency = (kWh/kg) =} \frac{\textit{Gross electricity produced (kWh) at Terni}}{\textit{pulper (kg)}}$$

$Gross_{electricity}$ produced (kWh) at Terni = Gross electricity produced = (item 13)

calculation 9

$$\textit{electric efficiency (\%) =} \frac{\textit{Net electricity produced (kWh)}}{\textit{pulper internal energy (kWh)+ natural gas internal energy (kWh)}}$$

Were:

Net electricity produced at Terni = (item 13)

$$\text{Natural gas internal energy (kWh)} = \frac{\text{Natural gas } (Sm^3) \times NCV_m (kCal/Sm^3)}{860 \text{ (kCal/kWh)}}$$

NCV_n = about 8,500 kCal/Sm^3 (net calorific value of natural gas)

860 = energy conversion factor from kCal to kWh

$$\text{Pulper internal energy (kWh)} = \frac{\text{pulper (kg)} \times NCVp \text{ (kCal/kg)}}{860 \text{ (kCal/kWh)}}$$

NCV_p = 3,635 kCal/kg (15,216 kJ/kg) - Pulper average net calorific value

860 = energy conversion factor from kCal to kWh

EXPLANATORY NOTES TO THE ENVIRONMENTAL ACCOUNTS

The figures presented in the *Environmental Accounts* have been produced and audited by the pertinent divisions.
Responsibility for the correct formation of the figures has been maintained within the individual production units, pending the implementation of a standardized Environmental Management System, capable of coding the procedures for obtaining a regular flow of numeric information.
Before final acceptance, however, the official figures have been subject to a validation process which anticipated four control procedures:

1. comparison with the historical data in order to highlight and justify any significant discrepancies;
2. repetition at least twice of the acquisition process;
3. feedback to the divisions responsible for the final validation of the figures;
4. sample audit carried out by an auditing firm.

The figures have been divided up into three categories:

- estimated;
- calculated;
- measured.

In the event of estimated data, the greatest of attention was paid to checking the reasonableness of the underlying criteria used, with the aim of resorting as little as possible, in the future, to this form of measurement of the environmental parameters.
When the figures are the result of calculation, the algorithm used has been concisely specified in order to permit the full comprehension of the mathematical result.
When, lastly, the data has been measured, an estimate of the uncertainty to be associated with the number is provided.

ADDITIONAL INFORMATION ON FIGURES PROVIDED IN THE ENVIRONMENTAL ACCOUNTS

ENERGY SECTOR PRODUCTS

item no.	explanation – comment
1	Total gross energy produced by the Group. This figure is calculated.
2	Electricity produced net of losses due to just the production phase. This figure is calculated.
3 = 4+5	Total electricity produced by the Acea Produzione plants, gross of losses. It includes thermoelectric and hydroelectric energy. The figure is measured with uncertainty of less than ± 0.5%.
6 = 7+8+9	Electricity losses attributable to just the production phase of the Acea Production plants. Includes: internal consumption (thermo and hydro) and initial transformation losses. The figure is measured with uncertainty of less than ±0.5%.
10	Electricity produced by the Acea Produzione plants, net of losses. This figure is calculated.
11 = 12+13	Electricity produced by the waste to energy plants: San Vittore del Lazio plant and Terni plant belonging to A.R.I.A. Note that the fuel used by the two plants (RDF- Refuse derived fuel - for San Vittore and industry pulper for the Terni plant) comprises both biodegradable organic material, therefore neutral with regard to the CO_2 balance, and non-biodegradable organic substances (plastic, resins. etc.). In 2015 the renewable share for San Vittore was equal to 52%, the Terni share equal to 40%.
14	Internal consumption of the two waste to energy plants at San Vittore and Terni + transformation losses at San Vittore. The figure is measured with uncertainty of less than ±0.5%.
15	Electricity produced by the two waste to energy plants at San Vittore del Lazio and Terni, net of internal consumption and transformation losses. This figure is calculated.
16	Gross energy produced by photovoltaic plants. The figure is measured with uncertainty of less than ±0.5%.
17	Total losses in photovoltaic generation phase, due above all else to the Joule effect (dissipation with heating) in the equipment. Estimated figure.
18	Net photovoltaic energy made available by the generation plants. The figure is calculated.
19	Thermal energy produced at the Tor di Valle co-generation plant, gross of losses. The item is measured with uncertainty of ± 2% in correspondence with the delivery pipes of the boilers. The thermal energy is produced by the Gallery boilers and the co-generation plant, comprising a turbogas unit and superheated water regeneration generator powered by the hot exhaust fumes of the turbogas units.
20	Thermal energy losses of the district heating system, due to: heat dispersion, losses on the network, technical emissions due to maintenance work, thermal recoveries of the heat accumulation systems. The item is calculated as the difference between the thermal energy produced and that effectively supplied to the customers (billed).
21	Net thermal energy supplied to end customers. The item, calculated, was obtained from the reading of the billed consumption.
22	Electricity supplied by Acea Produzione to Acea Energy SpA involving infra-Group exchange. The item is marginal due to the decision made by the Acea Group to sell the electricity produced on the electricity exchange or by means of bilateral agreements.
23	Net electricity acquired on the market by: • Sole Buyer for 2.839,9 GWh • Imports for 389,1 GWh • Market for 7.968,8 GWh The item is measured with uncertainty of ± 0.5%.
24	Energy requested on the Rome and Formello distribution network by all the connected customers (free + protected markets). This item is estimated.
25	Electricity losses which take place during the distribution and transmission phase. These are attributable to: transformation and transport losses, fraud and erroneous measurements. This item is estimated.
26	Internal uses of electricity for the performance of distribution activities. The item is estimated.
27	Electricity transferred to third parties. This involves exchanges of energy between distribution companies. The item is measured with uncertainty of ± 0.5%.
28	Total net electricity conveyed to customers in free market connected to the Rome and Formello electricity distribution network. This includes both the portion of electricity sold by Acea Energia and that sold by other operators active on the free market. The item is measured with uncertainty of ± 5% according to the CEI 13-4 standard.
29	Net electricity sold to customers in enhanced protection market. The downwards trend is the consequence of the progressive changeover of protected customers to the deregulated market, in other words it is the direct consequence of the process for de-regulating the electricity market underway in Italy since 1999 (Italian Legislative Decree No. 79/99). The item is estimated on the basis of the readings of billed consumption.
30	Net electricity sold by Acea on the free market at Italian national level. Includes the sold on Rome and Formello (item 28). Total sales on the free and the protected market is obtained by summing the items (29) and (30). The figure is estimated.

ENERGY SECTOR PRODUCTS

item no.	explanation – comment
31	Lighting flux supplied by the public lighting system in Rome. The item, calculated, represents the product between the number of lamps installed and the related value of "rated" lighting flux. As a result of the overestimation introduced by: 1. abatement of efficiency due to the ageing of the lamps; 2. shutdown due to faults; 3. shutdown due to maintenance, it is believed that a more realistic supplied lighting flux figure equates to the item provided, decreased by 20%.
32	Total number of gaugings/checks carried out benefiting the energy area. The item is calculated as the sum of the individual calculations made by the pertinent laboratories.

ENVIRONMENT SECTOR PRODUCTS

Item no.	explanation – comment
33	Incoming total waste.These are the amounts arriving at SAO plant: Municipal solid waste, organic fraction, green, non-hazardous industrial waste. In 2015, for plant downtime, organic waste were sent and treated off-site. This figure is calculated.
34	Landfilled waste, either directly or after processing. The figure is calculated.
35	Recovered waste - not sent to landfills. This is glass, paper and paperboard, iron and plastic. In 2014 the figure includes 2,983 tons of waste to energy residues, used for covering the landfill at the end of the day. The figure is calculated.
36	Compost produced at the SAO plant. The data is measured with an uncertainty of ± 1%.
37	Reduction for stabilisation. Represents the mass loss caused by such as natural transformation of matter and evaporation water loss. This figure is calculated.
38	Incoming sludge. This is the amount of incoming sludge at the Aquaser plants: Kyklos, Solemme and Samace. The item is measured with uncertainty of ± 1 %.
39	Incoming green. This is the amount of green from the parks, forests and other areas arriving at Aquaser plants: Kyklos, Solemme and Samace. The data is measured with an uncertainty of ± 1%.
40	Organic fraction from incoming waste collection at Kyklos. It represents the total quantity of organic fraction resulting from recycling collection. The item is measured with uncertainty of ± 1 %.
41	High Quality Compost. It represents the amount of high quality compost produced at the Aquaser plants, Kyklos, Solemme and Samace. The item is measured with uncertainty of ± 1 %.
42	Non-compostable material to disposal. It is the non-biodegradable matter, as plastic, that is sent to disposal as unfit to be composted. The item is measured with uncertainty of ± 1 %.
43	Total analytical controls. The item represents the total of analytical determinations made at the following plants: SAO, Kyklos and Solemme. The item is calculated.

WATER SECTOR PRODUCTS

item no.	explanation – comment
44	Total drinking water withdrawn from the environment or from other systems. This is the sum of the water withdrawn by the Group companies: Acea Ato 2 (Rome), Acea Ato 5 (Frosinone); Gori (Sarnese Vesuviano); Acque (Pisa); Publiacqua (Florence); Acquedotto del Fiora (Grosseto); Umbra Acque (Umbria).The item is calculated.
45	Total drinking water delivered to the distribution networks of the companies listed under item 44 net of losses due to the water supply at sources. The figure is estimated.
46	Total drinking water supplied to the respective customers of the companies listed in item 44. The figure is estimated.
47	Total drinking water withdrawn from the sources except the high drains, by the company Acea Ato 2 and introduced into the aqueduct system of the Rome historic network. It includes the water withdrawn from Lake Bracciano, treated. The item is measured with uncertainty of ±3%.
48	Total drinking water sold to Municipalities located along the route of the aqueducts. The item is measured and is affected by a systematic error estimated as around - 5%.
49	Drinking water introduced onto non-drinking water network. These are events which take place in the case of maintenance or extraordinary measures which make the dedicated non-drinking water resource insufficient. The item is estimated.
50	Drinking water returned to the environment / technical operating volumes with reference to the Rome "historic" distribution network (Rome + Fiumicino). This figure is calculated.
51	Total drinking water transported to the Rome "historic" distribution network (Rome + Fiumicino), net of the losses due to the water supply at sources. The item is estimated.
52	Total drinking water supplied in the Municipality of Rome on the "historic" network (Rome + Fiumicino). The figure represents estimated consumption due to the entire territory served. It includes the consumption due to users, drinking fountains, pipe washing activities, etc. The figure 2014, according to the AEEGSI Resolution no. 5/2014, includes the "water delivered to other aqueducts (A08)". The item is estimated.

WATER SECTOR PRODUCTS

item no.	explanation – comment
53	Overall distribution losses – Rome "historic" network (Rome and Fiumicino). This is the parameter A17 of the Italian MD No. 99/97 defined as the quantity of water lost during distribution: A17 = A9 – (A10 + A11 + A12) = overall losses in distribution, where, for 2014 figures: Parameter A9 of MD 99/97 – total volume of water introduced onto the network. According to the AEEGSI Resolution no. 5/2014, includes the "water delivered to other aqueducts (A08)"; Parameter A10 of MD 99/97 – gauged volume of water supplied to the end user, including, as per the above Resolution, the "water delivered to other aqueducts (A08)"; Parameter A11 of MD 99/97 – consumed uses, billed but not measured; Parameter A12 of MD 99/97 – as established by the aforementioned AEEGSI resolution, the parameter is identified as the "not measured and not invoiced volume" of the used water (authorized) , estimated as 0.005*A10; Parameter A14 of MD 99/97 – water lost apparently for not authorized/not billed consumption, totaling -as estimated by the AEEGSI- 0.002*A10; Parameter A16 of MD 99/97 –water lost apparently for measurement errors due to utility meters installed, totaling -as estimated by the AEEGSI- 0.04*A10. The item is estimated.
54	Effective distribution losses – defined by the AEESGI as A09-A10-A11-A12-A14-A16. The figure is estimated.
55	Total non-drinking water taken from the environment, gross of losses. This item is estimated.
56	Total non-drinking water supplied to Rome and Fiumicino. The item, calculated, corresponds with total water billed.
57	Total non-drinking water supplied to Municipalities other than the Municipality of Rome and Fiumicino. This is a small estimated quantity.
58	Total drinking water withdrawn from the sources except the high drains, by the company Acea Ato 2 and introduced into the Central Lazio Optimum Area of Operations ATO 2 (Rome "historic" network + Municipalities acquired) aqueduct system. The item is measured with uncertainty of ±3%.
59	Total drinking water sold to other aqueduct systems. The item is measured and is affected by a systematic error estimated as around - 5%.
60	Drinking water introduced onto non-drinking water network. These are events which take place in the case of maintenance or extraordinary measures which make the dedicated non-drinking water resource insufficient. This item is estimated.
61	Drinking water returned to the environment / technical operating volumes with reference to the Ato 2 distribution network (Rome and Fiumicino + municipalities acquired as of 31 December 2015). This figure is calculated.
62	Total drinking water transported to the Ato 2 distribution network (Rome and Fiumicino + municipalities acquired as of 31 December 2015). The item is calculated.
62 A	Total drinking water transported to the Ato 2 distribution network (Rome and Fiumicino + municipalities acquired as of 31 December 2015). Introduced in 2014, figure includes the water given to other aqueduct systems, according to AEEGSI Resolution no 5/2014. The item is gauged with uncertainty of ±3%.
63	Total drinking water supplied (i.e. gauged at the metres, where present) to the customers connected to the Ato 2 network (Rome and Fiumicino + municipalities acquired as of 31 December 2015). The figure represents estimated consumption due to the entire territory served. It includes, from 2014, "water supplied to other aqueduct systems", according to AEEGSI Resolution no 5/2014.
64	Overall distribution losses – Ato 2 network (Rome and Fiumicino + municipalities acquired as of 31 December 2015). This is the parameter A17 of the Italian MD No. 99/97 defined as the quantity of water lost during distribution. See item 53 for details.
65	Effective distribution losses - Ato 2 network (Rome and Fiumicino + municipalities acquired as of 31 December 2015). This is the sum (A15+A13) of the Italian MD No. 99/97. See item 54.
66,67,68	Respectively: quantity of water withdrawn from the environment, introduced onto the distribution network and supplied to its customers by Acea Ato 5 (Frosinone).
69	Overall distribution losses of Acea Ato 5 (Frosinone). This is the parameter A17 of the Italian MD No. 99/97 defined as the quantity of water lost during distribution. See item 53 for details.
70	Effective distribution losses of Acea Ato 5 (Frosinone). This is (A15+A13) of the Italian MD No. 99/97. See item 54.
71	Total waste water conveyed to main treatment plants and treated, concerning: Acea Ato 2, Acea Ato 5, Gori, Umbra Acque, Publiacqua, Acque, Acquedotto del Fiora. This figure is calculated.
72	Total waste water conveyed to the main treatment plants of Acea Ato 2 and treated. This figure is calculated.
73	Total waste water conveyed to the treatment plants of Acea Ato 2 and treated, including the quantities treated in the minor plants of the Municipality of Rome and in those outside the Municipality of Rome. For the figures of the smaller treatment plants ("other" in the city of Rome and "other" outside the city of Rome) in 2015 an estimate has been made. This figure is calculated.
74	Total waste water conveyed to the treatment plants of Acea Ato 5 and treated. The figure is calculated.
75	Overall number of analytical controls carried out on drinking water by the Acea Group. The item includes the analysis carried out by Acea Elabori and the analysis carried out independently by the companies. This figure is calculated.
76	Overall number of analytical controls carried out on waste water by the Acea Group. The item includes the analysis carried out by Acea Elabori and the analysis carried out independently by the companies. This figure is calculated.

RESOURCES USED – ENERGY SECTOR

item no.	explanation – comment
77 = 78 + 79	Total quantity of natural gas used for the generation of electricity and heat at the Acea Produzione and A.R.I.A. production plants. The item, expressed in normal cubic metres (volume at 0°C and 1 Atm), is measured with uncertainty of ± 0.5%. The figure is estimated.
80	Total quantity of gas oil used for the generation of electricity at the Acea Produzione Montemartini (turbogas) plant. The consumption of the Montemartini plant has increased in 2015 because the plant has produced more electricity working more hours than in 2014; this in order to comply with the normal activities of periodic tests planned, and to carry out testing activities after extraordinary maintenance. This item is measured with uncertainty of ± 2%.
81	Quantity of RDF (Refuse derived fuel) sent to the waste to energy process at the San Vittore plant in Lazio. The item is measured with uncertainty of ± 1%.
82	Quantity of pulper sent to the waste to energy process at the Terni plant. The item is measured with uncertainty of ± 1%.
83	Total water taken from surface resources and from aqueducts (Salisano hydroelectric plant) for the production of hydroelectricity. This figure is calculated.
84	Total quantity of water used in the industrial processes. The various contributions were due to: - Replenishment of losses on the district heating network. This is drinking water; - Various uses in the San Vittore and Terni waste to energy plants. This is water from aqueduct and from wells. This figure is calculated.
85	Quantity of drinking water used by the companies included in the energy sector for civil/sanitary use. This is represented by the uses of: Acea Produzione, Acea Distribuzione, A.R.I.A. plants and 50% of the Parent Company consumptions. The item, calculated, refers to billed consumption.
86	This represents the total quantity of new dielectric mineral oil introduced into the primary and secondary substations. From 2014 the quantity of oil present in Petersen coils installed in some primary substations is included: about 225 tons in 256 Petersen systems. The total amount of new dielectric mineral oil entered into the production circuit (transformers, capacitors, storage depots etc.) includes both the figure for Acea Distribuzione and Acea Produzione. This item is estimated.
87	The item represents the total quantity of gaseous insulator (SF_6) in the systems of Acea Distribuzione. The item is estimated. The quantity of loss make-up gas represents the total new gaseous insulator (SF_6) added to the production circuit in the year. This item is estimated.
88	Quantity of refrigerating fluids used during maintenance of air-conditioning equipment, when the old gas is recovered and replaced with new gas. The item is calculated allocating the total gases purveyed by the Parent Company in equal parts (50%) to the energy area and the water area. This item coincides with item 109.
89	Total chemicals used in the electricity and heat generation process at the plants of Acea Produzione and A.R.I.A. (waste to energy plants). From 2014 the activated carbon consumed in waste to energy plats has also been considered. This figure is calculated.
90	Amount of oils and lubricating greases used by Acea Produzione. The data is measured with an uncertainty of ± 0.5%.
91	This item coincides with item 25.
92	Coincides with the difference between the items 1 and 2.
93	Electricity consumed by the processes not directly linked with the production phases (offices). The item is calculated to an extent equating to 50% of the overall electricity consumed by the Parent Company. The remaining portion of 50% is assigned to the water sector.
94	Other uses of electricity in the energy sector. This figure is calculated.
95	Total electricity consumed by the product systems included in the energy sector. This figure is calculated.
96	Total electricity consumed for public lighting in the Municipality of Rome. This figure is calculated. The figure is calculated on the basis of the plants in operation in the year. The figure for 2015 has been updated based on new systems provided by Acea Illuminazione Pubblica and in accordance with the efficiency criteria adopted by the same. The figure is estimated.

RESOURCES USED – ENVIRONMENT

item no.	explanation – comment
SAO	
97	Quantity of water consumed at the plant SAO. It should be noted that the resource comes in part from the marquises (rain water) and partly from the riverbed (river water). The figure is estimated.
98	Total chemicals used at the plant SAO. In 2015 this figure is in sharp reduction for the revamping of the site ended in November 2015. The figure is calculated.
99	Electricity consumed in SAO. The 2014 and 2015 big reduction depends from the revamping processing going on from April 2014 (to November 2015). The data is measured with an uncertainty of ± 1%.
100	Total amount of gas oil consumed at the plant of SAO. The data is measured with an uncertainty of ± 2%.
101	Amount of water used for domestic purposes at the plant of Orvieto (SAO). It is supplied by tankers because the plant is not connected to the aqueduct. The figure is estimated.
production of compost	
102	Quantity of water consumed at the plants Kyklos, Solemme and Samace (acquired in Solemme by July 2015). The figure is close to zero as at the two plants Kyklos and Solemme, almost all of the water used comes from recycling, after purification with reverse osmosis technology. At Samace the consumptions are not significant: approximately 579 cubic meters. Finally, water consumption not from recycling are negligible.
103	Total chemicals used at the plants Kyklos and Solemme. Because of the shutdown of Kyklos, the 2015 figure is equal to the consumptions of Solemme. The figure is calculated.
104	Electricity consumed at Kyklos, Solemme and Samace. The sharp fall is due to the downtime of Kyklos in 2015. The data is measured with an uncertainty of ± 1%.
105	The total amount of fuels consumed at Kyklos, Solemme and Samace. The data is measured with an uncertainty of ± 2%.

RESOURCES USED – WATER SECTOR

item no.	explanation – comment
106	The figure represents the sum of the consumption of reagents for drinking water and disinfection of the water in the water companies Acea Ato 2 and Acea Ato 5. In detail this includes: sodium hypochlorite - used as a disinfectant upon the request of the Health Authorities -, aluminium polychloride, caustic soda and ozone. This figure is calculated.
107	Total quantity of chemical reagents used by Acea Elabori for the performance of its duties, in other words the performance of analytical checks benefiting Acea Group companies. The item is measured.
108	Total volume of pure gas for analyses used by Acea Elabori. The item is measured.
109	Quantity of refrigerating fluids used during maintenance of air-conditioning equipment, when the old gas is recovered and replaced with new gas. The item is calculated allocating the total gases purveyed by the Parent Company in equal parts (50%) to the energy area and the water area. This item coincides with item 88.
110	Electricity used for the drinking and non-drinking water pumping plants. The increase in 2015 is mainly due to a particularly dry climate weather condition which resulted in some cases the use of pumping equipment. The item is measured with uncertainty of ± 1%.
111	Electricity consumed by the processes not directly linked with the production phases (offices). The figure, equal to item 93, is calculated to an extent equating to 50% of the total electricity consumed by the Parent Company.
112	Electricity used by Acea Elabori. It includes all the energy relating to the various fields of activities of Acea Elabori, not only the laboratory analysis activities. This item is estimated.
113	Total electricity consumed in the water sector. This figure is calculated.
114	Quantity of drinking water used by the companies Acea Ato 2 e Acea Ato 5 for civil/sanitary use. The item, calculated, refers to billed consumption.
115	Quantity of water consumed for civil/sanitary uses within the installations not directly linked with the production phases (offices). The item is calculated to an extent equating to 50% of the overall water consumed by the Parent Company.
116	The figure is calculates as the sum of items 114 and 115.
117	Total quantity of chemicals used in the waste water treatment process. This figure is calculated.
118	Electricity used for the running of the waste water treatment plants and for the running of the sewage network. The item is measured with uncertainty of ± 1%.

FUELS USED BY THE GROUP (VEHICLE FLEET AND CONDITIONING)

item no.	explanation – comment
119	Total quantity of petrol used for the Acea Group's vehicle pool. A density value of 0.735 kg/l was used to convert from volume (litres) to mass (kg). For lack of availability of data at time of publication, a consumption equal to the 2014 figure was estimated.This item is measured with uncertainty of ± 0.5%.
120	Total quantity of diesel used by Acea Group's vehicle fleet. A density value of 0.835 kg/l was used to convert from volume (litres) to mass (kg). For lack of availability of data at time of publication, a consumption equal to the 2014 figure was estimated. This item is measured with uncertainty of ± 0.5%.
121	Total quantity of gas oil used to heat workplaces and to power generators. In 2015 it represents only the consumptions of Acea Ato 2 and Acea Ato 5. This item is measured with uncertainty of ± 0.5%.
122	Total quantity of natural gas used for heating working environments. Up to 2013 the boundary included: Acea, Acea Distribuzione; Acea Produzione (offices of via aeronautica), Acea Ato 2. From 2014 also Acea Ato 5, ARIA, Acea Elabori, Crea Gestioni, Acea Energia, Acea Illuminazione Pubblica are included. This item is measured with uncertainty of ± 0.5%.
123	Total quantity of LPG (liquid petroleum gas) used for heating working environments. A density value of 0.550 kg/l was used to convert from volume (litres) to mass (kg). This item is measured with uncertainty of ± 0.5%.

SPILLS AND WASTE – ENERGY SECTOR

item no.	explanation – comment
124	Total quantity of carbon dioxide emitted into the atmosphere as a consequence of the generation of thermoelectric energy from fossil fuels and from the waste to energy treatment of RDF and pulper. The item includes the CO_2 equivalent estimated on the basis of the SF_6 replenishments. The figure is calculated as the sum of the items 125, 126 and 127. The item is estimated.
125	Quantity of carbon dioxide emitted into the atmosphere by the Acea Produzione plants. This item is calculated according to current legislation.
126	Quantity of carbon dioxide equivalent estimated on the basis of the SF_6 replenishments, considering that 1 t of such gas has a warming potential (WP) equal to 22.800 times the CO_2 WP.
127	Quantity of carbon dioxide emitted into the atmosphere by the A.R.I.A. waste to energy plants. The figure is calculated according to the existing regulations.
128	Total quantity of nitric oxides (NO + NO_2) emitted into the atmosphere as a consequence of the generation of thermoelectric energy from fossil fuels and from the waste to energy treatment of RDF and pulper. Their presence in trace form in the emissions is due to the secondary undesirable reactions which take place at a high temperature between the nitrogen and the oxygen in the air. This figure is calculated.
129	Quantity of nitric oxides (NO + NO_2) emitted into the atmosphere as a consequence of the generation of thermoelectric energy from fossil fuels in the Acea Produzione plants. This figure is calculated.
130	Quantity of nitric oxides (NO + NO_2) emitted into the atmosphere by the A.R.I.A. waste-to-energy plants. This figure is calculated.
131	Total quantity of carbon monoxide (CO) emitted into the atmosphere as a consequence of the generation of thermoelectric energy from fossil fuels and waste to energy process. The presence of this pollutant in the emissions is due to incomplete combustion reactions and represents a symptom of decline in the combustion reaction efficiency. This figure is calculated.
132	Total quantity of carbon monoxide (CO) emitted into the atmosphere as a consequence of the generation of thermoelectric energy from fossil fuels in the Acea Produzione plants. This figure is calculated.
133	Quantity of carbon monoxide (CO) emitted into the atmosphere by the A.R.I.A. waste-to-energy plants. This figure is calculated.
134	Total quantity of sulphur dioxide (SO_2) emitted into the atmosphere as a consequence of the generation of thermoelectric energy from fossil fuels and from the waste to energy treatment of RDF and pulper. The use of natural gas and gas oil with a low sulphur content in the plants made it possible to sharply contain this type of emission. This figure is calculated.
135	Quantity of sulphur dioxide (SO_2) emitted into the atmosphere as a consequence of the generation of thermoelectric energy from fossil fuels in the Acea Produzione plants. This figure is calculated.
136	Quantity of sulphur dioxide (SO_2) emitted into the atmosphere by the A.R.I.A. waste to energy plants. This figure is calculated.
137	Total quantity of dust (microscopic particles with an average aerodynamic diameter equal to or less than 10 thousandths of a millimetre) emitted into the air as a consequence of the generation of thermoelectric energy using fossil fuels and from the waste to energy treatment of RDF and pulper. This mainly involves unburnt amorphous carbon, with traces of other compounds of a mixed composition obtained as a by-product of the combustion when this does not take place completely. This figure is calculated.
138	Quantity of dust emitted into the atmosphere as a consequence of the generation of thermoelectric energy from fossil fuels in the Acea Produzione plants. This figure is calculated.
139	Quantity of dust emitted into the atmosphere by the A.R.I.A. waste-to-energy plants. This figure is calculated.
140	Total quantity of waste water treated, deriving from thermoelectric production activities. This item is gauged with uncertainty of ± 2%.
141	Total cooling water in the thermoelectric plants. During last three years, as the combined cycle did not produce energy, it was not necessary to use the cooling water for the Tor di Valle plant. This item is estimated.
142	Total quantity of hazardous waste (pursuant to Italian Legislative Decree No. 152/06) disposed of by Acea Group companies with the exclusion of the waste to energy sector. The item is measured with uncertainty of ± 2%.
143	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) disposed of from the waste to energy sector. This basically involves light ash and slag deriving from incineration. The item is measured with uncertainty of ± 2%.
144	Total quantity of non-hazardous waste (pursuant to Italian Legislative Decree 152/06) disposed of by the Acea Group companies with the exclusion of the waste to energy sector. The item is measured with uncertainty of ± 2%.
145	Non-hazardous waste (pursuant to Italian Legislative Decree No. 152/06) disposed of from the waste to energy sector. This is essentially heavy ash and slag, deriving from incineration. The item is measured with uncertainty of ± 2%.

SPILLS AND WASTE – ENVIRONMENT

item no.	explanation – comment
146	Hazardous waste (Italian Legislative Decree No. 152/06) disposed from the Kyklos, Samace and Solemme plants. The figure has undergone a sharp rise in 2015 due to the fact that in the year, the leachate stored in container – affected by the accident of 28.07.2014, was conservatively classified as hazardous. The figure is calculated.
147	Non-hazardous waste (Italian Legislative Decree No. 152/06) disposed from the Kyklos and Solemme plants. The figure is calculated.
148	Hazardous waste (Italian Legislative Decree No. 152/06) disposed of by the plant of SAO. The data is measured with an uncertainty of ± 2%.
149	Leachate derived from activities at the composting plants and at SAO.
150, 151, 152, 153	Among the emissions in Environment, the following are described: dust, Volatile Organic Compounds, ammonia, volatile inorganic acids. The data refer only to the plant of Kyklos. 2015 COT, ammonia and SIV data are calculated from the concentrations measured by third party laboratories. The presence of this symbol "≤" locates concentration equal to or below the limits of detection of the instruments used by the laboratory, therefore indicates only an upper limit. Realistically the 2015 actual values are far below the limits of detection of the laboratory used.

SPILLS AND WASTE – WATER SECTOR

item no.	explanation – comment
154	Total quantity of sludge disposed of by Acea Ato 2 and Acea Ato 5. This sludge is non-hazardous waste. The item is measured with uncertainty of ± 2%.
155	Total quantity of sludge disposed of by Acea Ato 2. The item is measured with uncertainty of ± 2%.
156	Total quantity of sludge disposed of by Acea Ato Ato 5. The item is measured with uncertainty of ± 2%.
157	Total quantity of sand and sediment disposed of by Acea Ato 2 and Acea Ato 5. The item is measured with uncertainty of ± 2%.
158	Total quantity of sand and sediment disposed of by Acea Ato 2. The 2015 figure includes 16,932 tonnes of sand and sediment removed in the plant of Rome South, for extraordinary cleaning of the oxidation compartment. The item is measured with uncertainty of ± 2%.
159	Total quantity of sand and sediment disposed of by Acea Ato 5. The item is measured with uncertainty of ± 2%.
160	Total quantity of hazardous waste (pursuant to Italian Legislative Decree No. 152/06) disposed of by Acea Ato 2, Acea Elabori and Acea Ato 5 plus a portion produced by the Parent Company ascribed in equal parts to the two areas of activities, energy and water. The figure is calculated.
161	Quantity of hazardous waste (pursuant to Italian Legislative Decree No. 152/06) disposed of by Acea Ato 2 and Acea Elabori. The item is measured with uncertainty of ± 2%.
162	Quantity of hazardous waste (pursuant to Italian Legislative Decree No. 152/06) disposed of by Acea Ato 5. The item is measured with uncertainty of ± 2%.
163	Quantity of hazardous waste (pursuant to Italian Legislative Decree No. 152/06) disposed of by the Parent Company. The same amount has been attributed to the Energy Area.
164	Total quantity of non-hazardous waste (pursuant to Italian Legislative Decree 152/06) disposed of by Acea Ato 2, Acea Elabori and Acea Ato 5 plus a portion produced by the Parent Company ascribed in equal parts to the two areas of activities, energy and water. The item is calculated.
165	Total quantity of non-hazardous waste (pursuant to Italian Legislative Decree 152/06) disposed of by Acea Ato 2 and Acea Elabori. The item is calculated.
166	Total quantity of non-hazardous waste (pursuant to Italian Legislative Decree 152/06) disposed of by Acea Ato 5. The data is estimated.
167	Quantity of non-hazardous waste (pursuant to Italian Legislative Decree 152/06) disposed of by the Parent Company and ascribed to the water area. The same amount has been attributed to the Energy Area.
168	Total quantity of aggregates (non-hazardous waste - pursuant to Italian Legislative Decree 152/06) disposed of by the water companies Acea Ato 2 and Acea Ato 5. The item is calculated.

ACEA GROUP EMISSIONS FROM VEHICOLS AND AIR-CONDITIONING

item no.	explanation – comment
169	Total quantity of carbon dioxide emitted by the Acea Group vehicle fleet. The item was calculated using Sinanet emission factors (www.sinanet.isprambiente.it). For lack of availability of data at time of publication, a consumption equal to the 2014 figure was estimated.
170	Total quantity of nitric oxides emitted by the Acea Group vehicle fleet. The item was calculated using Sinanet emission factors (www.sinanet.isprambiente.it). For lack of availability of data at time of publication, a consumption equal to the 2014 figure was estimated.
171	Total quantity of carbon monoxide emitted by the Acea Group vehicle fleet. The item was calculated using Sinanet emission factors (www.sinanet.isprambiente.it). For lack of availability of data at time of publication, a consumption equal to the 2014 figure was estimated.
172	Sulphur dioxide emissions by vehicles were not calculated, as they were extremely small amounts deriving from combustion of modest quantities of sulphur found in latest-generation fuels.
173	Total quantity of carbon dioxide emitted by the air-conditioning systems in the work environments. The 2015 figure is calculated using the fuel consumption and emission coefficients (ISPRA 2015); until 2014 this item was calculated under the assumption that each toe of fuel used creates 3 tons of CO_2.

2015

ACEA GROUP
SUSTAINABILITY REPORT

ACEA SPA
Sede legale
Piazzale Ostiense 2 – 00154 Roma

Share Capital
1,098,898,884 euros fully paid-up

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