



# The Hera Group Sustainability Report for





contains figures for the three areas of responsibility: economic, social and environmental.



Focus on commitments made, the results obtained and the outlook for the future.



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## Letter to stakeholders

On 22 March 2012, the Hera S.p.A. Board of Directors approved the tenth Sustainability Report published by the Hera Group. In fact, since its founding, Hera has decided to include a report with the financial statements which explains how the company's business benefits its stakeholders and the results achieved by the company in the name of sustainability in the area in which it operates.

Over the years, this reporting tool has evolved to become increasingly related to and integrated with other planning and control instruments, such as the business plan, the budget and the Balanced Scorecard. The business plan, for example, outlines the Group's objectives, also in terms of social and environmental sustainability, objectives which are then consistently included and reported on in the Sustainability Report and incorporated into the Balanced Scorecard system. The latter is used to assign objectives to management, thereby ensuring an effective link with the bonus system.

The fact that nowadays sustainability has become an opportunity for companies confirms the soundness of Hera's approach on these topics, an approach which involves strong integration between sustainability issues and ordinary business activities, which is able to satisfy the requirements of various stakeholders in a balanced manner.

2011 closes with an economic result in line with expectations, resulting in the confirmation of the proposal to distribute a dividend to the company's over 21,000 shareholders.

It is important to note that the economic results were pursued with a constant focus on all social and environmental, as well as economic, considerations. In fact, since 2004, Hera has been a member of the Global Compact, an international initiative with the purpose of sharing, supporting and applying a set of core principles regarding labour standards, human rights and environmental safeguards, and it continues to support this initiative today.

The fourth internal climate survey was conducted in 2011, with excellent results that were higher than those achieved in the last three surveys and also higher than the objectives we had set. The annual customer satisfaction survey also achieved positive results: the customer satisfaction index increased once again, and for the first time reached the level of "high satisfaction".

The positive results of these two surveys are certainly related to the many projects, presented throughout the Report, which were initiated following previous surveys precisely in order to improve satisfaction indices.

Therefore, we are pleased to present you with the Hera Group 2011 Sustainability Report, we hope you enjoy reading it and we are sure that it will help you to fully understand the reality in which Hera works, the results achieved and our goals for the future.

**Tomaso Tommasi di Vignano**Chairman of the Board of Directors

Maurizio Chiarini Chief Executive Officer

## The Report

## **Reading this Report**

For the Hera Group, the Sustainability Report is a primary tool for reporting on its activities and results in the economic, environmental and social fields, as well as a fundamental tool for providing information to and dialoguing with stakeholders.

Since 2008, the Sustainability Report has been approved by the Board of Directors of Hera S.p.A. when the financial statements are approved; this aspect testifies to the role that this instrument has within the company's planning and control system.

Dedicated meetings have increased the distribution across communities served, with the distribution to all customer branches and through local press, to all employees and other various stakeholders.

Hera's Sustainability Report provides the principles which guide our actions, the performance achieved, the objectives reached compared to stated and future objectives, the results of our dialogue with stakeholders and projects in the field.

Within the Report, particular importance was accorded to local projects.

Some of the technical terms used in this document are defined in the attached glossary.

This Sustainability Report, the tenth published by the Hera Group, can also be viewed on the website www.gruppohera.it, where it can be downloaded in both Italian and English.

An accessible version of the financial statements is available on the Group's website, in Italian and in English, which includes other documentation and details; the subjects for which further details are available on the website are indicated in the text.

You will find an assessment sheet in this report. It is extremely important for us to receive information since this will enable us to improve the content matter and presentation of the Sustainability Report: just fill in the attached form and send it back to us.

We hope you enjoy reading our report!

The greenhouse gas emissions created by the use of paper for the preparation of this Sustainability Report have been neutralised thanks to Hera's compliance with GAIA, the Life project jointly funded by the European Commission and furthered by Bologna Municipal Authority in partnership with Cittalia, Impronta Etica, CNR and Unindustria Bologna, with the aim of increasing green areas in the city of Bologna by means of planting new trees.

This report was prepared with 100% recycled Revive Pure Natural ecological paper in compliance with RAL UZ 14 - Blue Angel and digital photographs.

Hera is a member of Impronta Etica, an association for promoting Corporate Social Responsibility.

Impronta Etica

## Information:

Corporate Social Responsibility Department, Hera S.p.A. Viale Carlo Berti Pichat 2/4 40127 Bologna
Tel. +39 051.287.038
Fax + 39 051.287.224
csr@gruppohera.it
www.gruppohera.it

## **Drawing up this report**

#### **Standards**

The 2011 Sustainability Report was drawn up on the basis of the AA1000 standard which provides the steps required for preparing social and sustainability reports.

The report content matter was selected in compliance with GRI and GBS guidelines, and taking into consideration the information deemed useful for corporate stakeholders. In this issue of the report, guideline G3 (3.1 version) is used as a reference for the fifth year and the sectorial supplement dedicated to the Electric Utility sector (Final Version of the Sustainability Reporting Guidelines & Electric Utility Sector Supplement approved in April 2009) was used for the third time this year.

The G3 Reporting Guidelines were drawn up in 2006 by the Global Reporting Initiative to evaluate the economic, environmental and social performance of companies; in March 2011, the 3.1 version of the guidelines was published with additions specifically concerning local communities, human rights and gender problems. The Electric Utility supplement was created in 2009 by the Global Reporting Initiative and contains specific indicators for the electric utility sector; the Gruppo di Studio per il Bilancio Sociale (GBS) had, instead, proposed its Principles for the Preparation of Social Report in 2001.

## Hera is a member of Global Compact

On 8 June 2004, the Hera Group ratified its commitment to the aims of the Global Compact, an international declaration of the intention to obtain consensus and support for certain fundamental principles and relating to standards applying to work, human rights and environmental safeguards. In October 2008, the Global Compact sent a letter to the Chief Executive Officer of Hera S.p.A. regarding the excellent quality of the 2007 Sustainability Report and its value as an example to be followed by other members. In 2011, Hera's annual communication on progress



achieved, represented by the Sustainability Report, was acknowledged as of an advanced level within the Differentiation Programme launched by Global Compact in February 2011.

## Structure of the document

The first two sections of the report provide an account of how the company was created, its identity, mission, corporate strategies, sustainability policies and the key indicators for assessing economic, environmental and social sustainability. The third section describes the methods applied for the dialogue with stakeholders. The fourth section highlights corporate economic returns by means of the methodology based on value added allocated to stakeholders proposed by the GBS. The next sections provide an account of the results achieved for each class of stakeholder, given as performance ratings of a qualitative and quantitative nature and related to the objectives set forth in the previous report and achievement of these. In each section, the stakeholder listening, dialogue and involvement initiatives are indicated.

The objectives for the coming years for each class of stakeholder have been set in line with the company's strategic planning instruments; in certain cases, future targets which the company has committed to have been specified with numeric indicators.

#### **Reporting actions**

The reporting actions comply with the AA1000 standard. An internal procedure was issued in January 2012 for the preparation of the Sustainability Report, which describes the activities required for planning, achieving, approving, disclosing and presenting the report and the associated responsibilities.

The social and environmental sustainability objectives set out in the Report have been defined with reference to the planning and control instruments used by the Group: Business Plan 2011-2015, Budget 2012 and Balanced Scorecard 2012. These interconnected instruments contain sustainability objectives which have an effect on stakeholders.

The final data collection actions required for the report entailed the distribution of forms providing the technical indications used to construct the indicators.

Lastly, in defining the contents of this Report, with the objective of complying as fully as possible with the principle of "materiality" of the GRI guidelines, the results of the analysis of the 2011 press review, blog, forum and newsgroup as well as the results of the activities for stakeholder involvement were considered.

#### The Guidance Committee for the Sustainability Report and the work group

The reporting process was led by a Guidance Committee composed of the Chief Executive Officer, the General Manager of Operations, the Corporate Social Responsibility Manager, the Quality, Safety and Environment Manager, the Chief Executive Officer of Hera Comm, the External Relations Manager, the Chief Executive Officer of Herambiente, the person in charge of Management Control, the Operating Services Sector Manager, the Administration, Finance and Control Manager, the Operations Technical Services Manager, the General Manager for Development and the Market and the Manager of the Business Unit Division - TOS Imola-Faenza.

This report was drawn up by the Corporate Social Responsibility Department of Hera S.p.A., with the participation of numerous contacts, both in terms of data collection and for the descriptions and comments.

#### Guidance Committee:

Maurizio Chiarini, Roberto Barilli, Filippo M. Bocchi, Ennio Dottori, Cristian Fabbri, Giuseppe Gagliano, Claudio Galli, Rita Malossi, Salvatore Molè, Luca Moroni, Franco Sami, Stefano Venier, Susanna Zucchelli.

## Corporate Social Responsibility Department:

Filippo M. Bocchi, Paola Brandolini, Benny Buozzi, Gabriele Magli, Gianluca Principato.

The following persons contributed to the preparation of the 2009 Sustainability Report. Luciano Agostini; Patrizia Albertazzi; Marta Alesi; Stefano Amaducci; Marco Amesso; Claudio Anzalone; Alberto Apollo; Alessandro Armuzzi; Claudio Artioli; Stefano Baldassini; Valentina Balducci; Pier Giorgio Ballanti; Teresa Barbera; Luigi Barbieri; Federico Barone; Sergio Baroni; Andrea Basso; Alessandro Battistini; Roberto Bazzani; Beatrice Beleggia; Marina Bellei; Simona Biagi; Davide

Bigarelli; Cecilia Bondioli; Enrico Bordigoni; Rossella Borgatti; Paolo Bosi; Sandro Bosso; Carlo Botti; Giacomo Bracali; Irene Bruni Prato; Angelo Bruschi; Guglielmo Calabrese; Alessandro Camilleri; Giancarlo Campri; Davide Camprini; Ugo Canonico; Alessandra Cascone; Dario Casone; Paolo Cecchin; Silvia Cicchelli; Gaia Cioci; Claudio Coltelli; Michele Corradini; Elisa Costa; Elisa Costamagna; Adriana Covizzi; Margherita Cumani; Cristina Dal Pozzo; Giuseppe D'Aleo; Isabella Data; Alberto Di Stefano; Alessia Evangelisti; Cristian Eziotti; Franco Fabbri; Erika Fabbri; Roberto Fabbri; Mila Fabbri; Dario Farina; Gian Battista Fauchè; Fausto Ferraresi; Carlo Ferri; Fabrizio Ferri; Giovanna Filanti; Maria Luisa Filippini; Riccardo Finelli; Franco Fogacci; Matteo Foschi; Giacomo Fossi; Luigi Gaiani; Katia Gamberini; Roberto Gasparetto; Cristina Gasperini; Federico Giva; Luca Giulianelli; Daniele Giunchi; Giorgio Golinelli; Francesco Gramolini; Marcello Guerrini; Monica Guidi; Valeria Guizzardi; Jens Klint Hansen; Salvatore Rudi Iaconis; Marco Impiglia; Sabina Isidori; Katia Laffi; Chiara Lambertini; Fortuna Laselva; Lorenzo Lazzaroni; Davide Lombardi; Patrizia Lombardi; Nicoletta Lorenzi; Gian Luca Luccarini; Barbara Lucchesi; Maurizio Magagni; Maria Cristina Magni; Micaela Maini; Marco Malagoli; Isabella Malagoli; Fabio Marcantonini; Elena Marchetti; Leonarda Maresta; Michele Martignani; Danilo Mascheroni; Gianrico Masetti; Barbara Masia; Fabrizio Mazzacurati; Tiziano Mazzoni; Edolo Minarelli; Laura Minelli; Antonio Monteleone; Mariarita Montevecchi; Massimiliano Moratto; Susanna Morelli; Alessandro Morgagni; Veronica Musiani; Pietro Musolesi; Cecilia Natali; Paolo Paoli; Andreas Papageorgiou; Roberta Pè; Diego Pedrini; Stefano Pelliconi; Carla Petraglia; Angelo Pettazzoni; Silvia Pfnister; Paola Piraccini; Alessandra Piromallo; Claudio Poli; Cinzia Pozzetti; Alessandro Protasoni; Daniela Pulvirenti; Francesca Ramberti; Gian Carlo Randi; Luigi Ranieri; Giulio Renato; Carmelo Mario Riccio; Barbara Romualdi; Francesca Roncarati; Michela Ronci; Valeria Rosati; Simone Rossi; Maria Cristina Rovini; Giovanni Sandei; Stefania Santacroce; Marco Santandrea; Andrea Santinelli; Alberto Santini; Annalisa Schiavo; Pietro Selleri; Barbara Sentimenti; Oriano Sirri; Walther Sirri; Carlo Sussi; Gianluca Tambosso; Mauro Tiviroli; Massimo Vai; Gianluca Valentini; Marco Venturi; Stefano Venturi; Carlotta Venturoli; Mariacristina Vernacchia; Elmo Veronesi; Roberta Veronesi; Daniele Villano Rispoli; Stefania Virgili; Danilo Vivarelli; Paolo Zaccherini; Emanuel Zamagni; Giulia Zanotti; Milena Zappoli.

## **Scope of reporting**

The scope of this document includes all the companies in the Hera Group, consolidated using the line-by-line method in the Group's consolidated financial statements. Furthermore, the companies in which the Group holds investments, Calenia Energia (parent company holding of 15%) and SET (parent company holding of 39%), which manage two electricity power stations, were also considered only insofar as the aspects involving atmospheric emissions. When compared with 2010, the scope of reporting includes the company Enomondo (which manages a biomass plant), consolidated on a proportional basis at 50%. Once again in relation to 2010, the merger via incorporation took place in December 2011 of Hera Comm Mediterranea within Hera Comm.

In certain cases, the findings do not tally fully with the report, in terms of scope of reporting. The data gaps in question (indicated by notes accompanying the individual tables) may be ascribed, variously, to the lack of certain items, or to the fact that certain items are not sufficiently significant, or to the fact that the pertaining data cannot be collected by applying the same management and recording procedures.

## **Companies included in the scope of reporting (consolidated companies)**

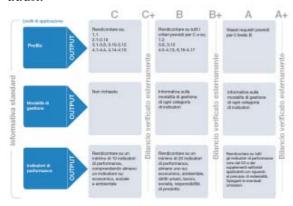
#### Hera S.p.A. Services and General Operations Herambiente S.p.A. Information Systems General Development and Market Division Division Central Division · Acantho S.p.A. • Famula On-line · Hera Servizi Funerari · Akron S.p.A. · Marche Multiservizi • ASA S.c.p.A. • Acque S.r.l. S.p.A. • Ûniflotte S.r.l. Consorzio Akhea Fondo Consortile • Eris S.c.r.l. • MMS Ecologica S.r.l. · Herasocrem S.r.l. • Hera Comm S.r.l. · Naturambiente S.r.l. • Enomondo S.r.l. • Hera Comm Marche • Sinergia S.r.l. · Frullo Energia Sr1 Società Ambiente S.r.l. • Hera Energie S.r.l. Intercomunale Servizi • Gal.A. S.p.A. • Hera Energie S.p.A. Nuova Geovis S.p.A. Rinnovabili S.p.A. • Romagna Compost • Hera Luce S.r.l. S.r.1. · Hera Trading S.r.l. Sotris S.p.A. · Medea S.p.A.

## **Auditing of the Report**

This Report was audited by an external company, which verified its compliance with the GRI-G3.1 (Sustainability Reporting Guidelines & Electric Utility Sector Supplement) and GBS guidelines.

The corporate quality management system, certified in compliance with the ISO 9001:2008 standard, envisages a procedure relating to the preparation of the Sustainability Report and collection of quality KPIs on a regular basis.

In terms of the levels of application identified for these GRI-G3.1 guidelines (shown in the figure), this Report reached a level of application of A+, which corresponds to complete application of the requirements of the guidelines, and an independent external audit.



## About us

## Hera today

Hera is one of the major multi-utility companies in Italy, operating in approximately 241 municipalities of the provinces of Bologna, Ferrara, Forlì-Cesena, Modena, Ravenna, Rimini, Pesaro and Urbino and in 3 municipalities in the province of Florence.

Hera provides energy (gas, electricity), water (water systems, sewage and treatment), and waste management (collection and disposal) services to a total customer base of approximately 3 million users.

Hera is a company renowned for its reliability, soundness and competitiveness. Its main strengths lie in:

- the balance of its services, comprised of services managed according to free market criteria (e.g. the sale of gas and disposal of special waste) and regulated services (e.g. gas distribution, integrated water services, collection and treatment of urban waste);
- strong roots in the areas in which it operates;
- a widespread shareholding structure.

The shareholding structure in June 2011, the dividend coupon date, includes 187 public shareholders (holding 60.1% of shares, in all), 401 institutional investors and over 20,500 private shareholders (natural persons and corporate bodies that are not involved in financial businesses).

## **History**

The group was founded at the close of 2002 following one of the most significant business combination operations ever conducted in Italy within the public utilities sector.

After its establishment, deriving from the merger of 11 local public service concerns, the company was partly privatized via the placing of 44.5% of the share capital on the Milan stock exchange (Borsa di Milano).

The shared aggregation process which led to the formation of Hera has continued over time through various operations concentrated on companies in the energy, water and waste management sectors, operating in geographical areas bordering the areas managed.

The most recent transactions are: the 2007 merger between Megas of Urbino and Aspes Multiservizi of Pesaro which gave rise to a new company, Marche Multiservizi, of which the Hera Group holds 40.6%; the merger was effective as of 1 January 2008. The merger of SAT S.p.A. into Hera S.p.A. approved in 2007, which became effective as at 1 January 2008. Corporate events in 2011 include the merger by incorporation of Sadori Gas into Hera Comm Marche, a Hera Comm subsidiary, of which Hera Comm holds 57%.

## Services managed

#### **Energy services**

Hera is one of the major operators in Italy, in terms of managed volumes for the sale and distribution of gas. Sales total approx 3.3 million cubic metres per year to over 1.1 million service customers. Hera distributes electricity in the Modena and Imola areas (in 24 municipalities) and sells approximately 10 TWh of energy per year to 482 thousand customers. Hera is also operational in the district heating (8 municipalities served), heat management (in 162 municipalities) and public lighting (in 59 municipalities) sectors.

#### Water services

Hera manages the integrated water services in 227 municipalities (it manages sewerage and purification services in all, and in 225 the distribution services) with sales volumes of approximately 254 million cubic metres of water for civilian and industrial use, 326 drinking water purification plants, 31,260 kilometres of aqueducts, approximately 15,000 kilometres of sewage networks and 848 treatment plants.

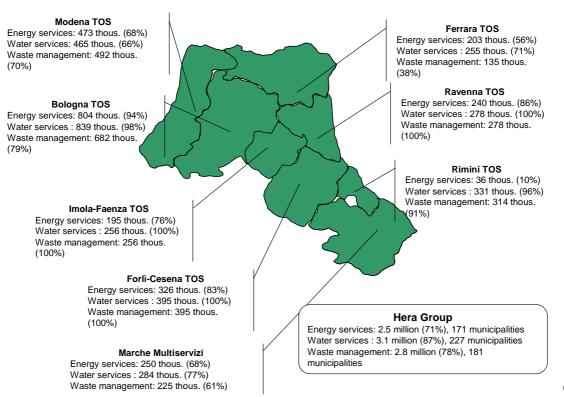
## **Waste Management Services**

Hera manages the entire waste cycle: collection, recovery, treatment and disposal. The group manages urban waste in approx. 181 municipalities representing a customer base of 2.8 million users (collecting approx. 1.8 million tonnes of refuse per year).

The Group owns 80 waste disposal plants. Hera, with its 7 plants, is one of the major operators in Italy in the waste-to-energy sector. In 2011, a total of 5.1 million tonnes of waste were disposed of.

Hera- Key Statistics (2011)		
Gas customers (thousands)	1,114.5	
Gas sold (millions of m <sup>3</sup> )	3,321.0	
Water customers (thous.)	1,185.4	
Water sold (millions of m <sup>3</sup> )	253.7	
Electricity customers (thous.)	482.1	
Electricity sold (GWh)	9,996.1	
Waste treated (thous. t)	5,107.1	
Permanent workforce (as at 31/12) (no.)	6,484	

## Customers and municipalities served in the local areas\*



Number of municipalities and residents in the municipalities in which Hera manages at least one energy service (distribution of gas or electricity, or district heating), water service (water systems, sewage or treatment) and waste management service (separated or non-separated waste collection, or sweeping) and the percentage of total residents in the province or the territory (as at 1 January 2011, source: ISTAT).

## The mission and values

### The mission

"Hera's goal is to be the best multi-utility in Italy for its customers, workforce and shareholders. It aims to achieve this through further development of an original corporate model capable of innovation and of forging strong links with the areas in which it operates by respecting the local environment.

For Hera, being the best means inspiring the pride and trust of:

- **customers**, who receive, thanks to Hera's responsiveness to their needs, quality services that satisfy their expectations;
- **the women and men** who work at Hera, whose skills, engagement and passion are the foundation of the company's success;
- **shareholders**, confident that the economic value of the company will continue be generated, in full respect of the principles of social responsibility;
- the areas in which Hera operates, where economic, social and environmental wealth represent the promise of a sustainable future;
- **suppliers**, key elements in the value chain and partners for growth."

## **Charter of values**

Integrity: Proud to belong to a group of people known for their honest and upright

conduct

**Transparency:** Sincere, clear messages for all stakeholders

Personal responsibility: Shared commitment to the good of the company

**Consistency:** Living up to our Mission and Values

## **Company operational principles**

Creation of value and social and environmental responsibility: To be a company that is sustainable in time, and to improve society and the environment for future generations

**Service quality and excellence:** Putting customers first, as a trustworthy provider of services and safety

**Efficiency:** Promoting the value of available resources, never wasting them

**Innovation and ongoing improvement:** Feeling you are part of a team that generates ideas and improvement

**Engagement and optimisation of personnel:** Sharing knowledge for self-improvement and improvement

**Empowerment to choose:** Selecting the optimal solution for growth

The company's Mission, Charter of Values and Operational Principles are set forth and detailed on the Group's website, on the corporate intranet and in the Code of Ethics, which is revised every three years.

The Mission, Charter of Values and Operational Principles were created with the participation of the Hera Group's entire workforce and were approved by the Board of Directors of Hera S.p.A..

## Managing sustainability

## **Corporate strategy**

The Hera Group's strategy is based on the corporate mission and affirms the Group's desire to guarantee an innovative corporate model based on a multi-business approach with strong roots in the community, which places sustainability as a key element of company choices and lines of development.

The 2011-2015 Business Plan is completely consistent with the journey undertaken by the Group to date; it reconfirms the multi-utility strategy and attention to the creation of value for shareholders and the main stakeholders.

The strategic guidelines which the Hera Group intends to implement in the coming years have been drawn up based on the three business areas:

• in the energy area, the Group aims to maximise sales profitability, optimise plant management, increase electricity and heat production from renewable and similar sources, strengthen growth of the client base, even outside of the areas

currently served, continue to improve commercial quality and the performance of customer service structures and evaluate opportunities arising from the development of the new electric mobility business;

- in the waste management area, the Group intends to make the waste-to-energy plants built in past years fully operative, employ the know-how developed during the construction and management of waste-to-energy plants to guide new projects, outline plans for developing the plant portfolio on the basis of changes in waste collection procedures and the current incentive system, progressively increase separate waste collection while minimising costs linked to the regional collection models, and take advantage of opportunities to improve material flows, particularly through energy recovery and recycling;
- in the networks area, Hera intends to conduct preparatory activities for future gas distribution service tenders, consolidating its abilities related to the design and proposition of excellent management solutions, and increase the efficiency and quality levels of the electricity distribution service.

In the Business Plan until 2015, these strategic priorities are supported by the sustainability strategy in order to strengthen the Group's competitive advantage, by:

- further increasing the percentage of electricity and thermal energy generated by renewable and similar sources, additionally enhancing energy recovery from waste and executing innovative projects focused on energy efficiency;
- maintaining quality and safety standards at levels higher than those required by the regulator and consolidating the quality levels of structures in contact with the customer;
- continuing to implement employee professional growth policies;
- increasing profitability and economic and financial stability;
- maintaining the characteristics and strong local roots which have characterised the Group's development since its establishment.

The lines of development defined in the Business Plan maintain continuity and consistency with the guidelines of the last few years, outlining a solid and balanced path which will allow the Hera Group to reach 2 million customers served by 2015, and to manage around 80,000 kilometres of networks and approximately 90 waste disposal plants for an overall capacity of over 7 million tonnes.

## The "balanced" scorecard of the Hera Group

The Balanced Scorecard approach enables us to assign "balanced" objectives to our management team. "Balanced" objectives means objectives distributed over four areas: development, quality and corporate social responsibility, organisational integration, efficiency upgrading.

The Balanced Scorecard approach provides a methodology pinpointing strategy which it translates into day-to-day actions and objectives on an organisation-wide basis. The innovation of this approach consists in considering the achievement of strategic objectives of social and environmental sustainability (such as, for example, the involvement of stakeholders, the increased quality of services to customers, the professional development of employees and attention to environmental impact) as a

condition for the achievement of the economic and financial objectives over the medium and long term.

#### What is the balanced scorecard?

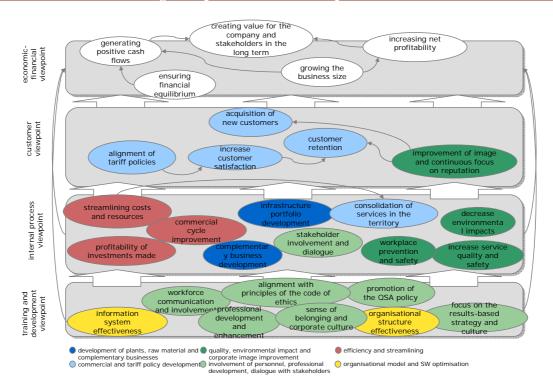
The balanced scorecard is a strategic control system (which can be linked to an employee incentive system), that is based on the connection between strategy and the day to day running of the company. It was devised in the early 1990's by the American academics, R. Kaplan and D. Norton. It has generated an immense following among leading corporations in the USA and is now being taken up by major European players.

Each year, the strategic map, updated based on the contents of the business plant, provides a summary of the strategic objectives of the Group and its commitments to stakeholders set forth in the Sustainability Report.

To achieve the 27 strategic objectives for the purpose of increasing the company's long-term value, 37 priority projects were selected during the 2011 budgeting process. These were assigned to members of the Executive Committee. Of these projects 3 fell within the strategic macro-area of "Involvement of personnel, professional development, dialogue with stakeholders," 10 within the strategic macro-area of "Optimisation of organisational model and software," 4 within "Commercial and tariff policy development, 6 within "Improvement of quality, environmental impact and company image", 5 within "Development of plants, raw materials and complementary business activities," and, lastly, 9 projects within "Efficiency and rationalisation".

The 2012-2015 strategic map, updated in September 2011 on the basis of the 2011-2015 Business Plan approved in July 2011, led to the addition of a new strategic objective within planned internal processes. This objective is "Workplace prevention and safety", which confirms and highlights the Group's commitment to employees in this area as well. This change in the strategic map reflects the Group's desire, incorporated within the new Business Plan, to increase integration between the economic and the corporate social responsibility areas.

## Strategic map of the Hera Group 2012-2015



All of the projects planned within the 2011 balanced scorecard system were assigned to a manager and inserted into the bonus system for Group managers and middle managers.

Each project was defined, identifying:

- the process and result indicators with targets in line with the budget of the Group, as well as the corporate departments required for their achievement;
- the key action plan for achievement of the project objectives in terms of time and cost.

The objective projects identified were monitored by a on a quarterly basis by the Hera S.p.A. Executive Committee and in the individual Budget Units.

The definition of objective projects and the quarterly monitoring system of the project elements are a significant strategic management instrument that ensures:

- integrations of the various perspectives for the evaluation of corporate performance, in addition to traditional economic and financial measurements;
- integration of the plan objectives into management processes;
- implementation of a continuous improvement process for strategic objectives and the relative projects and indicators;
- highlighting and analysis of situations that are critical for the achievement of the objectives that were set and the definition of speedy corrective actions.

In 2011, the perimeter of the Group's consolidated companies which use the balanced scorecard system increased. Specifically, beginning in 2011, this instrument was also applied to the managers and middle managers of Acantho.

The strategic objectives which have the greatest impact on sustainability are:

## • Reduction of environmental impacts.

Minimising the direct and indirect environmental impact of corporate activities to safeguard the natural environment on behalf of future generations. Reducing the use of environmental resources by doubling traditional renewable energy production by 2015 (waste-to-energy, biomass stations, biogas from landfills and anaerobic digestion) and by increasing production from similar renewable sources by 70% (by developing industrial co-generation). Further decreasing the disposal of urban waste in landfills (18% in 2015), developing separate waste collection (60% in 2015, with an increase of over 40% in separate waste collection per capita) and strengthening plants owned to recover material from dry fractions and to produce compost and energy. Progressing with initiatives of efficient energy consumption and containment of water network losses. Progressing with the plan to modernise the Group's wastewater treatment plants, in compliance with investments forecast in the area plans.

## • Increasing quality and safety.

Investing to improve the quality of the service and the relations with customers to acquire a competitive advantage, also in calls for tenders for the assignment of regulated services. Further improve compliance with specific commercial quality standards for gas and electricity services, and the standards set forth in the Service Charters for the water service and district heating (98.5% since 2012). Guaranteeing average call centre waiting times of 90 seconds for residential customers and 60 seconds for business customers and average branch waiting times of 14 minutes for residential customers and 4 minutes for business customers. Improving compliance with the AEEG (Italian Authority for Electricity and Natural Gas) standard with respect to claim response times. Guaranteeing gas service safety by continuing to increase the gap between Hera service levels and regulatory requirements.

## • Workplace prevention and safety.

Preventing and reducing occupational health and safety risks through the implementation of management systems, training, the involvement of and raising awareness amongst all workers concerning workplace safety objectives and goals. Continuing occupational safety projects which have already been undertaken with the goal of further reducing accident indices as set forth in the plan.

## • Involvement and dialogue with stakeholders.

Promoting Hera's contributions to economic and social development for the territory and for stakeholders, including through specific consultation activities and dialogue with stakeholders. Further consolidating and promoting the model of a socially responsible business capable of reaching a sustainable balance of the interest of various stakeholders, in order to improve competitiveness over the long term and the creation of shared value. Further developing stakeholder involvement and dialogue initiatives, ensuring transparent communication concerning company decisions, which is able to distinguish the Group and make it competitive.

#### • Communication and workforce involvement.

Implementing systematic instruments and procedures for dialogue with the workforce and adopting the consequent corrective actions (biennial internal climate surveys, downward communication, focus groups, etc.). Further improve the internal communication tools. Share strategies and objectives during annual company-wide meetings. Reaching an internal climate index of 60 and maintaining that level as a flat curve for all qualifications.

#### • Career advancement and efficient use of skills and know-how.

Strengthening the institutional and managerial training model and making learning processes more efficient to support technological and organisational innovation processes. In line with the leadership model, promoting the acquisition of managerial skills necessary to be ready for the new competitive context. Consolidating the "Scuola dei Mestieri", and identifying and promoting the Communities of practice. Continuing with the graduates Project and provide continuity in the definition of individual development paths towards roles of responsibility for high-potential resources. Increasingly make the Group's approach to optimizing diversity and respect for equal opportunities a concrete reality.

## • Alignment with Code of Ethics principles.

Ensuring the constant diffusion of the company Charter of Values and Code of Ethics. Monitoring compliance through the full implementation of the activation system defined by the Board of Directors.

## • Sense of belonging and corporate culture.

Disseminating corporate values and culture with the aim of increasing the sense of belonging of the entire workforce. Ensuring dissemination of the contents of the Charter of Values and the Code of Ethics (including its implementation system) after changes in the scope (acquisitions, integrations, etc.). Promoting and disseminating an integrated leadership model with the performance assessment system which favours alignment between the corporate behaviours and culture.

## • Promotion of the Quality, Safety and Environmental Policy.

Promoting the development within the Group of an integrated and certified management system for quality, safety and the environment, disseminating a culture of respect for and enactment of QSE policy commitments. Continuing the programme to extend the ISO/OHSAS/EMAS certifications/registrations within the Hera Group in order to increase the company's competitive position.

The commitments to stakeholders listed in this report are contained in the Hera Balanced Scorecard. This is to provide guarantees of consistency and coherence among the various instruments used for management and achievement of the Group strategy (Business plan, Sustainability Report, management reporting, bonus system).

## Hera still on the podium for online social responsibility

Hera has been confirmed one of the top in the country for social responsibility communication online. This recognition has been awarded by the prestigious ranking drawn up by Lundquist and published in *il Sole 24 Ore*, which monitors the commitment of the 50 largest listed Italian companies to communicating social performance through their institutional websites. Hera came in 3rd place, behind Telecom and Fiat, with 79 points out of 100, compared to a very low national average of 35.4. Large players such as Terna and Unicredit (74.5 points) and Enel (74 points) came in after Hera. Particular appreciation was shown for the chat with stakeholders on the Sustainability report and the development of multimedia content within the website's CSR section.

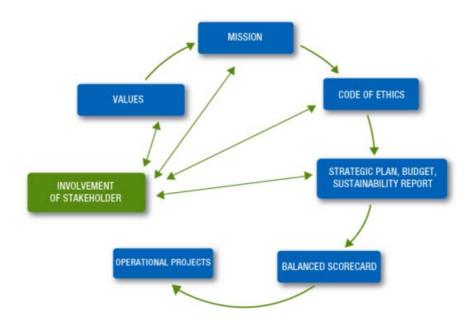
## **Corporate Social Responsibility within Hera**

Hera acts to develop and promote corporate policies with a view to adopting a corporate model that is capable of meeting the needs of the various stakeholders in a balanced manner. Hera has published the Sustainability report since its establishment, and added Corporate Social Responsibility to its strategy, as Hera considers CSR a valid instrument for increasing competitiveness and a key element in reaching sustainable development.

The Mission and Charter of Values expressed in the Code of Ethics dictate the guidelines for corporate conduct and underlie each corporate action and relationship. A shared Mission, Charter of Values and Conduct established in the Code of Ethics is the strategic and cultural framework in which the Business Plan takes shape, results are reported in a transparent way through the Sustainability Report, and economic planning is carried out annually. The Balanced Scorecard system makes it possible to differentiate the corporate strategy and social responsibility policies into specific operational projects managed by managers and middle managers and periodically monitored. These projects are an integral part of the management bonus system.

This virtuous cycle of social responsibility within Hera is characterised by numerous initiatives of stakeholder involvement that allow for the examination of legitimate claims and their opportune insertion as part of the corporate policies and the relative implementation instruments.

## From strategy to daily management: a virtuous cycle



## **Key Performance Indicators**

Key Performance Indicators	2005	2006	2007	2008	2009	2010	2011
Economic Responsibility	2000	2000			2007		2011
Value added (in millions of €)	722.1	802.5	817.1	923.8	977.4	1,010.4	1,042.6
Total investments (in millions of €)	346.9	504.8	471.8	429.7	429.3	353.9	324.9
ROI (Operating Income/Net Capital Employed)	8.8%	8.6%	7.4%	8.9%	8.1%	8.5%	8.7%
EBITDA per open ended contract employee (thousands of €)	65.4	68.5	74.2	82.7	87.5	93.6	99.4
Total return for shareholders since listing (%)	94.2%	184.6%	171.8%	53.0%	70.0%	72.1%	42.3%
Social Responsibility	71.270	101.070	171.070	33.070	70.070	72.170	12.570
Open-ended contract employees (average annual % of total							
workforce)	95.5%	93.2%	92.7%	93.7%	95.0%	95.8%	96.2%
Hours of training per capita	18.5	20.1	24.3	33.2	23.0	23.0	28.1
Workforce attending at least one training course (%)	82.2%	92.5%	92.1%	97.6%	93.4%	96.0%	95.6%
Accident frequency index (number of accidents/hours worked							
x 1,000,000)	50.1	47.5	42.4	37.6	32.6	29.6	23.4
Internal climate index (score 0-100)	50	-	53	1	58	-	64
Index of customer satisfaction for residential customers (score	67	67	65	67	69	69	70
0-100)	07	07	03	07	09	09	70
Compliance with AEEG and Service Charter quality							
standards (gas, electricity, integrated water service, district	94.7%*	94.6%	94.8%	95.8%	97.5%	98.6%	98.7%
heating)							
Emergency gas services: percentage of calls with intervention	94.7%	96.3%	96.8%	96.5%	96.8%	97.8%	98.9%
within 60 minutes	74.770	70.570	70.070	70.570	70.070	77.070	70.770
Average call centre response time for residential customers	70.2	34.5	46.2	66.1	33.2	33.8	37.4
(seconds)							
Average branch operator waiting time (minutes)	26.9	23.7	20.7	19.3	14.6	14.5	10.5
Value of supplies from local suppliers (% of total)	-	-	-	66%	68%	64%	65%
Value of supplies from ISO 9001 certified suppliers (% of	_	_	_	72%	77%	78%	79%
total)							
No. environmental education programme students	33,505	37,622	36,014	45,617	39,901	41,306	52,017
Environmental responsibility	T	ı	T		ı	1	ı
Portion of energy produced from renewable sources (incl.	25.2%	27.6%	27.3%	32.0%	27.6%	25.8%	30.0%
waste-to-energy at 51%)		_,,,,,					
Portion of energy produced from renewable sources (incl.	50.8%	51.2%	51.1%	54.0%	63.1%	67.8%	72.8%
waste-to-energy at 51%) and similar				,	001111	0	, =, 0, 1
Waste-to-energy plant emission levels vs legal limits (real	22.4%	21.2%	19.3%	17.1%	13.4%	13.0%	12.0%
concentrations/legal limits: best value <100%)							
Quality of treated water vs legal limits (real	-	_	_	_	35.5%	36.1%	38.3%
concentrations/legal limits: best value <100%)							
Compliance with Kyoto Protocol (real emissions/assigned	98%	86%	64%	70%	89%	57%	56%
emissions)							
Non-invoiced water (physical and administrative losses from	-	8,48	8.33	8.00	7.87	7.99	_
the civil aqueduct): cm/km of network/day	20.00/						50.50/
Separated waste collection	28.9%	31.2%	36.0%	42.0%	44.8%	47.8%	50.5%
Kilos of separate waste collection per capita	199	217	250	297	310	340	347
Vehicles using low environmental impact fuels.	9.2%	13.7%	14.0%	15.8%	17.6%	18.4%	19.2%
(Methane, LPG, Electric powered) (% of Total)							
Portion of urban waste collected for disposal via landfill (%	-	37.0%	37.3%	36.0%	30.1%	25.0%	23.1%
total collected solid waste)							

<sup>\*</sup> Gas service.

## The instruments of governance

## **Corporate governance**

Hera is a multi-utility company with public sector majority shareholders and a markedly diversified shareholder base. Regarding Corporate Governance, the Group adopted statutory procedures, with specific attention to the implementation of the principles contained in the Code of Conduct prepared by Borsa Italiana.

The main governance bodies of Hera are the Board of Directors, the Executive Committee, Board of Statutory Auditors, the internal committees and the Shareholders' Meeting. The Board of Directors is supported in its duties by 2 committees: the Remuneration Committee and the Internal Control Committee. The Board of Directors has also established a Supervisory Body pursuant to Legislative Decree no. 231/2001, as well as an Ethics Committee to monitor the dissemination and implementation of the principles in Hera Group's Code of Ethics.

#### **The Board of Directors**

The appointments mechanism for the Board of Directors, comprising 18 members, is specified in article 17 of the Articles of Association which provides that the election of the members of the Board will be based on lists. Specifically, the Articles of Association provide that the 14 members of the Board of Directors be selected from a majority list while the remaining 4 members be selected from a minority list. The local authorities holding shares have entered into a Voting Trust and Share Transfer Rules Agreement which provides clauses on the method of forming the majority list, and there is also another consultation agreement signed by 4 minority shareholders for the appointment of members of the Board of Directors.

The articles of association provide that the Board shall meet at least once each quarter or whenever the chairman considers it necessary or a meeting is requested by at least one third of its members or the Board of Statutory Auditors; it furthermore provides that the Board be vested with broad and unrestricted powers for the ordinary and extraordinary management of the company. It is empowered to carry out all such actions as it deems necessary for and conducive to achieving the company purpose except those placed explicitly, by law or the Articles of Association, under the responsibility of the Shareholders' Meeting.

The Board of Directors met 11 times in 2011.

Board of Directors				
Name and Surname	Office	Position	Appointed by	
Tomaso Tommasi di Vignano	Chairman	Executive Director	Shareholders' Meeting from lists presented by the majority shareholders	
Maurizio Chiarini	Chief Executive Officer	Executive Director	Shareholders' Meeting from lists presented by the majority shareholders	
Giorgio Razzoli	Vice Chairman	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	

Board of Directors				
Name and Surname	Office	Position	Appointed by	
Mara Bernardini	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Filippo Brandolini	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Luigi Castagna	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Valeriano Fantini	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Marco Cammelli	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the minority shareholders	
Pier Giuseppe Dolcini	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the minority shareholders	
Fabio Giuliani	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Mauro Roda	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Enrico Giovannetti	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the minority shareholders	
Nicodemo Montanari	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Roberto Sacchetti	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Rossella Saoncella	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Bruno Tani	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the minority shareholders	
Luca Mandrioli	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	
Giancarlo Tonelli	Director	Non-executive independent director	Shareholders' Meeting from lists presented by the majority shareholders	

The Board of Directors, appointed on 29 April 2011, will remain in office until the Shareholders' Meeting for approval of the Financial Statements as at 31 December 2013.

Three directors of Hera S.p.A. are aged between 30 and 50, 15 directors are over 50 years of age.

As set forth in the Code of Conduct of Borsa Italiana, the Annual Report on Corporate Governance, included in the Statutory Financial Statements, illustrates the requisites for

non-executive, independent directors of Hera S.p.A.. The remuneration paid to directors of Hera S.p.A. is illustrated in the 2011 Financial Statements, along which that paid to statutory auditors and managers with strategic responsibilities (Managing Committee).

#### The Board of Statutory Auditors

The Board of Statutory Auditors, appointed at the Shareholders' Meeting held on 29 April 2011, will remain in office until the approval of the financial statements for 2013. The articles of association establishes that the members of the Board of Statutory Auditors are appointed on the basis of the lists submitted by shareholders in order to ensure that the minority appoints the Chairman and an alternate auditor. The remaining two permanent members and one alternate auditor are selected from a majority list. It is the corporate body that monitors correct administration, especially insofar as the adequacy of the organisational, administrative and accounting structure adopted by the directors and its operation.

#### **The Executive Committee**

The Executive Committee, appointed by the Board of Directors on 2 May 2011, in accordance with article 23.3 of the articles of association, with regard to the yearly definition of the Group's industrial plan and the proposed appointments of top level managers, the Executive Committee has a duty to express an opinion prior to their submittal to the Board of Directors; it is also expected to adopt resolutions, in relation to defined brackets of amounts, concerning contracts and agreements tied to the corporate purpose, consultancy relationships with outside professional experts, the company's membership in organisations, associations and other bodies, settlement of disputes and releases of creditor claims, acts amending or terminating contracts for credit lines and loans, and stipulation, amendment and termination of investment contracts.

The Executive Committee is composed of the Chairman, Vice Chairman and Managing Director of Hera S.p.A. It met five times in 2011.

#### **The Remuneration Committee**

The Remuneration Committee was appointed by the Board of Directors on 2 May 2011. The task of this committee is to make proposals to the Board of Directors with regard to remuneration of the Chairman, the Chief Executive Officer, and directors who cover specific roles, as well as to propose the general criteria to be adopted with regard to remuneration of senior managers and middle managers. The Committee met 3 times in 2011.

The Committee is made up of four non-executive independent directors, and upon invitation by the Committee chairman, the Chief Executive Officer and the Chairman of the Board of Directors may participate in its meetings.

#### **The Internal Control Committee**

The function of the Internal Control Committee, which was appointed by the Board of Directors on 2 May 2011, is to consult and propose. It is composed of four independent, non-executive directors. Its task is to assess the reliability of the internal control system to ensure the efficiency of corporate operations, reliability with regard to information of a financial nature, compliance with the law and with regulations, and protection of corporate assets. The procedure for transactions with Related parties implemented by

the Board of Directors in December 2010 requires that the Internal Control Committee be responsible for guaranteeing the substantial correctness of operations with related parties by issuing a specific opinion.

Taking part in its meetings are the Chairman of the Board of Statutory Auditors or another Auditor designated by the said Chairman, as well as, when expressly requested by the committee Chairman, the Chief Executive Officer and the Chairman of the Board of Directors.

The Committee for Internal Control met 7 times in 2011.

#### The Ethics Committee

Appointed by the Board of Directors of Hera S.p.A. on 14 May 2008, it has the task of monitoring the dissemination and implementation of the Code of Ethics. It receives the reports on violations of the Code and assesses whether to begin proceedings.

It includes the Hera S.p.A. Vice Chairman, the Corporate Social Responsibility Director and an external member.

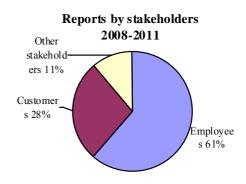
On 25 January 2012, the Ethics Committee submitted to the Hera S.p.A. Board of Directors the annual report set forth by art. 71 of the Code of Ethics on activities carried out and reporting received during 2011.

The Ethics Committee met 9 times in 2011.

## **Ethics Committee activities in 2011**

The Ethics Committee received 15 reports in 2011: 11 from employees and 4 from customers. Therefore, reports received by the body since its establishment in 2008 increased to 54, 61% if which were received from employees.

The 11 reports from employees especially regarded personnel development and hierarchical relationship management. The 4 reports from customers regarded response times. The Committee carried out 6 interventions as a result of the reports, one of which was based on a report which called the Committee's attention to the need to make a structural change to office access, which is not required by law, in order to meet the needs of a disabled employee. In the other cases, the Committee clarified and interpreted the issues which were brought up.



On the basis of specific reports (and a case which gained a certain relevance in the press), the Committee went into detail with Hera Comm on the practices enacted to prevent unrequested Energy contracts (monitored by AEEG) and suggested that these be suitably highlighted in this Sustainability report (please see the "Customers" section).

## **Supervisory Body 231**

The task of the Supervisory Body 231 is to supervise and control compliance with, and the functioning and effectiveness of, the Organisational Model for the prevention of crimes which may be linked to administrative liabilities of the Group companies, according to the terms of Legislative Decree no. 231/2001.

This body is an independent body appointed by the Boards of Directors of the Group companies participating in "Progetto 231". The Board reports to each Board of Directors on matters of concern as per Legislative Decree no. 231/2001. It avails itself of the Internal Auditing Department for purposes of control, analysis and other duties undertaken.

The supervisory body includes the Internal Audit Director, the Legal and Corporate Affairs Director and one external member.

## The Organisation

The Hera model is different from other multi-utilities because it has achieved business and operational integration founded on a Holding which makes use of Central Divisions for set-up, support and control, which guarantee an integrated Group perspective and favours the exploitation of synergies. The holding also has General Managements and Central Sectors and Technical Coordination structures which carry out a management and coordination function for the businesses managed.

Within the Operations General Management, the detailed organisation of the Operating Sectors Department was changed. Those changes (effectively operating as of 1 December 2011) aim to guarantee additional focus on business processes, with a more effective separation between guidance and operating activities and the identification of unique references for each area of activities.

Regarding the governance and support processes within the Central Divisions, the search for the optimum balance between process governance and orientation toward the internal customer is being further reinforced, along with actions aimed at seeking additional levels of efficiency linked to process integration. The project to adapt information systems following the transformation of the Territorial Operative Companies into Operating Structures has been definitively completed.

The analysis and optimisation of processes has continued within Administration, Finance and Control, also by extensively applying the Lean Organisation methodology, which takes a "lean" approach to work, based on company organisation and management "on flows" and "without waste", particularly for some administrative and accounting and credit management processes.

In the Development and Market Department, particularly of Hera Comm, some organisational changes were made (with operational effects as of 1 January 2012) regarding the revision of the detailed organisation of Marketing and Indirect Sales, aimed at guaranteeing more focus on analyses which support commercial development, on the identification of market opportunities and on supporting the line units in working toward assigned commercial objectives.

During the second half of 2011, the activities for approving special waste within Herambiente S.p.A. were transferred from the Market Department to the Approvals area of the Operating Services Department in order to guarantee greater focusing of the activities. Finally, also in the second half of 2011, the organisational change began (with operating effects as of 1 January 2012) regarding the transfer of the Industrial

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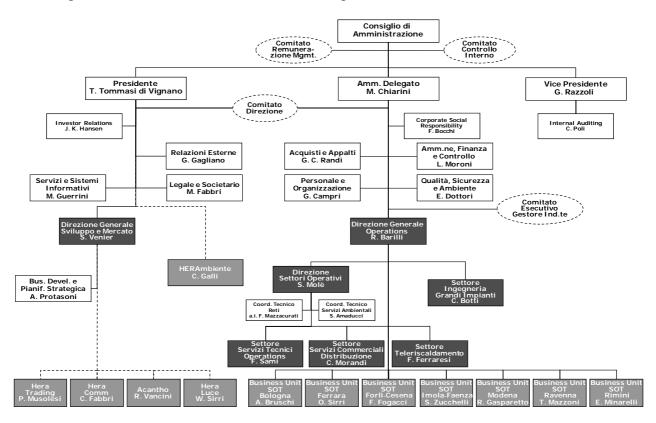
<sup>&</sup>lt;sup>1</sup> These companies are: Hera S.p.A., Acantho, Akron, Asa, Enomondo, Eris, Famula On-line, FEA, Hera Comm, Hera Luce, Hera Trading, Herambiente, Medea, Nuova Geovis, Romagna Compost, Sinergia, Sotris, and Uniflotte (91% of the Group's open-ended contract employees work in these companies).

Waste Plants line from the Market Department to the Production Department, and the establishment of Small Business Sales and Business Sales offices within the Market Department, in order to guarantee more focus on plant operations management processes and commercial processes.

Processes related to regional back-office activities, also those supporting the central coordination structures in operations and specialist management, were consolidated in the individual Territorial Operating Structure Business Units.

Finally, the process of fluid remote-control centralisation was completed as scheduled. Three committees have been set up for purposes of corporate management:

- Managing Committee: responsible for analysing and obtaining group-wide consensus on policies, strategies and operational planning decisions, while fostering integration between the various functions;
- Executive Committee: meets every three months to monitor management trends and the progress of Balanced Scorecard projects;
- Coordination Committee of Heads of the Territorial Operating Structures: monitors progress with respect to locally managed services, while ensuring alignment of the activities of the various companies.



Since the end of 2009, for the promotion and development of strong local roots each TOS has used a Territory Committee composed of members representing the local area the Committee covers (including the Chairman), who will be joined by the Director of the local TOS Business Unit. The Committee periodically focuses on some key themes such as monitoring customer satisfaction and the quality and sustainability of services offered. The Committee is also in charge of supporting the top management of the Group in its dealings with public institutions and other local stakeholders.

## **Governing Corporate Social Responsibility**

## The Corporate Social Responsibility Department

This unit was established by the Board of Directors of Hera S.p.A. in May 2005 and reports to the Chief Executive Officer. The CSR Organisational Unit, which from 2010 is now a Department, ensures that the social responsibility principles are an integral part of corporate planning and management. The CSR Department is in charge of defining and proposing corporate guidelines concerning corporate social responsibility, reporting on sustainability, ensuring the continued development of the integrated balanced scorecard system with sustainability strategies, proposing and managing the execution of social responsibility projects. Since the end of 2010, the Department has included the Balanced Scorecard System Management, Sustainability Reporting and CSR Projects offices.

## Hera invests in research on social responsibility

At the end of 2010, the Department of Economic Sciences at the University of Bologna assigned a research fellowship, financed by Hera, as part of the "Corporate social responsibility and market competition" project. The project's goal is to apply analytic economic tools to the study of companies which adopt social responsibility policies.

## **The Internal Auditing Department**

In 2003, the Internal Auditing function of Hera S.p.A. (Department since March 2010) was instituted, according to the provisions of the Code of Conduct for Listed Companies prepared by Borsa Italiana. Since 2006, the Internal Auditing Department has reported directly to the Vice Chairman of the Hera S.p.A. Board of Directors, thereby ensuring its independence from other operational structures.

In 2011, analyses took place to perfect and adapt, also formally, the Internal Auditing Department's Mandate and Operational Manual.

Under the supervision of the Internal Control Committee, the Internal Auditing Department evaluates corporate risks, delineates and executes the long-term audit plan and implementation, executes the related specific audits, and provides internal consulting about risk management.

The Internal Auditing Manager has the responsibility for Internal Control, in compliance with the provisions of the Code of Conduct for Listed Companies prepared by Borsa Italiana S.p.A.

Audits may regard infrastructure, activities, processes and information of Hera S.p.A. and its subsidiaries. In 2011, the total tasks carried out resulted in 48 audit reports. For the purpose of Legislative Decree no. 231/2001, 666 information flows were examined.

#### The organisational model for corporate crime prevention

Legislative Decree no. 231/2001 introduced a regime of administrative liability into the Italian legal structure. These measures are applied to entities which commit crimes in their own interest or to their own advantage. These crimes may be committed by natural persons acting as representatives, directors or managers on behalf of the entities, or by natural persons acting under the supervision of such persons or subjected to supervision on their part.

The Board of Directors of Hera S.p.A. and the main subsidiaries of the Group adopted an Organisation, Management and Control model (called "Model 231") to ensure conditions of correctness and transparency in conducting business and company activities.

Following the mapping of "sensitive" company activities, at risk of the offences included in the Decree, the Group companies defined specific protocols to be followed in carrying out specific activities, and made the consequent information flows available on a periodic basis. These protocols are circulated to the entire workforce through the corporate intranet. Their application is monitored during the audit phase. No cases of corruption have arisen that result in advantages being gained by the Group, and thus, defined as significant as per "Model 231".

In 2011, the Hera S.p.A. Board of Directors approved the new "Selling Activities" and "Behavioural and operations management procedures with a view to environmental protection" protocols and the "Management of Relations with Shareholders, Statutory Auditors and Independent Auditors" protocol was revised.

The Internal Audit Department ensures assistance to various corporate functions in drawing up and implementing corrective actions in relation to lacks identified during audits.

The Organisational Model of the Hera Group includes the principles of conduct formalised in the Code of Ethics.

In the course of 2011, the Internal Auditing Department updated the disclosure version of the Hera Group Model 231, after which training was held, even for top management. The new version was widely distributed by updating the dedicated page on the corporate intranet with the information resulting from regulatory developments and recent case law analyses.

#### The Code of Ethics

The Code of Ethics lays down the commitments and ethical responsibilities to be met as part of all activities undertaken by the managers, the workforce and collaborators of all group companies for the achievement of corporate objectives. Hera's Code of Ethics aims to provide guidance for group management according to the principles of compliance with the law, a fair and correct approach to professional activities, quality and economic efficiency with respect to relations inside and outside the group, so that conduct may be of unequivocally conducive to meeting the needs of stakeholders and to consolidation of a positive corporate reputation.

The supply contracts drawn up by group companies include termination clauses linked to the failure of suppliers to comply with the principles of the Code of Ethics. Starting from 2006, supplier qualification is subject to acceptance of the Code of Ethics.

The Code of Ethics updated in the second half of 2010 was approved at the meeting of the Hera S.p.A. Board of Directors on 26 January 2011. Throughout 2011 and in the first quarter of 2012, the updated Code of Ethics was approved by all Group subsidiaries.

Employees were involved in updating the document, also through focus groups and interviews with some directors. The main revisions regarded the sections "Relations with customers", "Relations with employees and associates" and "Relations with suppliers", and a total of 24 articles were updated. Amongst other items, the concept of collaboration amongst employees was highlighted and the value of the behavioural examples of all, especially of managers, was reinforced.

#### Risk analysis

Risk factors and critical points are identified and weighed through a process of risk assessment of the Group's business segments, and the infrastructure processes, in order to update and define the three-year Internal Audit Plan which provides a breakdown based on level of risk for each segment to be verified. Internal Audit activities are focused on the segments with the highest risk levels. The resulting Audit Plan, following receipt of an opinion by the Internal Control Committee, is approved by the Board of Directors of Hera S.p.A.

Regarding specific risks related to the topics included within the scope of Legislative Decree no. 231/2001, the Supervisory Body defines an Audit Plan based on the risk assessments, any extension to companies which were previously excluded from the Group's Project 231, coverage of new processes, regulatory developments and the extension of the scope of activities of the companies.

## Risk management

In January 2004, Hera created the Risk Management & Control department within its organisation, in order to optimise the company risk profile, adopt pro-active behaviours in relation to pure corporate risk, minimising threats and taking advantage of opportunities, in order to ensure increasingly efficient protection of human, material and intangible business assets, and contribute to the growth of corporate value.

Risk Management processes are applied in a continuous process during typical phases, such as awareness of the risk, identification of danger, risk analysis, risk management and treatment, and the control and auditing of the Risk Management policies carried out.

To pursue corporate objectives, both in terms of wealth preservation and growth of value, the Hera group integrates synergy actions offered by two main risk management tools: an insurance coverage program provided by leading international insurance companies and the implementation of a strategy to eliminate or reduce risks through specific and effective intervention programs.

## The Quality, Safety and Environmental Management System

The Group views management systems as an essential governance tool.

The implementation of these systems allows for Hera to improve:

- measurement and problem analysis ability and definition of corrective actions on objective bases of priority and criticality, through a systematic approach to non-compliances;
- cross-functional coordination, through the contributions of the Quality, Safety and Environment structures;
- definition of training plans and skills growth, through systematic analysis of criticalities and necessary competencies;
- input collection and definition to complete investment plans;
- internal benchmarking and sharing of problems, through the implementation of audit and control activities (both internal and external);
- implementation of Group guidelines, procedures and operating instructions.
- the control of regulations applicable to its activities.

The results achieved in 2011 include:

- the first maintenance of Hera S.p.A.'s "integrated" quality, safety and environmental management system with excellent results, with a resulting optimisation of internal quality, safety and environment processes and third-party auditing procedures;
- the definitive awarding of the Emas registration for the Casalegno cogeneration plant in Imola, the prestigious result of, *inter alia*, recognition at both the domestic level by the Commitee for Ecolabel and Ecoaudit and the European level when the company participated in the European Emas Award 2011;
- the awarding of the ISO 14001 certification for sampling and analysis activities carried out at the Group's laboratories;
- the awarding, with excellent results, of the ISO 9001 certification to the company Famula On-Line;
- the awarding of an extension to the ISO 9001 certification to the energy services of Hera Comm, already ISO 9001 certified for sales services;
- on the safety front, the OHSAS 18001 certification projects for Herambiente, Uniflotte, Frullo Energia Ambiente and Akron concluded successfully.

In 2011, commitment to internal inspection controls, which are fundamental for the Quality, Safety and Environment Department, intensified. In 2011, 269 internal inspection controls were carried out and the process to reorganise the Quality, Safety and Environment Central Department, with the aim of strengthening internal resource specialisations and favouring synergies on sector technical aspects, was completed.

Furthermore, with greater recourse to outsourcing, attention paid to control over supplier services has increased, particularly in relation to health and safety. Additional training for company contacts was organised, together with the Procurement and Tender Contracts Department, in order to further improve the process for monitoring supplier services. By December 2011, approximately 400 people had participated in 1,252 training hours related to that activity.

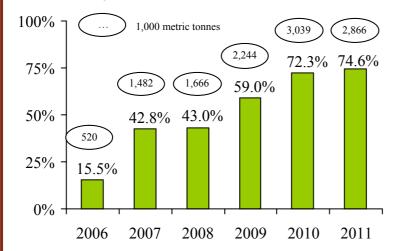
In 2012, the ISO 14001 certification process is expected to begin for the activities carried out by the Large Plant Engineering Department. Romagna Compost is expected to begin the ISO 9001 and ISO 14001 certification process.

## Hera's commitment to quality, safety and environmental certifications

Quality management systems establish the requirements necessary to improve corporate processes within an organisation in order to increase the satisfaction of final customers, who receive the end benefits of Hera's services. The distribution of the ISO 9001 management systems in the Hera Group companies has reached 97% of open-ended contract workers. The distribution of ISO 14001 management systems, on the other hand, has reached 86% of Group employees, while the distribution of the OHSAS 18001 management systems has reached 85% (compared to 73% in 2010). 94% of the total waste disposed of in Group plants was disposed of in ISO 14001 certified disposal plants.

In 2011, waste disposed of in plants with EMAS registration amounted to 63% of the total waste treated in the Group's 44 facilities. This percentage rises to 75% if the 8 plants for which the validation from the external certification body has been received and for which the investigation for registration is still underway at the Ecolabel-Ecoaudit Committee are also counted.

Waste disposed of in plants with EMAS registration (a percentage of the total waste disposed of in Group plants and the total waste disposed of in thousands of metric tonnes)



In 2011, waste disposed of in plants with EMAS registration amounted to 2.8 million metric tonnes of waste or 75% of the total waste treated in Group plants. The urban waste disposed of in plants with EMAS registration amounted to 1.1 million metric tonnes or 76% of the urban waste treated in Group facilities.

In 2011, commitment continued to be focused on the progressive implementation of EMAS registrations for the Herambiente waste treatment sites, as set forth in the EMAS project. The project, which received the European EMAS Award Italy in 2005 as it was considered to be one of the most interesting in Europe, was brought to the attention of the Ecolabel and Ecoaudit Committee - EMAS and ISPRA section, during a meeting held in Rome in November 2011.

The EMAS project excludes plants which are no longer active, such as decommissioned landfills, from the registration process, since, in light of the application of environmental standards which are already operative, it is difficult to pursue the continuous improvement of the environmental performance of these plants. In order to inform all stakeholders of how the landfills are maintained when they are no longer operating, a description of the procedures for running and controlling the environmental impacts of these plants will be kept in the general part of the Environmental Declarations.

Since the EMAS project began, 19 plant engineering sites, corresponding to 37 plants, have been registered. Another 3 sites (with 8 plants) are awaiting approval from the Committee in charge of issuing EMAS registrations: these are the Zocca (MO) landfill, the "Area 2" site in Modena and the transfer service in Stradelli Guelfi (BO), whose environmental declarations were successfully approved by the external certification body in June 2011.

During 2011, the four new plant engineering sites which were submitted last year obtained the EMAS registration. These plants are the composting plant in Cà Baldacci (RN), the Forlì plant engineering site (4 plants), the Civitella (FC) landfill and the Baiona Ecological Centre in Ravenna, while the Pago di Firenzuola (FI) landfill and the Voltana (RA) composting plant, already registered, are still awaiting registration.

Due to upgrading carried out on plants for which the EMAS registration was expected, in 2012 Herambiente will be dedicated to maintaining registrations obtained previously and, in addition to updating the required environmental declarations, will also renew registrations for six plant engineering sites.

The section "The environment and future generations" sets forth a list of the plants with ISO 14001 certification and EMAS registration.

# Major regulatory developments most impacting sustainability and the businesses managed

## Water and waste management

In 2011, legislative developments introduced significant new elements reorganising national and local governance of economically significant public services, such as the integrated water service and the waste management sector.

Regarding the integrated water service, Law no. 106/2011 specified that a National regulatory agency would be created, but before this could occur, a new provision was introduced in Law no. 214/2011 which suppresses the National supervisory commission on the use of water resources and the transfers the economic and non-economic regulatory functions, as well as control over the water sector, to AEEG (Italian Authority for Electricity and Natural Gas); those tasks shall be precisely defined in a prime minister's Decree (DPCM) which has not yet been issued at the reporting date.

Regionally, the organisation of the integrated water service and the urban waste management service shall be assigned to the new Emilia-Romagna regional agency, established with Regional Law no. 23 of 23 December 2011, following the required service reorganisation after the suppression of the local Water and Waste Regulatory Authorities, which was postponed many times and most recently set forth for 31 December 2011, as set forth in Decree of the President of the Council of Ministers of 25 March 2011. The pivotal principle of the new water and waste service organisation is the creation of a single area which coincides with the regional area.

The technical and operating structure of the new Agency, supervised by a director, is broken down into two levels (regional area and provincial structures) and the Agency will be governed by both a Regional Authority Council and nine Local Councils at the provincial level. The regulation also introduces specific provisions for intermediary waste treatment or final disposal plants, which are excluded from tenders for assigning waste management services if the plants are owned by private parties.

For the waste management service, Law no. 214 of 22 December 2011 introduces a specific municipal tax to cover urban and similar waste management costs, as well as for the indivisible services of Municipalities (called "TRES"), and suppresses all other types of charges for this purpose starting from 1 January 2013. The TRES implementation methods shall be defined in a governmental regulation which should be issued by 31 October 2012 (meanwhile, the regulation set forth in Presidential Decree no. 158 of 27 April 1999 shall continue to be in force).

#### Economically significant local public services

Regarding the area of economically relevant local public services, in general, Presidential Decrees no. 113/2011 and no. 116/11 implement the outcome of the popular referendum held on 12 and 13 June 2011, which repealed the principle of "adequacy of return on capital invested" (art. 154, subsection 1, Legislative Decree no.

152 of 3 April 2006), valid for the integrated water service tariff, and cancelled art. 23-bis of Decree Law no. 112/2008 (converted into Law no. 133/2008, as amended by Decree Law no. 135/2009, converted into Law 116/2009).

Regarding the repeal of the first regulation, new provisions to be implemented after the transfer of national water service tariff regulatory functions to AEEG have yet to be issued, while for the second repeal, various legislative interventions were carried out in the second half of the year. Article 4 of Law no. 148/2011 reintroduces, de facto, the principle of art. 23-bis regarding the promotion of competition in the economically relevant local public services sector, namely, the tender as the ordinary procedure for assigning services and the early termination of direct assignments according to a progression related to the assignment type, and in any case it sets forth that that regulation does not apply to the integrated water service for which the EC legislative principles remain in force, since new interventions have not been made domestically. That law was amended with Law no. 183/2011 and amendments are still underway in 2012, in particular with Decree Law no. 1 of 24 January 2012, on de-regulation.

## The "III energy package"

Of relevance to energy services is Legislative Decree no. 93 of 1 June 2011, which enacted the "III Energy Package", in particular EC directives 2009/72/EC and 2009/73/EC regarding EU regulations for domestic gas and electricity markets. Please note in particular: safety provisions in national energy procurement; the definition of "vulnerable" customers in the gas market (domestic customers, public service users, and public and private facilities which carry out a recognised assistance activity, as well as civilian and non-civilian customers with consumption of no more than 50,000 cubic metres per year) and customers under "market tariff protection conditions" in the electricity market; regulations to promote energy efficiency; regulations on competition, which concern the complete functional separation of gas transport companies; regulations confirming the principles on tenders for the assignment of the gas distribution service, in compliance with the decrees issued during the year by the Ministry of Economic Development.

In particular, it was confirmed that distribution concessions may be assigned only through area tenders (with 177 established areas).

Specifically regarding gas distribution, in addition to the aspects incorporated in Legislative Decree no. 93/2011, during 2011 four Ministry of Economic Development decrees were issued, finally providing a clear perspective on the procedures for implementing the area tenders required in the coming years.

#### Renewable and similar source incentives

On the topic of renewable source incentives, Legislative Decree no. 28 of 3 March 2011, implementing directive 2009/28/EC, has the goal of supporting the development of renewable sources to achieve the target set by the National renewable energies action plan as of 2020, by completely redefining and reordering the prior incentive schemes, which suffered from excessive regulatory sedimentation due to the continuous need to make corrections to seek a balance between development, cost, competition and the market. The decree especially defines the criteria and procedures for support mechanisms (the incentive system based on green certificates is being progressively phased out), and postpones the majority of economic aspects to the enactment of specific implementing decrees, which as of the reporting date, have not yet been issued.

The decree sets up a transitional period during which the current regulations will apply for plants which begin operations by 31 December 2012. Subsequently, the new regulation shall apply to all plants. As regards photovoltaic energy, the IV Energy account, an interministerial decree, was approved on 5 May 2011, and clarifies the incentive model in force as of 1 June 2011.

For co-generation plants, ministerial decree of 4 August 2011 updates Legislative Decree no. 20/2007, redefining the co-generation technologies, the calculation of co-generation production and the performance of the co-generation process in order to qualify co-generation. The subsequent decree of the Ministry of Economic Development of 5 September 2011 determined a new support regime for cogeneration: this incentive is based on white certificates and is recognised by the Energy Services Manager, following recognition of the qualification of cogeneration, according to the actual primary energy savings made.

The IV regulatory period concerning electricity distribution tariffs and quality In the electricity sector, amongst the regulatory news most impacting the Hera Group are the measures on electricity distribution tariffs and quality for the IV regulatory period (2012-2015). In ARG/elt resolution 199/2011, the Authority approved the new integrated texts for transport and distribution services, electricity metering and connections, respectively, which shall be in force during the next regulatory period. The main new element regards the introduction of a restriction on regulated revenues by company (organised in a similar manner to the gas distribution mechanism already in force), calculated for "capital invested" on a mixed basis (implicit for assets until 2007, at the effective historical cost for investments starting in 2008), and for "operating costs" on average national values taken from the 2010 separate financial statements. In ARG/elt resolution 198/2011, the Authority approved the new integrated text of electricity distribution and metering service quality for the 2012-2015 regulatory period. Some new introductions are particularly significant: an incentive and penalty system for continuity recoveries in which incentives are decreased for the best served areas and increased for the worst served areas; an individual continuity regulation, reserved to

medium voltage end customers, which will also include brief outages (in the past it only

referred to long outages); the activation of supply voltage monitoring.

## Dialogue with stakeholders

An industrial group with the characteristics of Hera must take into account the needs and demands of its many stakeholders.

Hera periodically surveys the satisfaction of its customers and employees. The results are used to define improvement initiatives.

## Hera's stakeholders

An industrial group with the characteristics of Hera must take into account the needs and demands (which often may be conflicting) of its many stakeholders.

Corporate Social Responsibility means considering, within company decisions, all legitimate demands of the various categories of stakeholders, balancing these demands and integrating them into company strategy.

Hera has mapped its company stakeholders. The starting point was a survey of corporate stakeholders and of current listening and dialogue activities. Various stakeholder classes were then identified and, for each, a breakdown was provided. The presence of targets of particular interest and the issues of particular significance to these targets were also identified. Then, an assessment was made of the influence that each group exerts on corporate decision-making processes and the significance with respect to corporate activities. These two aspects are assessed in the light of the decision-making power, pertaining to legal or contractual obligations, employment relations with the company and links with corporate strategies.

Mapping of the stakeholders and key issues to be targeted by involvement actions enabled us to pinpoint the stakeholders that are the most important for the company (workforce, customers, shareholders), a second group of stakeholders with interests of a broader nature however able to influence corporate decisions (financial institutions, suppliers, public administration, local communities) and a category of stakeholders whose interests are only indirectly represented (the environment and future generations).

## Main dialogue and consultation initiatives

Stakeholders	Main classes	Key issues	Main dialogue and consultation initiatives
Workforce	- Employees - Non-employee workforce - Trade unions	Stability, internal climate, training, career advancement, bonuses, remuneration, life/work balance, safety, internal communication	- Biennial internal climate survey: fourth survey carried out in 2011 (3,906 questionnaires filled in, equal to 63% of those sent) - Survey on the perceived quality of internal services: in the first months of 2011, a questionnaire was issued to a sample (around 10%) of the company population (378 questionnaires filled in, equal to 58% of those sent) - Meetings of the Chairman and Chief Executive Officer to illustrate the business plan to all staff (16 meetings held in March 2011, with all staff) - Improvement groups: the work groups launched in 2010 concluded in 2011 - "Passaparola" ("Word of mouth") project defined, for "top down" communication to employees. In the fourth quarter of 2011, the first cycle was completed, with approximately 2,000 employees participating in roughly 100 meetings Meetings to present the Sustainability Report 2010 (involving approx. 500 workers) - Application of the Group's Supplementary Collective Labour Agreement signed on 24 March 2010: LaborHERA (technical study for organisational and work quality innovation) met three times in 2011
Customers	- Residential customers - Customer bases in areas served - Business customers - Consumer groups and trade associations	Service quality, tariffs, transparency, safety, service reliability, communication and information	- Residential and business customer annual survey: approximately 3,000 interviews of residential customers, a stratified sample by local area, consumer range and service, 1,300 interviews of the various types of business customers, a stratified sample by local area and turnover  - Customer satisfaction survey for technical intervention requests (e.g., opening or moving a meter) or estimates regarding network services: 983 interviews carried out, stratified by local area and service  - Survey of the satisfaction of customers with the district heating service: 399 customer interviews conducted  - In application of the joint mediation procedure, 74 requests for mediation were received from customers in 2011  - In April 2011, the creation in the entire area of the new direct contact channel with consumers' associations (single contact person, dedicated telephone number and email) was completed. 365 cases were managed through this channel. In 2011, 16 meetings were held with the associations involved, in the seven areas in which Hera operates, to define and subsequently reanalyse the new contact channel

Stakeholders	Main classes	Key issues	Main dialogue and consultation initiatives
Shareholders	- Public shareholders - Institutional investors	Dividends, share performance, investor relations, corporate governance aligned with best practices	- Investor Relations activities: meetings with 330 investors - Participation in the Oddo Environment Forum which takes place each year in Paris; meeting with over 20 ethical investors - The yearly publication of the calendar of corporate events - Real-time publication in Italian and in English of communications such as approval and publication of financial statements, quarterly and interim reports, business plans and significant operations, on the Group's website, in the Investor Relations section - An important international road show carried out in 2011 to meet approximately 10 "SRI" investors, amongst the largest in this category in Europe -A weekly chat which allows the company to interact in real time with users - Increased participation of shareholders in the meeting held on 29 April 2011: shareholders representing 80% of the share capital participated
Financial	- Banks - Bond market	Continuity of relations, long-term solidity of equity	
Suppliers	- Suppliers of goods and services and temping agencies - Qualified suppliers - Local suppliers	Continuity of relations, qualification, bargaining conditions, payment deadlines	- Meetings with representatives from the social cooperative world working in the areas served by the Hera Group, to share the 2011 results and for procedures to optimise projects for entry into the workforce - Help desk to assist suppliers on the e-procurement platform: approximately 10,000 requests were received, and 99% were resolved in the expected times
Public Administration	- Reference local authorities: - Municipalities, provinces, regions, their associations and local chapters - Regulatory and control bodies - Universities and research institutes - State agencies	_	- Forms of structured dialogue with mayors present in each TOS

Stakeholders	Main classes	Key issues	Main dialogue and consultation initiatives
Local community	- Local groups and associations - Trade associations - Average - Residents in the vicinity of production plants - Citizens' committees	Support for initiatives, local investment, transparent communication, socially responsible corporate management	- Comitato Consultivo della Comunità Locale (residential advisory board - RAB) in Ferrara and Imola - Convention in Modena on 18 May 2011 to present the 2010 Sustainability Report: 306 participants - Conventions for the presentation of the 2010 Sustainability Report to the local stakeholders of Imola, Ravenna, Cesena, Rimini, Ferrara and Bologna: 656 participants - There is an information desk at the Modena waste-to-energy plant which is open upon appointment, every Tuesday afternoon from 4 pm to 7 pm - In 2011, 120 guided tours of the waste to energy plants have been provided, with over 2,600 visitors
Environment and future generations	- Environmental associations - Trade associations - Technicians and experts from other companies - Technicians and persons competent in environmental issues elected by the inspectorates	water withdrawal,	- Local initiatives to promote energy and water savings, the use of water from the network and separate waste collection

Hera's significant commitment to the development of stakeholder involvement initiatives is by now an internal element of the operational structure of the units handling the relations with various stakeholders.

The internal climate survey, the meetings of the Chairman and Chief Executive Officer with the workforce to present the business plan, the customer satisfaction survey, the RABs (Residential Advisory Boards), the meetings for the presentation of the Sustainability Report, and the new "top down communication" meetings are today consolidated actions which are integrated into the company's management; they are the "normal" analysis methods used to identify areas for improvement.

In the sections of this Report, the approach used and the results of the main dialogue and consultation initiatives carried out in 2011 are set forth by stakeholder category.

## Dialogue on the Sustainability Report

Hera presented the Sustainability Report 2010 to the public on 18 May 2011 in Modena: after opening with a display of the Report's main elements, Mr. Jean-Paul Fitoussi, professor at the Paris Institute of Political Studies and at Luiss in Rome, spoke about the causes, consequences and scenarios of the global financial and economic crisis which began in 2009. The discussion continued with a round table with the participation of

Group stakeholder representatives: Sergio Cofferati, Member of the European Parliament, Matteo Colaninno, Member of Parliament and Entrepreneur, Marco Frey, Professor of Business Administration at the Scuola Superiore Sant'Anna in Pisa and Chairman of the Global Compact Network in Italy, Antonio Massarutto, Professor of Public Economics at the University of Udine, and Gian Carlo Muzzarelli, Councillor for productive activities, energy plan and sustainable development for the Emilia-Romagna region. Approximately 300 people attended the meeting.

The Report was also presented at public meetings with local stakeholders. This began on 7 June in Rimini, and continued to Ravenna and Forlì, followed by Rimini and Ferrara, up to the encounter held on 30 June in Bologna. The meetings opened with presentations of the local views of the Sustainability Report.

At all the meetings, the floor was given to the stakeholder representatives, who spoke 37 times. During the round tables organised for the six meetings, a local journalist moderated a discussion amongst mayors, regional and provincial administrators, other local administrators, Arpa and Local Health Authority technicians, companies, trade and consumers' associations, trade unionists, journalists, rectors, university department deans and university professors on Hera's approach to sustainability and their demands and expectations.

Some of the topics discussed turned into requests to start or extend Group initiatives, including improving the readability of bills, a comparison of the company's results with those of other companies in the same sector, the importance of a relationship with the community, especially for the local businesses that Hera's contracts can stimulate and the demand for innovative products which can be directed to suppliers, and the contribution that social cooperation can provide to local communities, also due to the economic advantages generated by socially motivated job placement.

There were over 960 participants in the meetings which were closed by the Chief Executive Officer of Hera S.p.A., Maurizio Chiarini, who highlighted that two distinctive objectives of the Hera Group are achieved through these meetings: the growth of strong roots in the community and openness to dialogue.

#### Results and Value added

This section includes the key data on economic responsibilities of the company. In 2011, value added distributed to stakeholders amounted to Euro 1,042.6 million (+3% compared to 2010). Euro 815.1 million of this was distributed to stakeholders in local areas

### **Operating results**

#### **Consolidated Income Statement**

(in millions of €)	2010	2011
Revenues	3,666.9	4,105.7
Other operating income	210.4	210.2
Raw materials and consumables (net of changes	-2,140.5	-2,440.1
in inventories)		
Service costs	-810.7	-870.5
Other operating costs	-38.8	-39.8
Personnel costs	-361.9	-370.0
Capitalised costs	81.9	49.3
EBITDA	607.3	644.8
Amortisation, depreciation, allowances	-291.9	-310.3
EBIT	315.4	334.5
Financial charges	-109.8	-113.2
Pre-tax profit	205.6	221.2
Tax	-63.6	-94.5
Net profit for the year	142.1	126.8

Despite the presence of the persistence of a particularly unfavourable economic climate, 2011 results disclosed growth in all the main economic and quantitative indicators. The main business areas continued to disclose constant growth when compared with last year, with the exception of the waste management area, where the impact of the slowdown in production activities is most evident.

The main economic and operating results were all up with the exception of the net result; in relation to the latter, it should be recalled that 2010 had benefited from non-recurrent positive effects on taxes for Euro 25.1 million. Net of these effects, the net result would also have been up on last year.

The majority of the quantitative indicators were up: greater volumes of electricity were sold, partly thanks to the allotment of the management of protected customers for the Lombardy, Tuscany, Lazio and Abruzzo, Molise and Puglia regions, for the three-year period 2011-2013, and greater volumes of water managed. By contrast, minor volumes of gas and heat were sold and distributed, due to higher average temperatures when compared with last year, in any event offset by greater volumes brokered, and lower volumes of waste marketed:

Furthermore, the following events occurred during 2011:

- As from February 2011, the Herambiente Group consolidated the activities of Enomondo at 50%, a company which runs a 13 MWe biomass plant, in partnership with Caviro Distillerie Srl.
- In July 2011, Hera Comm Marche absorbed Sadori Gas, which currently has a customer portfolio of more than 34,000 contracts, able to generate over 47 cubic metres of gas sold a year, distributed throughout 42 Municipalities included in the provinces of Pesaro-Urbino, Ancona and L'Aquila.
- Hera Spa extended the scope of activity of the gas distribution service winning the public tender for the service in the municipality of Formignana (FE) as from 1 July 2011 and acquiring the networks in the municipalities of Pievepelago, Riolunato and Fiumalbo (Mo) as from 1 June 2011; annual volumes distributed will increase approximately 4 million cubic metres.

As already emerged from the financial statements as at 31 December 2010, the Consolidated Income Statement incorporates the application of the interpretation of accounting standard IFRIC 12 "Service Concession Arrangements" which changed the procedure for reporting company events for companies operating in industries regulated by specific concessions. In accounting terms, the effect of the application of this principle, which does not alter the results, is the representation in the income statement of the investment work carried out on assets under concession, limited to grid services. Therefore, other operating income was higher by Euro 143.6 million for 2011 and by Euro 135.2 million for 2010, capitalised costs were lower by Euro 35.5 million in 2011 and Euro 35.4 million in 2010 and operating Service costs, materials and other operating expenses were higher by Euro 108.1 million in 2011 and Euro 99.8 million in 2010.

EBITDA rose from Euro 607.3 million in 2010 to Euro 644.8 million in 2011, +6.2%; EBIT increased from Euro 315.4 million to Euro 334.5 million, + 6.1%; the pre-tax result increased 7.6%, passing from Euro 205.6 million to Euro 221.2 million; the net profit fell from Euro 142.1 million in 2010 to Euro 126.8 million in 2011, -10.8%.

Revenues rose Euro 438.8 million, +12.0%, increasing from Euro 3,666.9 million in 2010 to Euro 4,105.7 million in 2011. This was mainly due to: (i) greater volumes of electricity sold (+ 29.1%) and distributed; (ii) additional gas sales and distribution revenues, partly as a result of the increase in the prices of the raw material (gas); (iii) higher revenues from the waste management area, in particular due to additional electricity generation revenues; (iv) the additional revenues from management of the water cycle.

The increase in costs for raw materials, amounting to Euro 299.6 million, when compared with last year, was affected by the higher volumes of electricity sold and the increases in the price of the raw material (gas)

Other operating costs (Service costs were up by Euro 59.8 million and Other operating costs by Euro 1.0 million), saw a total increase of Euro 60.8 million (+7.2%); the increase is attributable to higher costs for transporting electricity and gas (representing over 75%), while the remaining balance concerns additional costs due to the application of IFRIC 12, the increase in the scope of activities and inflationary dynamics.

The increase in Personnel costs, which rose from Euro 361.9 million in 2010 to Euro 370.0 million in 2011 (+2.2%), is mainly connected to changes in contractual dynamics. The decrease in Capitalised costs, which fell from Euro 81.9 million to Euro 49.3 million, is essentially linked to minor work carried out on plants and work between Group companies, specifically for the completion of the new WTE plants.

The Group consolidated EBITDA in 2011 disclosed growth, rising from Euro 607.3 million to Euro 644.8 million (+6.2%), thanks to the satisfactory performance of the electricity sector, which rose from 9.8% to 11.4% as a percentage of the total result, and of the gas and water cycle sectors.

Amortisation, depreciation and allowances increased by 6.3%, up from Euro 291.9 million in 2010 to Euro 310.3 million in 2011. The increase was essentially due to: (i) greater allowances made to the bad debt provision, (ii) the bringing onto stream of new disposal plants whose depreciation offsets the effect of the reduction in minor quantities transferred to landfills.

EBIT for 2011 amounted to Euro 334.5 million, up 6.1% when compared with the same period in 2010.

The result of financial operations as at 31 December 2011 amounted to Euro 113.2 million compared to Euro 109.8 million as at 31 December 2010. The greater liability is due to the increase in average borrowing and the rise in the spreads registered throughout 2011. The total cost of financial operations also reflects the benefits deriving from the management of cash on hand which partly pegged the rise in borrowing rates as well as the additional profits from associated companies amounting to around Euro 0.4 million.

As a result of the above, profit before taxes increased from Euro 205.6 million in 2010 to Euro 221.2 million in 2011, up by 7,6% or Euro 15.6 million.

Taxes rose from Euro 63.6 million to Euro 94.5 million; 2010 had included non-recurrent positive effects for Euro 25.1 million, while 2011 benefited to an extent of Euro 7.6 million. Specifically, assets acquired by the parent company Hera S.p.a. due to the merger via incorporation of Agea Reti were recorded for an additional statutory value of Euro 6.4 million; this additional value, not recognised for tax purposes, was freed up in 2011 by means of the application of the substitute tax pursuant to Article 176.2 ter of the FCA, amounting to Euro 0.8 million, leading to the consequent reversal to the income statement of the deferred tax liabilities originally recorded. The transaction therefore made it possible to record a positive non-recurring balance of Euro 1.2 million in the income statement.

Furthermore, the Group carried out a realignment of the tax and statutory values relating to the goodwill, deriving from the consolidated financial statements as at 31 December 2010, pertaining to the controlling equity investments, as per Articles 23, subsections 12-15 of Decree Law no. 98/2011, by means of application of the substitute tax, totalling Euro 5.8 million and the consequent recognition of deferred tax assets, totalling Euro 12.2 million, equal to the full future IRES and IRAP tax benefit on the amount freed up. The transaction made it possible to record an additional positive non-recurring balance of Euro 6.4 million in the income statement.

In addition to the above, additional taxes were recorded following the increase in the IRES Robin surtax by 4 percentage points, as well as the increase in IRAP of 0.30% for the concessionary companies set up as a result of the 2011 measures for a total of Euro 4.6 million. The final tax rate therefore comes to 42.7%.

Net profit as at 31 December 2011 amounted to Euro 126.8 million, down 10.8% compared to Euro 142.1 million in 2010.

Net of the extraordinary effects of taxes for 2011 and 2010, the net profit would increase Euro 2.2 million, +1.9%, on last year.

#### **Balance sheet**

(in millions of €)	31-Dec-2010	31-Dec-2011
Net fixed assets	4,142.3	4,292.7
Net working capital	-29.1	-31.5
Provisions	-382.8	-394.7
Net capital employed	3,730.4	3,866.5
Shareholders' equity	1,870.2	1,879.4
Long-term debt	2,292.1	2,323.1
Net short-term position	-431.9	-336.0
Net financial position	1,860.2	1,987.1
Total sources of financing	3,730.4	3,866.5

The net capital employed in 2011 increased 3.6% from Euro 3,730.4 million to Euro 3,866.5 million as a result of the investment plan.

Net fixed assets as at 30 December 2011 amounted to Euro 4,292.7 million compared with Euro 4,142.3 million in December 2010, involving an increase of 3.6%.

Provisions at the end of 2011 amounted to Euro 394.7, up 3.1% with respect to the balance in December 2010 of Euro 382.8 million.

Net working capital remained more or less unchanged, disclosing an improvement of around Euro 2.4 million when compared with December 2010.

Shareholders' equity rose from Euro 1,870.2 million to Euro 1,879.4 million due to dividends authorised for a total of Euro 121.4 million, of which Euro 117.2 million already distributed.

#### **Operating investments (non financial)**

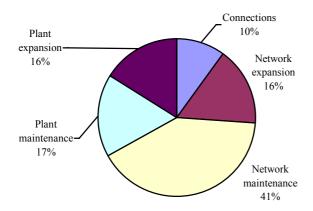
(in millions of €)	2010	2011
Gas/District Heating/Heat Management Services	48.8	52.2
Electricity/Industrial Cogeneration Services	39.0	33.8
Integrated Water Service	94.2	100.6
Waste Management Services	98.7	70.1
Other Services	13.3	14.0
Central Structure	51.8	54.2
Total	345.8	324.9

Gas service investments were higher than in the same period last year. Measures for the gas service in the area in question, regarded expansion, enhancement and upgrading of distribution networks and plant and included the start-up of the project for the mass replacement of gas meters. In the district heating service sphere, investments concerned network extension work in the areas of Bologna, Imola, Forlì-Cesena, Ferrara and Modena whereas Heat Management service investments concerned structural work on thermal plants operated by companies of the Group.

Electricity service investments mainly concerned the extension of the service and special maintenance of the plants and distribution grids in the Modena and Imola areas, along with network support services. Investments in the area were down with respect to the same period in the previous year due to the completion of the new photovoltaic plant built at the Bologna Freight Village and the final stage of the mass replacement of current meters with electronic meters, to comply with the replacement plans resolved by the AEEG. Investments include those relating to the production of energy and heat which mainly refer to the co-generation plant in Imola and those relating to industrial co-generation which regard the construction of new plants at local companies.

With regard to the Integrated Water Cycle, it saw an increase in measures on treatment plants with respect to the same period last year. Investments mainly refer to expansions, enhancements and upgrades of networks and facilities, and to regulatory compliance mostly in the treatment sewage sphere.

## Investments in the integrated water service of the Territorial Operating Structures (2011)



With regard to the seven TOS, during 2011 41% of investments concerned the extraordinary maintenance of the networks (in line with last year), while 33% concerned plant, specifically in the treatment sphere (25% in 2010). Investments for the extension of networks and connections were down, equating to 26% of the total (33% in 2010).

In the waste management service, initiatives for the maintenance and enhancement of existing facilities were up with respect to the previous year. With regard to waste-to-energy plants, initiatives mainly concerned the construction of the Rimini plant.

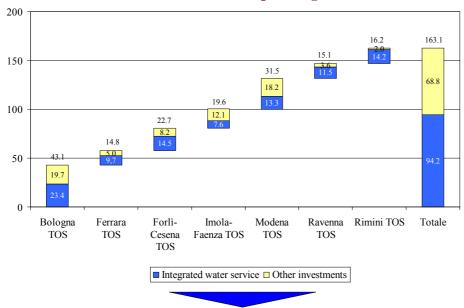
With regard to Other services, in the telecommunications sphere, a transaction was carried out for the acquisition of transmission capacity (IRU) linked to the exit of Infracom. The Public Lighting service saw investments down with respect to the same period in 2010; the Other item included investments in cemetery services inclusive of the construction of the new crematory complex.

There was an overall increase in investments within the Central Structure sphere when compared with the same period of the previous year, due to maintenance measures on the vehicle fleet and those for developing the information systems. Other investments include measures for completing the laboratories and the remote control structures.

Financial equity investments and acquisitions

(in millions of €)	2010	2011
Investments	8.1	0.0

#### **Total investments of the Territorial Operating Structures (in millions of €)**



58% of Area Company Investments concern the integrated water service

#### **Environmental costs and investments**

The measurement of the costs and the environmental investments makes it possible to quantify in economic terms the interventions carried out in order to improve the environmental sustainability of the Group and the territory in which it operates, thereby showing how much of the activity translates into environmental improvement.

Any cost or investment connected to interventions which resulted in a significant positive environmental impact was defined as an environmental expense. Taking account of the activities managed by Hera, several characteristic activities carried out by the company such as separate waste collection, the operation of composting plants or the expansion of treatment plants were also taken into consideration.

**Environmental costs and investments** 

(in millions of €)	2010	2011
Costs	239.2	245.5
Investments	147.6	126.0

With respect to the energy services, environmental costs pertain to the emergency response services for gas network safety, ordinary maintenance of the gas network, the operation of plants for the generation of energy from renewable sources, the operation of the networks and district heating plants.

For the water service, environmental costs are connected to the emergency response service, the ordinary maintenance of the aqueduct and sewage systems and to the disposal of waste water treatment and purification sludge.

For the environmental services, the activities considered were the management of separate waste connection, the operation of waste selection, separation and composting plants and the disposal of the waste produced by disposal plants. Furthermore, the fees

paid to Municipalities for the environmental compensations relating to the waste disposal plants were counted.

Lastly, the costs involved in energy savings activities, the environmental management system and for the purchase of methane fuel for the motor vehicles were considered.

In total, the operating costs connected to interventions aimed at improving environmental sustainability amounted to Euro 245.5 million in 2011 (3% more than in the previous year). The most significant increases concerned waste management services, specifically separate waste collection, and the costs for the purchase of energy certificates (mainly white certificates).

With regard to investments, in relation to energy services, the activities considered were those aimed at the extraordinary maintenance of the gas networks, the construction or upkeep of plants for the generation of electricity from renewable sources or similar sources and the management of district heating systems. The investments related to industrial cogeneration were also considered.

For the water service, the interventions aimed at reducing losses within the water systems, the extensions of the sewage network and treatment plants and the interventions for the improvement of the environmental performance of the plants themselves were counted.

For the waste management services, the activities connected to separate waste collection, e.g. investments in Equipped Drop-Off Points, the construction or upkeep of the waste selection, separation and composting plants, the reduction of atmospheric emissions from waste-to-energy plants, the generation of electricity in waste-to-energy plants were considered. Also considered were the investments for the disposal of waste produced by the company (landfill leachate collection facilities in landfills and waste disposal plants).

With regard to the central structure, investments for the purchase of methane-fuelled vehicles and of skips and "igloo" bins for separate waste collection were considered.

Total environmental investments amounted to Euro 126 million, down 15% from 2010, mainly as a result of the minor investments in the waste management area in relation to the completion of the upgrade work on the waste-to-energy plants in 2010, partly offset by the increases relating to composting plants and in the photovoltaic sector. Environmental investments accounted for 39% of non financial operating investments.

#### Allocation of value added

Value added, in this Sustainability Report, is understood as the difference between revenues and production costs not constituting corporate stakeholder remuneration. Value added is, from this angle, distinct from the value added strictly applying to accounting practices. Here, the methodology applied is that proposed in 2001 by the Gruppo di studio per il Bilancio Sociale (Sustainability Report Study Group) (GBS). With respect to the GBS methodology, rentals for use of assets owned by shareholder municipalities and sponsorship costs are considered, as they are deemed significant for stakeholders. In addition, in contrast to the proposal of the GBS, the portion of value allocated to financial institutions was calculated considering the balance of financial income and charges, as deemed a better quantification of the relationships with this type of stakeholder, as opposed to the sole figure of financial charges. With this framework,

the gross overall value added distributed is almost equal to the gross value added produced by normal operations.

There are two important reasons for using the indicator of value added. Firstly it enables quantification of the wealth generated by the company, and accounts for how this wealth was generated and how it is allocated to stakeholders; it is therefore useful for comprehending the economic impacts the company produces. Secondly, through this report it connects the Sustainability Report with the Financial Statements. In this sense, production and allocation of value added provides an instrument by means of which we can reconsider the corporate Financial Statements from the vantage point of stakeholders.

The GRI G3.1 guidelines also include among the indicators the economic value generated and distributed to stakeholders. This indicator, equating to Euro 4,100.4 million in 2011 varies from the amount of value added indicated in this paragraph mainly because it also considers the distribution of economic value to suppliers, of which the portion intended for the purchase of raw material (methane gas and electricity intended for sale) amounting to Euro 2,274.7 million.

#### **Production of value added**

(in millions of €)	2009	2010	2011
Revenues	4,201.3	3,666.9	4,105.7
Other operating income	234.7	210.4	210.2
Grants received from public institutions	-3.1	-4.2	-7.0
Use of raw materials and consumables (net of changes in inventories of	-2,777.6	-2,140.5	-2,440.1
raw materials and stock)			
Service costs	-675.5	-724.0	-789.0
Bad debt provisions	-26.4	-37.1	-49.7
Accruals to provisions for contingencies and other provisions	-25.0	-30.6	-26.9
Other operating costs	-18.7	-18.4	-16.1
Capitalised costs	63.9	81.9	49.2
Gross value added	973.5	1,004.6	1,036.3
Portion of profit (loss) pertaining to associated companies	3.9	5.9	6.3
Gross overall value added	977.4	1,010.4	1,042.6

Gross overall value added generated for stakeholders in 2011 came to Euro 1,042.6 million, an increase of Euro 32 million on the previous year (+3.2%) and of Euro 65.2 million on 2009 (+6.7%).

#### Distribution of value added to stakeholders

(in millions of €)	20	)09	20	10	20	11
Workforce	352.0	36.0%	361.9	35.8%	370.0	35.4%
Shareholders	103.1	10.6%	125.2	12.4%	122.6	11.8%
Company	206.4	21.1%	241.1	23.9%	238.1	22.8%
Financial institutions/Banks	105.0	10.7%	115.6	11.4%	119.5	11.5%
Public Administration	208.8	21.4%	164.8	16.3%	190.4	18.3%
Local community	2.1	0.2%	1.8	0.2%	2.0	0.2%
Gross overall value added	977.4	100.0%	1,010.4	100.0%	1,042.6	100.0%

The portion of value added intended for the **workforce** increased by Euro 8.1 million (+2%) with respect to 2010. Compared to the total value added produced, this portion

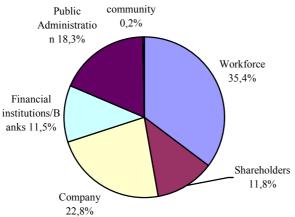
represents 35.4%, and consists of wages and salaries (including employer social security contributions and provision for employee leaving indemnities).

The portion allocated to the **shareholders** of Hera S.p.A. (stable with respect to 2010) and the minority shareholders of the subsidiaries fell by Euro 2.6 million (-2%) and is equal to 11.8% of the total. Of this portion, Euro 100.4 million was allocated as dividends distributed to Hera S.p.A. shareholders, and Euro 22.2 million was allocated as dividends for minority shareholders of the subsidiaries of Hera S.p.A. (this portion came to Euro 24.8 million in 2010).

A portion totalling 22.8% of the value added generated in 2011 was re-invested in the **company**. This portion, essentially stable with respect to 2010, includes the net profit for the year not allocated to shareholders (Euro 4.3 million) and amortisation of investments made by the company (Euro 233.8 million).

The portion of value added allocated to **financial institutions** in 2011 came to Euro 119.5 million (11.5% of the total, +3% compared to 2010). This share comprises Euro 212.0 million in financial charges, and Euro 92.5 million in financial income.

#### Distribution of value added to stakeholders (2011)



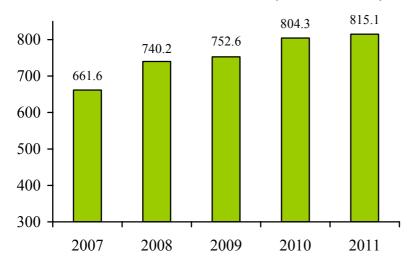
The portion distributed to Public Administration amounted to Euro 190.5 million, 18.3% of the total (+16% compared to 2010). Duties and taxes amounted to Euro 115.0 million (11% of the total value added distributed, 43% more compared to 2010). Of the taxes and duties, Euro 69.3 million was allocated to the State (Euro 44.8 million in 2010 due to the non-recurring positive effects totalling Euro 25.6 million relating to the freeing up, by means of substitute tax, of the additional values recorded in the financial statements as a result of extraordinary transactions carried out in 2009), Euro 40.6 million to the Regional authorities and Euro 4.8 million to the Municipal authorities. Income taxes rose from Euro 63.6 million to Euro 94.5 million due to the matters illustrated previously and the additional taxes recorded following the increase in the IRES Robin surtax by 4 percentage points, as well as the increase in IRAP of 0.30% for the concessionary companies set up as a result of the 2011 measures. With regard to 2009, the portion distributed to Public Administration includes the return of the socalled "state aid" received at the end of the 1990's by Italian companies in the utilities sector, declared illegal at EU level by European Commission Decision 2003/193 of 5 June 2002. Decree Law no. 10/2007, converted into Law no. 46/2007, regulated the methods for returning these amounts. For Hera, the amount due to the Revenue Office totalled about Euro 27.6 million (of this, Euro 12.3 million is accounted for under financial charges).

The plants and installations used by the company are in part owned by shareholding municipalities, and rental payments are made for their use. Environmental compensations are also paid to the municipalities regarding the waste treatment plants. In 2011, total payments for use of the assets of shareholder municipalities and environmental compensations came to Euro 82.5 million.

Grants received amounted to Euro 7 million, Euro 3.1 million of which allocated as plant grants, Euro 2.8 million as operating grants and Euro 1.1 as others grants. This amount was subtracted from the portion allocated to the public administration.

Lastly, Euro 2 million was allocated to **donations** (Euro 0.1 million) and **sponsorships** (Euro 1.9 million); details on these items can be found in the "Local communities" section.

#### Value added distributed to local areas (in millions of €)



In 2011, value added distributed to stakeholders in the local areas amounted to Euro 815.1 million (+1.3% compared to 2010). It comprises:

- employee salaries (46% of the total);
- dividends to local Hera S.p.A. shareholders (9%);
- duties, taxes and fees to local authorities (16%):
- charitable donations and sponsorships (0.2%);
- resources re-invested in the company (29%).

If value added for local suppliers is also considered (which represents 65.5% of total supplies and that can be estimated at Euro 839.3 million), the total wealth distributed to local areas in 2011 can be estimated at Euro 1,654.4 million.

The minority shareholders of the subsidiaries have not been taken into consideration in the calculation of the value added distributed to the local areas.

### Workforce

Hera had a workforce of 6,621 people as at 31 December. On average, 96.2% of workers have an open-ended contracts. In the last 3 years, 524 people were hired on the basis of open-ended employment contracts, 148 of which in 2011 alone.

## **Objectives and performance**

#### What we said we would do...

- Carry out the fourth internal climate survey in 2011, aiming to reach a workforce participation level of 57% and a satisfaction index of 60.
- Provide 143,000 hours of training in 2011, equal to 23 hours per capita.
- Implement the "Work Force Management" information system in all TOSs, with a view to increasing network service efficiency, effectiveness and quality.
- Launch the "A year for safety" project in 2011, in order to raise awareness amongst all employees regarding a culture of health and safety.
- Obtain the OHSAS 18001 certification for Herambiente and Uniflotte in 2011.
- Begin a project in 2011 to obtain the SA 8000 certification.
- Define and launch additional initiatives aimed at promoting a culture of equal opportunities and the development of disabled employees.
- Support all Group managers and middle managers in managing the change introduced by the leadership model.
- Define improvement actions based on the survey on the perceived quality of internal services and monitor their implementation.

#### What we have done...

- The fourth internal climate survey had a participation level of 63% and a satisfaction index of 64. 22 corporate climate improvement actions were defined. (see page 87)
- In 2011, 175,092 hours of training took place, which corresponds to approximately 28.1 hours per capita (see page 63)
- The "Work Force Management" information system was extended to all TOSs in May 2011, thereby overcoming the fragmentation of IT tools used previously. (see page 65)
- "A year for safety" was launched in May 2011: 16 sub-projects began, and seven have already been successfully completed. (see page 73)
- Herambiente and Uniflotte obtained the OHSAS 18001 certification in December 2011. (see page 74)
- The projects plans were approved by senior management in November 2011. Operating activities began in February 2012. (see page 80)
- The Hera Group Diversity Manager was named in March 2011. Various initiatives were launched, including the opening of the fourth crèche available for the children of employees. Ten individual projects for the development of disabled employees were launched in 2011. (see page 59)
- In 2011, 5,700 hours of informational sessions and topic-based seminars were provided for all managers and middle managers. (see page 68)
- On the basis of the results of the survey carried out in March 2011, 13 improvement actions were identified, 9 were carried out in 2011 and 4 are in progress and should be completed by the end of the first half of 2012. (see page 91)

#### We shall...

- Carry out the 22 improvement actions aimed at the internal climate that were defined as a result of the Climate study 2011 and which aim to maintain a satisfaction index of 64 in 2013.
- Provide 143,000 hours of training in 2012, equal to 23 hours per capita.

- In 2012-2013, define and launch training and development initiatives for 94 young resources included in the second edition of the "Development of Potential" project.
- Leadership model: set up and carry out a new activity plan in 2012.
- In 2012, involve the entire staff in the training initiative, "Safety is not a game", in order to raise awareness amongst all employees regarding a culture of health and safety within and outside of the workplace.
- Complete 9 sub-projects for the "A year for safety" initiative within the end of 2012.
- Define and launch additional initiatives aimed at promoting equal opportunities, the development of disabled employees and work-life balance.
- Define in 2012 an action plan aimed at optimising generational differences.
- "Work Force Management" information system: extend the mobile function to all TOSs and implement the reporting system during 2012.
- Obtain the SA 8000 certification for Hera S.p.A. in 2012
- Plan and carry out in 2013 a training initiative for all employees on the Code of Ethics and the Sustainability report.

#### **Breakdown**

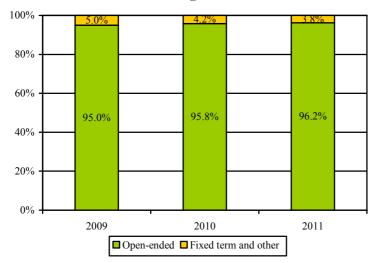
Staff figures at the close of the year

no.	2009	2010	2011
Managers	123	125	125
Middle managers	328	342	353
Employees	3,194	3,297	3,353
Workers	2,836	2,727	2,653
Open-ended contract employees	6,481	6,491	6,484
Fixed-term contract workers	105	78	47
Job training and entrance contracts	79	74	58
Fixed-term contract employees	184	152	105
Staff leasing contracts	29	7	26
Project based contract workers	17	6	6
Total	6,711	6,656	6,621

As at 31 December 2011, the total workers with open-ended contracts in Group companies amounted to 6,484. The main changes in the scope of consolidation during 2011 regarded the merger of Sadori Gas into Hera Comm Marche (+8 employees) and the termination of the public lighting service in the municipality of Bologna (-17 employees), partially offset by the initiation of the public lighting service in San Donato Milanese.

The reduction in personnel designated as blue collar is mainly caused by the move from the role of blue-collar worker to white-collar worker (totalling 34), retirement and voluntary resignation.

#### **Workforce numbers (average)**



On average, 96.2% of workers have an open-ended contract. Employees with fixed term contracts account for 2.7% of average workers, while the remaining 1.1% of workers were hired with flexible arrangements (staff leasing contracts and project work). We hereby reiterate the Group's will to limit the usage of flexible contracts to urgent situations only (seasonality, extraordinary and temporary work peaks, substitution of workers who are absent temporarily). However, the employees hired through flexible contracts provide a priority recruitment pool for hiring with open-ended contracts. Regarding this aspect, the number workers hired with staff leasing contracts and project work in 2011 was on average in line with the previous year and 30% lower than in 2009.

**Open-ended contract employees (breakdown by function)** 

1 0		•	/
no.	2009	2010	2011
Grid services	2,181	2,150	2,161
Waste Management Services	1,889	1,849	1,822
Other Services	618	603	597
Commercial	602	649	698
Coordination activities	1,191	1,240	1,206
Total	6,481	6,491	6,484

Of the workforce, 28% operate in the waste management sector and 33% in grid services (gas, electricity, district heating, and water service). Of the workforce, 11% are employed in the commercial structure and an additional 9% in other services (information technology management, fleet management, laboratories, public lighting, and cemetery services). Coordination activities absorb 19% of the Group workforce.

Open-ended contract workers whose place of work is in a different province than their place of residence

no.	2009	2010	2011
Number of workers	708	790	795
of which resident outside the province of service	285	315	328

Approximately 12% of open-ended contract workers live outside the province where they work (the province with the highest number of workers who live in other provinces is Bologna); 41% of these workers reside outside of the area served, which is an increase of 13 resources compared to last year. In 2011, 25 managers lived outside the province of service.

#### **Open-ended contract employees (breakdown by location of workplace)**

no.	2009	2010	2011
Bologna TOS area	1,763	1,764	1,744
Ferrara TOS area	526	510	500
Forli-Cesena TOS area	570	594	599
Imola-Faenza TOS area	605	612	630
Modena TOS area	1,104	1,102	1,091
Ravenna TOS area	664	664	669
Rimini TOS area	705	682	696
Marche Multiservizi area	517	535	534
Other	27	28	21
Total	6,481	6,491	6,484

#### Open-ended contract employees by educational qualification and position (2011)

no.	Managers	Middle	<b>Employees</b>	Workers	Total
		Managers			
Primary education	0	0	11	39	50
Junior secondary education	3	6	615	1,731	2,355
High school diploma	13	125	1,980	879	2,997
University degree	109	222	747	4	1,082
Total	125	353	3,353	2,653	6,484

The education level has risen, with the percentage of the workforce holding high school and university degrees at 63%, compared to 62% in 2010 and university graduates increased by 5%.

## Average age and average seniority of employees with open-ended contracts by role (2011)

years	Age	Years of service
Managers	50.1	13.0
Middle managers	47.6	15.9
Employees	44.8	15.7
Workers	47.8	16.9
Total	46.2	16.2

The average age of employees with open ended contracts is 46.2 (the same as in 2010) and the average years of service of employees with open ended contracts is 16.2 years, on the rise over the last three years.

Hours of absence and hours worked per capita (by type)

(hours)	2009	2010	2011
Illness	63.0	60.0	58.4
Maternity/paternity and parental leave	12.1	11.7	15.6
Accidents	10.0	9.0	7.5
Strikes	2.2	3.7	5.9
Union meetings	1.3	1.0	1.8
Union leave	6.4	6.7	6.6
Other	40.9	40.9	37.9
Total absences (h)	135.9	133.0	133.8
Regular hours worked	1,536.3	1,537.1	1,525.4
Overtime hours worked	55.6	53.0	46.0
Total hours worked	1,591.9	1,590.1	1,571.4

The data refer to the following companies: Hera S.p.A., Marche Multiservizi, Famula on Line, Uniflotte, Hera Comm, Hera Trading, Herambiente, FEA, Acantho, Satcom (in 2009), Hera Luce.

With regard to the hours of absence, there has been a continuous decrease in the hours of absence due to illness from 2009 to 2011 (-3% compared to 2010 and -7% compared to 2009). Overtime hours continue to represent a reduced percentage compared to the total hours worked, and in any case it is progressively decreasing: since 2007, when there were 67.8 hours per capita, there has been a decrease of 32% in overtime hours. The decrease in hours of absence due to accidents continues: since 2006, when there were 13.7 hours per capita of absence due to accidents, there has been a decrease of 45% over the course of 5 years, to the current 7.5 hours per capita. The "Other" item shown in the table mainly refers to leave requested to assist family members with disabilities or illness and leave for academic purposes.

#### Hera confirmed one of the "Top Employer" companies

For the second year in a row, Hera (the only multi-utility) received the international Top Employers certification, awarded by the CRF Institute, which recognises companies with the highest qualitative standards for human resources. Out of a maximum of 5 points, the Hera Group obtained excellent scores in all areas: 5 out of 5 for "company culture" and "training and development", and 4 out of 5 for "primary benefits", "career development" and "secondary benefits and working conditions".

The study highlighted the company's points of excellence, which turned out to be the company culture and values, the vast training options, transparency and consistency and the management system and performance assessment. In particular, the Hera Group was also awarded the Special Award for "company culture", due to the strong sense of identity and commitment transmitted starting on the first day of work, thanks to inclusive internal communication initiatives, and due to the focus placed on the importance of the social responsibility principles set forth in the company's Code of Ethics.

#### **Turnover**

The personnel policy is to back up the process of integration of companies within Hera with a plan for efficient use of the workforce made available as a result of processes of

internal rationalization and further outsourcing of activities that generate low added value.

Since the founding of the group and following acquisitions, Hera is engaged in a process of far-reaching corporate reorganisation with no recourse to social shock absorber measures.

New employees are generally hired for top-ranking professional positions (both specialised and operative), which are difficult to cover with internal personnel. Internal personnel is generally chosen for administration and manual labour positions. External employment selection agencies are called in for top ranking professional positions.

Personnel hired during the year (breakdown by position)

no.	2009	2010	2011
Managers	3	5	1
Middle managers	8	10	3
Employees	161	134	102
Workers	28	27	42
Open-ended contract employees	200	176	148
Fixed-term contract workers	119	115	117
Staff leasing contracts	130	54	80
Job training and entrance contracts	59	38	38
Project based and freelance contract workers	60	29	27
Seasonal workers and apprentices	11	5	2

In 2011, 148 persons were hired with open-ended contracts, and 524 were hired with those contracts in the last three years, of which 340 following an initial hiring through a non-open ended contract with the Group. In 2011, 59 people under 30 years old were hired with open-ended contracts.

In 2011, 54 female employees were hired with open-ended contracts (36% of the total) and 194 since 2009, totalling 39%. The percentage of new hire female managers, middle managers and employees staff in 2011 is 51%, compared to 44% in 2010.

Job leaving by open-ended contract workers by reason

no.	2009	2010	2011
Resignation	52	40	37
Retirement	118	116	93
Death	12	7	5
Dismissal	4	0	3
Incapability	20	10	20
Transfer to other company	3	14	17
Total	209	187	175

In 2011, there were 175 cases of job leaving. 74% of these cases of job leaving were due to retirement and voluntary resignation. The 17 people who left to work for other companies in 2011 are the Hera Luce personnel transferred to the company which won the tender for the Bologna public lighting service, while the 14 departures in 2010 were related to the sale of the Rimini TOS business unit and the Fluid Distribution Department to Romagna Acque.

Turnover rate for open-ended contract workers by role

%	2009	2010	2011
Managers	6.7%	7.2%	4.0%
Middle managers	3.8%	4.4%	2.8%
Employees	2.5%	1.9%	2.0%
Workers	3.9%	3.7%	3.5%
Average	3.3%	2.9%	2.7%

Turnover rate for open-ended contract workers by gender

			• 0
%	2009	2010	2011
Men	3.7%	3.5%	3.0%
Women	1.7%	0.8%	1.7%
Average	3.3%	2.9%	2.7%

**Turnover rate for open-ended contract workers by age** 

%	2009	2010	2011
Under 30	2.9%	2.9%	2.9%
From 30-50 years of age	0.8%	0.9%	1.1%
Over 50	8.9%	6.7%	5.9%
Average	3.3%	2.9%	2.7%

The turnover rate is calculated by dividing the number of leaving employees by the number of employees at the end of the year. The turnover rate was 2.7% in 2011. Higher than average values are recorded for workers, for men and for workers over 50 years of age, while the turnover rate decreased for managers and middle managers compared to 2010.

**Career advancement during the year (breakdown by position)** 

no.	2009	2010	2011
Managers	9	6	4
Middle managers	22	20	22
Employees	453	456	447
Workers	285	289	268
Total	769	771	741

There were 4 promotions from manager to executive in 2011. In 2011, 1 manager was hired externally (compared to 5 in 2010). Career advancement involved 210 female personnel, totalling 28% of all cases, which is in line with the percentage of women working within the Group, which comes out to 24.3% of the company population.

Ad interim positions covered

no.	2009	2010	2011
Ad interim positions at the end of the	18	20	25
year			
Ad interim positions covered	5	7	5
of which by internal personnel	4	7	4

In the company organisational chart there are several organisational positions for which the manager has been assigned ad interim. Specific attention was focused on reducing the number of "ad interim" positions in the organisation, by promoting internal resources. With regard to the 20 ad interim or open positions for managers and middle managers at the beginning of 2011, during the year, 5 positions were covered, 4 with internal personnel.

During 2011, for 26 employees, the company they work for changed.

Internal mobility is a direct consequence of the complete activation of the reorganisation that the Group has been carrying out since it was formed.

The objective of internal mobility is to create an opportunity for Hera employees to grow their knowledge and capacities transversally, while allowing them to continually place themselves in new contexts and develop richer and more complete work skills, while strengthening their sense of belonging to the Group.

Since July 2008, the corporate intranet has included a section dedicated to internal mobility, so employees can view announcements for open positions within the Group and apply for those positions. Since its establishment, the dedicated page has received 357,172 hits, 131 announcements have been placed and 59 positions filled; in 2011 alone, the page registered 267,858 hits, 16 announcements and 6 positions filled.

In the course of 2011, a total of 115 infragroup transfers were made, mainly in the central services (47) and operating services (23) areas.

## Diversity and equal opportunities

#### Equal opportunities and enhancing the value of diversity

The new Group Code of Ethics, approved by the Hera S.p.A. Board of Directors on 26 January 2011, led to the formalisation, also within this fundamental Group guidance document, of the commitment to equal opportunities, development of a work-life balance and enhancement of the value of diversity.

In October 2009, Hera signed the Charter for equal opportunities and equality in the workplace promoted by, amongst others, the Sodalitas Foundation, Impronta Etica and the National Office of the Equality Councillor, with the participation of the Ministry of Labour and the Ministry of Equal Opportunity. The Charter contains 10 commitments contributing to the fight against all forms of discrimination in the workplace and the championing of diversity within organizations.

#### The Hera Group's Diversity Manager

The Hera Group Diversity Manager was appointed in March 2011, in line with the commitments taken when the Charter for equal opportunities and equality in the workplace was signed in October 2009. This Charter requires that corporate functions be identified and that clear responsibilities on the topic of equal opportunities be assigned to them. The purpose of this appointment is:

- to favour the implementation of a corporate policy on equal opportunities and enhance the value of diversity;
- to promote the development of specific projects and training with a view to raising awareness amongst employees on the value of diversity;
- to define specific indicators to monitor the status of equal opportunities within Hera, and assess the efficiency of projects implemented.

The Diversity Manager works with the team comprising the Corporate Social Responsibility Department, the Central External Relations Department, the Central Quality, Safety and Environment Department and the Central Personnel and Organisation Department.

The main initiatives carried out in the last two years include:

- publication of the Mamma&Papà al lavoro ("Mummy & Daddy at work") booklet, being updated and reprinted in 2012, to better inform employees of their rights and the company's human resource management policies on maternity and parental leave;
- opening of new company and intercompany crèches: after Cesena, Imola and Ravenna, the Bologna crèche opened in 2011;
- awareness raising and training aimed at optimising differences and diversity;
- preparation of the "Positive return policies" project, in order to apply for the loan set forth in art. 9 of Law no. 53/2000 "Measures to achieve a work-life balance", presented by the Department for family policies, the results of which will be announced in the first half of 2012.

The goal of the "Positive return policies" project is to develop actions to achieve a work-life balance and supporting mechanisms for those who take maternity and parental leave, or leave under Law no. 104/1992. These actions and instruments include specific training initiatives, an intranet which can be used by workers on leave to facilitate their re-entry, agreements with private crèches in the local community and awareness raising and training actions aimed at changing the company's culture with respect to work-life balance.

The project was defined by controlling the effective needs of employees, by:

- holding two focus groups, one for mothers and fathers and another for beneficiaries of Law 104;
- issuing questionnaires to all employees of the Group's main office areas which do not have company crèches: 30 employees are interested in the service.

The needs survey led to the identification of 74 potential beneficiaries of the project.

#### Female staff (breakdown by position)

%	2009	2010	2011
Managers	13.8%	14.4%	16.0%
Middle managers	28.9%	29.8%	28.9%
Total managers and middle managers	24.8%	25.7%	25.5%
Management employees	30.6%	33.1%	33.7%
Total managers, middle managers and	30.0%	30.5%	31.0%
management employees			
Non-management employees	42.4%	41.2%	42.1%
Total employees	38.8%	39.1%	39.6%
Workers	4.7%	4.7%	4.7%
Total	22.9%	23.7%	24.3%

Female staff levels among open-ended contract workers reached 24.3% in 2011, a continuous increase on the last few years. Female personnel levels among managerial and executive positions come to 25.5%. Considering all contractual qualifications that

provide for a managerial role (managers, middle managers and management employees), women comprise 31.0% (a slight increase compared to prior years).

Personnel by age group

%	2009	2010	2011
Under 30	2.4%	2.1%	2.1%
From 30 to 50	67.5%	64.1%	65.7%
Over 50	30.1%	33.8%	32.2%
Total	100.0%	100.0%	100.0%

There are over 2,000 open-ended contract employees over 50 years of age (a decrease of 4.7% compared to 2010).

#### **Part-time contracts**

no.	2009	2010	2011
Men	38	30	30
Women	190	187	206
Total	228	217	236

Part-time arrangements, as regulated by current labour agreements, are considered a valid instrument in providing a response to labour flexibility needs both in terms of organisational and employee needs.

It is characterised by the voluntariness, reversibility and compatibility with technical, organisational and productive needs of the company and with the needs of worker.

Family and health needs, the need to help others with disabilities, and cases of serious illness (duly certified as such) are our priority considerations in assessing applications. The persons to whom staff members report must consider how practicable the contracts the applicants seek are in terms of corporate needs: if it is concluded that the contract is viable, the changes will be made.

In 2011, out of 14 requests for part-time arrangements from female employees following maternity leave, 13 were accepted.

#### Maternity, paternity and parental leave

	2010	2011
Maternity leave taken (no.)	85	98
Paternity leave taken (no.)	158	206
Duration of parental leave taken, per capita (days)	41	50

The data refer to the following companies: Hera S.p.A., Marche Multiservizi, Famula on Line, Uniflotte, Hera Comm, Hera Trading, Herambiente, FEA, Acantho, Hera Luce, Akron, Nuova Geovis, Sinergia.

In 2011, 98 employees took maternity leave; all employees returned to work following maternity leave (no employees resigned within 3 months of returning to work from maternity leave). Out of all parental leave (the period of voluntary leave which both parents may take, subsequent to obligatory leave, when the child is between 0 and 8 years old), 73% is taken by female employees; the average duration of leave taken in 2011 was 50 days (57 days for leave taken by women and 31 days for leave taken by men).

Considering the fact that there were 55 births amongst the Group's female workers in 2010, after the corresponding maternity leave, parental leave was used 47 times in the last 2 years, in addition to parental leave taken 15 times by fathers during the same period of time. There is a legal limit of 6 months for each parent, while the average duration of parental leave within the Group over the last two years comes out to 3 months in relation to the births which occurred in 2010, and specifically 3 and a half months for women.

#### The Hera crèches: a work-life balance experience

One of the most significant actions to favour a work-life balance within Hera is the experience of company and intercompany crèches, which have been open since 2007: to date, four are active, and there are 54 places available for the children of employees.

"Tirithera", which opened in 2007, was the Group's first company crèche, established at the **Cesena** office. In 2009, the **Imola** intercompany crèche, "Il nido di Cornelia", opened as a result of the efforts of the Hera Group, Legacoop and Cna Imola, with the contribution of the Municipality of Bologna, the Fondazione Cassa di Risparmio di Imola and the support of the Municipality of Imola. In October 2010, the "L'Hera dei Bimbi" intercompany crèche opened in **Ravenna**, which involves cooperation between Hera (lead management company), the municipality and local associations and cooperatives. Finally, as a result of collaboration between the Emilia-Romagna region and the municipality of **Bologna**, and three companies with offices near the trade fair area (Hera, Unipol and Legacoop Bologna), the intercompany crèche, Filonido, was opened in Bologna in September 2011. During the 2011/2012 school year, 22 children of employees attended the Group's company and intercompany crèches.

#### Persons belonging to quotas set forth by Law no. 68/1999

no.	2009	2010	2011
Persons belonging to quotas set forth by Law no. 68/1999	346	347	340

The data refer to the following companies: Hera S.p.A., Marche Multiservizi, Famula on Line, Uniflotte, Hera Comm, Hera Trading, Hera Luce, Herambiente, Akron, FEA, Medea, Nuova Geovis, Sinergia, Acantho, Satcom (in 2009).

In all provinces in which it operates, Hera complies with the obligations of Law no. 68/1999, which requires that personnel belonging to protected recruitment categories be hired in the proportion set forth in that law. Fulfilling those obligations involves the use of the regional compensations and agreements, the objective of which is to gradually fulfil employment obligations.

This law promotes the recruitment and integration within the sphere of work of certain classes of persons (the differently-abled, orphans etc.), and also provides that the worker's recruitment process is carried out by way of solutions agreed between the company, the Regional Employment Office and the worker.

At the end of 2011, there were 340 persons belonging to the categories set forth in Law no. 68/99 working in Group companies: 293 were classified within article 1 of the law (disabled). Overall, excluding Marche Multiservizi and Acantho, there are: 119 workers, 182 employees and 3 managers/middle managers.

In 2011, a total of 12 resources were hired or already employed and recognised as classified within Law no. 68/99.

#### Developing resources: 2011 action plan implemented

To employ the competences and potential of differently-abled persons working in the company, analyse their satisfaction, improve their work and, if necessary, implement work requalification, increasing productivity: this is why "Developing Resources" was developed starting in 2008 with the support of the ASPHI Foundation which promotes the integration of differently-abled persons in schools, the workplace and society.

Four actions were carried out in 2011:

- monitoring of the recruitment and the first year of work of differently-abled workers was launched with the new procedures defined in 2010;
- ten individual projects were initiated (specific training, job changes, IT implementation and innovation of support instruments), and were monitored with the procedures described above;
- in September 2011, a training initiative was carried out on the management of disabilities and diversity for twenty employees involved in the "focal point" pilot project, in order to develop the capacity to support co-workers in learning Office;
- the corporate intranet section dedicated to disabilities and to the project, which has been online since February 2011, was regularly updated.

### Training and professional development

In 2011, over 175,000 training hours were provided, which exceeds the objective of 143,000 hours, mainly as a result of some training initiatives regarding the Group's strategic projects such as Work Force Management (approximately 20,000 training hours), unbundling and the Leadership Model (5,700 training hours).

Total training hours per area of intervention

(hours)	2009	2010	2011
"Scuola dei Mestieri" and critical skills	51,483	51,518	46,007
Quality, safety, environment	38,926	35,730	39,933
Specialised training (incl. hands-on training)	18,648	17,649	27,387
Institutional and managerial training	30,171	34,327	38,134
Training to support new IT system and basic computing	5,670	4,434	23,631
Total	144,898	143,658	175,092

The data refer to Hera S.p.A., Herambiente, Hera Comm, Hera Trading, Uniflotte, Famula On-line and Hera Luce

Compared to 2010, there was an overall increase of 22% in terms of training hours provided.

Training (in man hours) (average, per capita)

(hours)	2009	2010	2011
Managers	21.5	21.8	35.8
Middle managers	28.6	28.7	38.7
Employees	22.6	20.1	28.1
Workers	23.4	26.2	26.7
Project based contract workers and workers with staff	6.3	4.5	4.3
leasing contracts			
Average	23.0	23.0	28.1

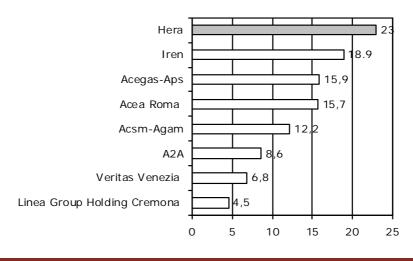
The data refer to Hera S.p.A., Herambiente, Hera Comm, Hera Trading, Uniflotte, Famula On-line and Hera Luce.

There were 28.1 training hours per capita, an increase of 22% compared to 2010 and higher than the objective, which was 23 training hours per capita. 37% of the training hours involved workers and 52% involved employees.

#### **Professional training in the main Italian utility companies**

Hera is in first place in terms of training hours per capita among the 8 multi-utility companies considered in the comparative analysis between the main Italian utility companies.

#### Per capita training hours (2010)



Training, including hands-on training, was planned and managed according to a procedure which is carried out in the following phases: needs analysis, planning of activities and cost forecast, provision of training activities, monitoring and assessment of completed training activities.

% of workforce attending at least one training course

%	2009	2010	2011
Managers	92%	95%	99.7%
Middle managers	94%	96%	87%
Employees	93%	95%	97%
Workers	95%	98%	96%
Project based contract workers and workers with staff	71%	81%	43%
leasing contracts			
Total	93%	96%	96%

The data refer to Hera S.p.A., Herambiente, Hera Comm, Hera Trading, Uniflotte, Famula On-line and Hera Luce. This index was calculated by dividing the persons involved in at least one training event by the total employees present at the end of the year.

In the period under review, 96% of workers (97% of female workers and 95% of males) attended at least one training course, thanks also to the activities involving increasing awareness about safety in the workplace, Work Force Management training and managerial training.

#### The Work Force Management project: IT serving network and plant management

Work Force Management is the Group's new, unique and integrated information system, designed to improve all programmable and non-programmable operating activities, on grids and plants (gas, water, electricity and district heating). The Group has set itself three main objectives with this new system: overcoming the fragmentation of information applications used, sharing and systematising company knowledge and improving customer services.

The project, which is the first in Italy to be introduced in a multi-utility company, was fully started up in all operating structures at the beginning of May 2011.

The project continues in 2012 with:

- the initiation of the mobile function, which will initially be applied for Emergency Support services, and in other functional areas in the foreseeable future, involving dispatching activities to operating teams, technical final reporting and feedback on the progress of activities in the field through portable devices used by the teams, connected in real time with the coordination centres;
- the creation of an integrated environment for reporting the main technical, management and economic information.

#### **Assessment of training**

%	2009	2010	2011
Degree of satisfaction of trainees (perceived quality)	84%	83%	81%
Outcomes (correspondence with needs)	59%	64%	67%

The data refer to Hera S.p.A., Herambiente, Hera Comm, Hera Trading, Uniflotte, Famula On-line and Hera Luce. The degree of coverage of the 2011 outcomes involves 100% of the courses.

Hera uses a system for assessment of training that takes the degree of satisfaction expressed by the workforce into account, alongside the assessments of the department managers with respect to the impact of training actions on the skill profile development of co-workers and on reduction of organisational problem areas linked to trainee roles.

The degree of satisfaction is generated by assessments conducted by trainees once the course is over, on a scale of 0 to 5. The table indicates the average grade obtained, on a scale of 0 to 100.

The outcomes are the result of the assessment carried out by managers during the grading phase, which is provided for each role.

The reported percentage values indicate scores of 4 or 5 (1-5 scale).

**Total training cost per area of intervention** 

(thousands of €)	2009	2010	2011
"Scuola dei Mestieri" and critical skills	185.9	110.1	76.5
Quality, safety, environment	128.8	157.9	188.7
Specialised training (incl. hands-on training)	205.1	147.3	170.1
Institutional and managerial training	207.1	255.2	243.2
Training to support new IT system and basic	33.1	7.1	12.0
computing			
Other (costs for development and support activities)	120.3	180.0	178.4
Total	880.2	857.6	868.8

The data refer to Hera S.p.A., Herambiente, Hera Comm, Hera Trading, Uniflotte, Famula On-line and Hera Luce.

The overall financial investment for training amounted to Euro 869 thousand net of costs for personnel in training and in-house trainers. Euro 111 thousand was used from the Interprofessional Training Fund in 2011.

#### **Main training initiatives**

All training activities set forth for the Work Force Management project were completed, both for the first phase (Bologna and Imola-Faenza TOSs) and for the second phase (extension to all other TOSs); the trainers received methodological training on teaching methods and learning management, with particular focus placed on motivational and cultural change aspects linked to the new system's technologically innovative model, and technical training managed in the classroom with a view to becoming proficient on the system, which was structured into a basic module and specialist modules to learn the individual functions necessary for the management and subsequent maintenance of the work.

Employee training on safety in daily work practices continues to be emphasised; approximately 49,000 training hours were provided in 2011 in the Quality, Safety and Environment area (including 9,000 hours as part of the Scuola dei Mestieri initiative).

# HerAcademy: more knowledge and innovation for the company and the community

HerAcademy, the Group's Corporate University, was founded in 2011, as a supplement to the research programme conducted by CRISP (Centro di ricerca interuniversitario per i servizi di pubblica utilità – Inter-University Research Centre for Public Utility Services), with the contribution of important regional academic institutions and the involvement of reference stakeholders.

HerAcademy was presented in Bologna on 15 December 2011, during the meeting "Private, public and social assets - The organisation of knowledge in the public utilities sector and the HerAcademy project"; the initiative is in line with the Group's

continuous commitment to taking advantage of experience and developing the skills of its workforce by promoting cooperation and the exchange of knowledge, so that work becomes a source of satisfaction and pride for people, as well as a significant factor for the company's success.

#### The Scuola dei Mestieri and its progress

The Scuola dei Mestieri, which has now reached its seventh year, is a project for efficient use of the technical and operational skills that are present within the Hera Group. The aim is to raise the level of awareness of professional conduct and of skill transfer potential from operator to operator.

There are 13 notebooks printed and published for the Scuola dei mestieri: in 2011, the thirteenth notebook called "Training courses for employees who manage and maintain networks and electric stations" was published; in 2012, the fourteenth notebook should be published, for remote control station workers, and those already published will be updated.

Developing the organisational performances and strengthening the company sense of belonging are among the objectives that led us to further develop the Scuola dei Mestieri model, guiding its evolution in the apprenticeship communities. Apprenticeship communities are mainly ad hoc and self-regulated social groups which are characterised by the production and sharing among their ranks of procedures and practical knowledge applied to a specific trade, through behaviours inspired by principles of cooperation. In 2011, development work related to customer management is continuing in all regional areas and is aimed at revising operating instructions, also by using forums and the wiki environment; forums were also used to manage and monitor the Work Force Management project, while a dedicated wiki environment was created to share knowledge related to some processes of Hera Trading.

#### **Progetto Laureati (Graduates Project)**

This project which began in 2004 aims to recruit and hire young high potential graduates. There are currently 112 employees that joined the Group through this project in the period from 2004 to 2011.

Specifically, in 2011 15 young resources were hired who attended the institutional training programme during the year (including the orientation course and the basic management course).

The selection provides for an initial assessment phase which is attended by candidates that have been previously selected through the CVs received by the company and who meet specific requirements regarding their identity and studies. When the selection process is complete, the suitable candidates are hired by the company with an eighteenmonth entrance contract.

#### Courses focusing on the development of potential

The second "Development of Potential" project was held in 2011 and, in line with the 2008 edition, it involved resources from the 2007 and 2008 editions of the Graduates Project and other young employees with similar characteristics in terms of identity and studies, identified following an assessment of professional growth potential.

The project's main objective is to enhance and develop the potential of young employees of the Group.

This second edition saw the participation of 94 employees, for whom specific training and development initiatives will be planned throughout 2012. Furthermore, the courses dedicated to the resources from the 2008 edition and the relative monitoring continued. Overall, 90 women and 104 men participated in the project's two editions.

#### The Leadership Model

The Leadership model describes the key elements necessary to best interpret Hera's mission and values, and the skills which Hera managers should have and develop are related to four key elements: management of complex situations, orientation to excellence, focus on service and exemplary leadership. All managers are called to invest in themselves to grow and continuously acquire more authoritativeness, with the aim of contributing to the achievement of company objectives, while focusing on results and external as well as internal customers, motivating their co-workers and ensuring that they develop professionally in line with their roles.

The objective for 2011 was to set up and carry out an articulated plan of initiatives aimed at managers and middle managers, with a view to fully disseminating and providing training on the model's contents. The principles include:

- training workshops to raise awareness and teach management about the model and its role with respect to other human resource management processes;
- specific seminars on the model's various key elements, to provide points for reflection, also through the testimonials of important external speakers;
- training sessions to develop skills related to co-worker and team management, in line with the model

Over 5,700 man-hours were provided as part of these initiatives, and over 400 people were involved. In 2012, continuity will be provided to this project through the arrangement and implementation of a new targeted activity and initiative plan, and the specific seminars will also be completed.

#### **Enhancing skills within Hera**

Within its training and development courses, the Group has always particularly emphasised the optimisation of the distinctive skills of its workforce. In addition to making significant investments in external training, the company has also been committed for years to using internal trainers to facilitate the dissemination of skills and the special experience gained in the field.

Also, when development and career paths are identified, particular attention is placed on mapping and analysing resource skills and potentials, specifically focusing on key roles, to identify the best ways to support growth.

#### **Agreements with Universities**

The Hera Group has reached a framework agreement with the University of Bologna providing incentives for the training of undergraduates and recent graduates, with a particular emphasis on water, energy and environmental issues, through the assignment of six-monthly scholarships for final year students and for recent graduates. In this context, a specific agreement with the Department of Industrial Chemistry allows young graduates or final year students to benefit from curricular training, vocational training or orientation.

The Group also has agreements with the Universities of Modena and Reggio Emilia, Ferrara, the S. Anna School of Advanced Studies in Pisa and, since 2011, with the University of Padua.

**Internships** 

no.	2009	2010	2011
Interns hired over the year	151	82	166
of whom aged under 18	21	55	21
Interns recruited following internship	15	9	13

166 persons had an apprenticeship with Hera in 2011. Of these, 13 were hired.

### Pay, salaries and bonuses

All Group employees are hired through national collective labour agreements, with the exception of project-based contract workers, who do not have a collective labour agreement, covering 0.3% of average employees in 2011. Employees with staff leasing contracts, amounting to 0.8% of average workers in 2011, have the same economic conditions as those provided in the contracts applied to employees with open-ended contracts (including the performance bonus).

Relation between minimum pay and salary conditions according to labour agreements and Hera pay and salary levels (Federgasacqua contract – 2011)

Euro	Min. pay/salary (according to lab. agr.) (A)	Min. pay/salary (Hera) (B)	% Gap (B:A)	Average Hera compensation (C)	% Gap (C:A)
Middle managers	2,659	2,894	9%	4,254	60%
Employees	1,483	1,483	0%	2,457	66%
Workers	1,483	1,483	0%	2,146	45%

The data refer to the following companies: Hera S.p.A., Famula on Line, Uniflotte, Hera Comm, Hera Trading, Herambiente, FEA.

The table illustrates the gaps between gross monthly pay/salary levels at Hera and those specified by the Federgasacqua labour agreement, which governs the employment relationship of 47% of Group workers. Comparison between the minimum pay/salary conditions of the Federgasacqua contract and the minimum applied by Hera was conducted by considering the minimum seniority conditions within the Group for the three employment classes. Comparison was also conducted by taking into account average pay/salary levels for the three classes.

The gap between the minimum level applied by Hera and that envisaged by the labour agreement is 9% for middle managers and in line with the contractual figure for white-collar and blue-collar workers. The average salary, on the other hand, is 60% higher than the minimum labour agreement conditions for middle managers, 66% higher for white-collar workers and 45% higher for blue-collar workers.

## Relation between senior management compensation according to labour agreements and Hera levels (Confservizi contract)

Euro	2011
Minimum according to labour agr. (A)	4,385
Hera minimum (B)	5,385
% Gap (B:A)	23%
Average Hera compensation (C)	9,528
% Gap (C:A)	117%
Average market salary for managers	10,092
% difference compared to the market	-6%

Data do not include Marche Multiservizi.

The above table illustrates the gaps between average gross compensation levels and the gross compensation levels envisaged by the national collective labour agreement for the senior management class. For this class, the contract to which reference is made is that of the local public services providers' association, Confservizi.

The average salary of Hera managers is 117% higher than the minimum salary stipulated in the contract, while the minimum salary is 23% higher than the Confservizi contract.

The average salary of Hera managers is 6% lower than the average market salaries for managers, as these are reported in the Hay Compensation Report – Total Cash Italia 2011.

#### Average salaries by gender (2011)

Euro	Men	Women
Managers	9,789	8,114
Middle managers	4,246	4,271
Employees	2,523	2,361
Workers	2,152	2,039

Regarding employees and workers, compensation is slightly lower for women. The gap between female and male employees is slightly larger, since men account for 66% of management employees. Instead, the salary gap between men and women within the management class is significant (approximately Euro 1,700), but this figure is influenced by the fact that there are fewer female directors than male: in fact, in 2011, out of 33 Group directors, 4 were women.

#### **Gross performance bonus (per capita)**

Euro	2009	2010	2011
Middle managers	1,755	1,534	1,541
Employees	1,495	1,318	1,325
Workers	1,387	1,221	1,228
Weighted average	1,452	1,289	1,297

The data refer to the following companies: Hera S.p.A., Famula on Line, Uniflotte, Hera Comm, Hera Trading, Herambiente, FEA.

In line with the Group Supplementary Collective Labour Agreement stipulated on 24 March 2010, the 2011 performance bonus for managers, employees and workers is based on profitability, productivity and sustainability indicators.

The profitability and productivity indices consist of the Group's gross operating margin and the per capita gross operating margin of the companies belonging to the Group and the territorial operating structures.

The main sustainability indices for 2011 (which have an impact of up to 20%) include: reduction in the number of claims, percentage of separate waste collection, commercial quality standards defined by AEEG, compliance with the standards defined in the water service charter, indices of accident frequency, severity and rate, near-accident indices, water supply activation times, percentage of the water network subject to active research for losses, business and residential customer satisfaction index, and average arrival time after emergency calls.

The 24 March 2010 agreement identified the amount of the performance bonus in 2010-2012, as well as the portions which are assigned to personnel as consolidated productivity during the three years, and are subtracted from the overall bonus amount.

#### Other incentive systems

Starting from 2006, the incentive system for managers of the Hera Group has been linked to the balanced scorecard. This system was introduced to the Group gradually through an initial application to senior managers and middle managers and a subsequent extension to all managers. According to this system, the variable component of individual compensation for managers and middle managers is calculated as a percentage value of gross annual salaries and is defined at the end of the year on the basis of results obtained relative to the objectives set at the start of the year.

The balanced individual scorecard is structured in three parts:

- the first consists of specific project-objectives deriving from translation in operating terms of the objectives contained in the Group's strategic map;
- the second contains the economic objectives defined in the budget for the year;
- the third involves an assessment on the behaviours set forth in the Group leadership model.

The structure of the balanced individual scorecard, or the weights assigned to the three areas, vary according to the seniority of the employee and the department.

The final assignment of the bonus is weighted according to the results reached insofar as certain Group parameters: financial-economic results and customer satisfaction index for residential customers.

The assignment of the objectives to employees and the assessment of their achievement takes place through a clearly defined process which is based on the decision of the top management for the individual balanced scorecards of the directors and managers and of the directors for the individual balanced scorecards of the managers. The activity takes place with the coordination of the Balanced Scorecard System Management function within the Corporate Social Responsibility Department and personnel departments.

Approximately 51% of the variable remuneration of senior management of the Hera Group is linked to the completion of the projects planned in the balanced scorecard system (the remaining 49% is linked to respect of budget objectives and compliance with the behaviours set forth in the leadership model).

A total of 422 managers and middle managers received a bonus linked to the balanced scorecard in 2011. This is added to 233 employees who received an incentive bonus in the forms provided by the merit-based policies of the Group in 2011.

#### Sustainability in the management bonus system and in the performance bonus

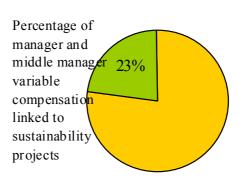
Aspects that refer to sustainability are present in the incentive system for managers and middle managers and the systems for the determination of the performance bonus used by the Group.

The performance bonus is influenced by indicators that are connected to quality and the environment while the incentive system connected to the balanced scorecard provides for a part of the incentive to be connected to the achievement of sustainability projects.

2011. 24% of the variable remuneration of Group managers and middle managers was linked sustainability project objectives (improvement of quality, environmental impact, image, personnel involvement, professional development involvement of stakeholders).

A maximum of 20% of the performance bonus for managers, employees and workers is linked to quality,

environmental and occupational safety objectives.



#### **Pension funds**

The number of employees participating in the pension funds as at December 2011 is 4,488, or around 69% of total employees.

The Hera Group has three main pension funds created through national collective labour agreements: Pegaso for employees under the gas-water and electricity national collective labour agreements, Previambiente for employees under the Federambiente national collective labour agreement, and Previndai for managers. 94% of total employees enrolled in pension funds are enrolled in these three funds. There is a slight decrease in enrolment since new hires do not always enrol, and instead may decide to contribute TFR (employee leaving indemnities) to the INPS treasury fund.

The table below sets forth the yield of the balanced subfund within the two main pension funds, which comprise 92% of workers participating in the pension funds.

**Yield of the main pension funds (balanced subfund)** 

%	2009	2010	2011
Pegaso	9.11%	4.82%	1.40%
Previambiente	9.53%	4.66%	0.07%

## **Health and safety**

The "A year for safety in the Hera Group" project was launched in 2011. This is an important initiative involving the Group's entire workforce. The project aims to support the growth of a truly prevention- and safety-oriented culture, improving behaviours in the workplace and in day to day life. The project is managed by a Guidance committee

made up of top management, and is continually monitored by a Coordination Group which reports its progress to the Guidance committee. This group also includes a Scientific Committee made up of three external labour, health and safety specialists from various disciplines (legal, economic and psychosocial). The Scientific committee supports the project's development by establishing and assessing criteria of consistency and the results achieved on the basis of three main areas:

- organisational/management, so safety as a responsibility spread throughout the company, in relation to which all are asked to contribute: beginning from the top management's commitment, down to the behaviour of each individual worker;
- economic/competitive, which consists of highlighting, also through concrete examples, the costs and benefits of a correct safety management system;
- communication/cultural, which is the natural complement to the other two: it provides for the development of informational and training channels to ensure that the culture of safety is spread within the organisation, permeating the areas in which "doing safety" creates value for the company and attributing the proper importance to everyone's contribution, in order to increase the tangible and intangible benefits of the commitment taken on.

"A year for safety in the Hera Group" comprises 16 projects, some of which apply throughout the Group and therefore are managed centrally: others, instead, are assigned and carried out by the individual territorial structures and may also be extended to other areas during the project's second phase of development. To date, 7 projects have been successfully completed. An assessment on replicability in other areas has already begun for some initiatives.

Parallel with the development of project-related activities, a set of process and result indices has been prepared and will be included within the 2012 Balanced Scorecard system.

#### A year for safety: project progress

#### Safety is not a game

This training initiative employs team games and involves the entire company population, increasing awareness of safety at all levels and stimulating new workers to adopt specific behaviours in all aspects of life, in and outside the workplace.

An animated software application has been created which will accompany the "top down" training phase for the entire company population (roll out in March 2012), which will be carried out by 130 employee trainers, who will be in charge of training co-workers and associates.

Next, the top-down training involving the entire workforce will begin. The project is ongoing.

#### Scientific study to define the economic model

This research aims to assess safety management impacts by comparing the various organisational and management models adopted by companies to prevent occupational health and safety risks with consequences on efficiency and competitiveness. The data needed to quantify the costs associated with accidents in the Emilia and Romagna areas have already been obtained and analysed. Preliminary activities to define the model to quantify the economic impacts of safety organisation and management have been completed.

The project is ongoing.

#### National waste management service guidelines

Contribution from the Hera Group in defining guidelines within a project launched by the Rubes Triva Foundation in partnership with INAIL to define guidelines for creating a Workers' Health and Safety Management System for the waste management services and territorial companies.

The project was completed successfully with the publication and distribution of national guidelines by INAIL-Federambiente.

#### **Alcoholism regulation**

Preparation of a document implementing the directives of the framework law and any implementing regulations related to alcohol and alcohol-related issues. The completed document will be formalised as a Corporate Regulation on alcohol, and its goal is to ensure implementing procedures, with controls carried out during the workday during which the worker must have a blood alcohol level of zero.

The corporate regulation on alcohol was issued with service order no. 90 of 28 September 2011.

The regulation will be implemented in all areas throughout 2012. The project is complete.

#### Increase in the quality of supplier monitoring

This initiative intends to supplement the supplier control system, also on aspects relative to health and safety. The project's objective is for a protocol to be drawn up which helps to locate data relative to accidents for a group of suppliers representing 75% of the value of goods and services purchased. The work group is also required to identify performance indices regarding health and safety to be included as criteria for the periodic supplier assessment.

Training on the new supplier monitoring process is in the completion phase for company contacts (expected for 720 workers). The phase of collecting the supplier accident data is almost complete.

The project is nearing completion.

#### Hera S.p.A. integrated certification

Execution of an integrated process which controls the company's performance (Central bodies and TOS-BU) in relation to 3 internationally recognised quality, environmental, and occupational health and safety management standards.

Hera S.p.A. obtained the integrated certification (September 2011). The project is complete.

#### **Herambiente OHSAS 18001**

Process to assess the occupational health and safety management and control system in order to obtain the OHSAS 18001 certification for Herambiente.

Herambiente obtained the OHSAS 18001 certification (the controls of Det Norske Veritas Italia, the certifying body, were completed on 21 December 2011) The project is complete.

#### Uniflotte OHSAS 18001

Process to assess the occupational health and safety management and control system in order to obtain the OHSAS 18001 certification for Uniflotte.

Uniflotte obtained the OHSAS 18001 certification (the controls of Det Norske Veritas Italia, the certifying body, were completed on 29 December 2011. The project is complete.

#### Scientific study on work-related stress

The scientific study aims to adopt a new method for assessing work-related stress by using dedicated tools which report objective data (preliminary assessment of the phenomenon by analysing company data) and subjective data (interviews with all workers through a special questionnaire).

The pilot project at the Ferrara TOS BU concluded with the preparation of a final report which is currently being validated by the scientific committee.

#### **Training ground**

Further improve worker training by creating a dedicated structure ("proving ground") which simulates work environments and processes in safe conditions.

Information has been collected regarding Hera's needs for technical and operative training in 2012 which could be carried out on the proving ground. The initiative's proponent is currently assessing the timing and procedures for effectively creating the ground.

The project is ongoing.

#### Machine and equipment safety

Compliance control and drawing up of operating instructions on the safe use of company vehicles and equipment.

Analyses of approximately 180 operating vehicles at the Modena TOS BU are complete, and the relative operating instructions for their safe use have been produced.

The training/hands-on training of operators, involving roughly 130 people, will begin by March.

The project is ongoing.

#### Tutor-observer

Process of observation by a specialised employee/worker who is properly trained as a tutor and accompanies a co-worker at work and observes that person's activities. In a subsequent phase, any anomalies observed during work activities regarding the health and safety of the worker and the environment are discussed.

Approximately 500 observations were carried out in the pilot area of Ravenna. A report of the observation results was submitted. Six critical areas were identified (e.g., environment-collection, maintenance, ergonomics in the excavations), for which working groups will be launched to identify operating improvement proposals. An assessment of replicability in other areas is underway. The project is complete.

#### Definition of the "area topic table" model

Analysis and assessment of work activities, equipment, the workplace, procedures and operating instructions with the support of the main area control bodies such as AUSLs and the Fire Brigade.

The topics to be discussed in the Area Topic Tables were identified:

- Emergency drills at the company offices;
- Emergency management for work in confined spaces;
- Area emergency management.

Preliminary meetings with external stakeholders (ASL, Fire Brigade) have been held.

The first working group has been instituted, with the involvement of the Fire Brigade.

The project is ongoing.

#### Safe behaviours

This project has two parts: the first, Safe Behaviours, directly involves the workforce and is meant to provoke reflection on best safety practices through the analysis of one's own behaviours and one's own perception of safety. Following this first analysis phase, possible corrective measures concerning manners of thinking and acting will be planned.

The second part of the project, Safe Driving, involves a safe driving course for heavy vehicles, conducted using a professional simulator able to reproduce extreme conditions, such as fog, rain and snow.

For the first part, the data have been collected and analysed, and a final report was drawn up by the external partner which supports this project's development (ISMO).

This part of the project is ongoing.

For the "Safe Driving" part, the safe driving pilot project carried out at the Rimini TOS BU was completed in December 2011, with the participation of 73 workers. Planning for replication in other areas is underway.

#### EHS feasibility study

Project intended to set forth the evolution of company information systems in the area of EHS (Environment, Health, Safety), with the aim of creating an integrated management information system in the areas of Environment, Health and Safety.

The project plan has been drawn up, and it is projected that the EHS system will be implemented in 2012-2013. The feasibility study is currently being carried out with the involvement of all structures concerned. The project is ongoing.

#### "Proactive orientation towards safety" scientific study

Action aimed at surveying the safety climate by administering a questionnaire in order to obtain information on the proactive orientation towards safety at all organisational levels, referring to attitudes, motivations, prevention behaviours and the perception of occupational risks.

The project's methodology has been defined.

The questionnaire is planned to be administered by March 2012 to a sample of workers (approximately 300) at the Rimini TOS-BU and at Herambiente S.p.A. The project is ongoing.

#### **Accident indices**

	2009	2010	2011
Frequency Index	32.6	29.6	23.4
of which for ongoing accidents	4.0	5.9	2.0
Severity index	1.8	1.0	0.5
Rate Index	5.2	4.8	3.8
Average accident duration (days)	56.8	33.0	23.3
Number of accidents	252	215	164
of which accidents during commutes	31	43	14
(no.)			

The frequency index is the number of accidents per million hours worked. The severity index is the number of days of absence per accident divided by thousands of hours worked. The rate index is obtained by dividing the number of accidents by the number of workers, multiplied by 100. The data refer to Hera S.p.A. Accidents reported to INAIL which lasted more than 3 days were considered. The severity index for 2010 was updated based on information obtained this year.

As the data in the tables show, accident indices are continuously improving, and there was also a decrease in the frequency index of accidents during commutes, which had increased in 2010 compared to the previous year. The final figure for the year culminates in an accident frequency for Hera S.p.A. of 23.4, which is markedly lower than the figure for the previous year (-21%).

In 2011, the number of accidents on the job decreased by 24% compared to 2010 and by 35% compared to 2009. The average accident duration also decreased notably in the three-year period considered: -59% since 2009. The number of accidents while commuting (going to and from work) decreased by one-third in 2011 compared to the previous year, from 43 to 14.

#### Occupational safety in the main Italian utility companies

Hera is in fourth place in terms of the accident frequency index among the 8 multiutility companies considered in the comparative analysis between the main Italian utility companies. It should be noted that Acea and Acsm-Agam are the only companies among the 8 considered which do not run waste management services.

Accident Frequency Index (2010)

# Acsm-Agam Acea Roma Iren Hera Acegas-Aps Linea Group Holding Cremona A2A Veritas Venezia Aces Roma 26.2 29.6 43.0 48.4 48.5

The accident severity index in 2011 is 0.5, a clear improvement over 2010 and in general with respect to previous years.

10

20

30

40

50

60

70

80

0

The accident severity index was influenced in 2009 by a mortal accident that occurred at the Forlì waste-to-energy plant while an employee was carrying out waste disposal using his own vehicle. The findings phase relative to this occurrence was carried out, and the decisions of the Public Prosecutor have yet to be issued as of the reporting date. Accident indices are higher for workers, since they are more at risk of accidents. In 2011, the accident frequency index for workers was 41.5; in 2010 it was 57.2. The accident severity index for workers was 0.9 (1.8 in 2010).

#### Frequency index (breakdown by function)

	2011
Grid services	18.6
Waste management and cemetery	
services	57.2
Coordination activities	3.8
Average	23.4

The data refer to Hera S.p.A.

Frequency index (breakdown by area)

= = = 1				
	2009	2010	2011	
Bologna TOS area	29.6	25.0	21.6	
Ferrara TOS area	21.1	16.4	19.9	
Forlì-Cesena TOS area	17.2	19.8	15.6	
Imola-Faenza TOS area	12.5	30.3	25.6	
Modena TOS area	43.7	25.2	20.4	
Ravenna TOS area	23.8	24.2	19.1	
Rimini TOS area	62.3	73.4	65.8	
Average	32.6	29.6	23.4	

The data refer to Hera S.p.A.

The trend of the indices continues to improve in all areas, except in Ferrara, where there was a slight increase in events (from 10 to 12).

#### Accident indexes of a number of subsidiaries (2011)

	Marche Multiservizi	Herambiente	Nuova Geovis	FEA	Uniflotte	Hera Luce	Hera Comm
Frequency Index	50.3	19.5	0.0	52.8	27.9	48.0	11.3
Severity index	1.3	0.4	0.0	0.2	0.4	0.5	0.5
Rate Index	8.2	3.2	0.0	8.5	4.3	7.8	1.8
Workforce	534	560	26	47	138	77	513

There were some improvements in the accident frequency indices for the subsidiaries considered, such as for Marche Multiservizi (from 57.6 to 50.3) and Uniflotte (the index fell from 65.8 to 27.9, with the number of accidents decreasing from 15 to 6), while the index increased for Hera Luce, from 7.2 to 48 points (there were 5 accidents compared to only one in 2010).

The FEA accident severity index was influenced in 2010 by a mortal accident that occurred in December 2010 at the Bologna waste-to-energy plant while an employee was carrying out inspection/maintenance on part of the plant. The findings phase relative to this occurrence is currently being carried out as of the reporting date.

The overall frequency index for all the companies considered (Hera S.p.A. and the main subsidiaries included in the table) amounted to 24.9, showing a significant decrease compared to the previous year's figure of 30.4; the number of accidents while commuting accounts for 11% of total accidents (18% in 2010). The severity index is 0.6, compared to 1.7 in 2010.

Health checks performed

no.	2009	2010	2011
Hearing tests	907	1,038	664
Respiratory tests	2,188	1,943	1,945
Laboratory tests	1,180	1,317	1,248
Sight and eye tests	1,670	663	867
Total check-ups performed	5,945	4,961	4,724
Total workers examined	3,505	2,822	3,122

The data refer to Hera S.p.A.

In the course of 2011, the health test (blood alcohol level test) to check for the absence of alcoholism was launched for Hera S.p.A. personnel. The checks are expected to be completed during 2012 in compliance with the company regulation issued in 2011. Following a medical check up in 2011, 12 employees were declared as inappropriate for the specific duty they carried out.

In 2011, the Occupational medicine coordination was reorganised, first involving an alignment of contracts and parameters of the services carried out by qualified doctors and the consolidation of health protocols at the Hera S.p.A. level and for almost all subsidiaries. The role of qualified doctor Coordinator was also reorganised to reinforce that role and the Coordinator's presence within the company.

The new occupational medicine structure will make it possible to improve services and, on the basis of planning and agreements with regional bodies, start monitoring and epidemiological studies to increase the level of controls and the quality of the workplace.

#### **Industrial relations**

In line with the Group Supplementary Collective Labour Agreement signed on 24 March 2010, in 2011 actions continued to implement the commitments assumed with that agreement.

Within the Technical Commission set forth in the Supplementary Collective Labour Agreement, systems to harmonise Group compensations and regulatory economic conditions were drawn up and discussed, with a particular focus on topics related to travel, canteen and geographic mobility compensations.

The Group Supplementary Collective Labour Agreement re-examines the common rules of trade relations and, in the new Industrial Relations Protocol, for the first time establishes a technical study for organisational and work quality innovation, which is not set forth in the labour agreement, called LaborHERA. This study includes experts appointed by the union and by the company who will be in charge of monitoring safety and training initiatives, also within tenders, and corporate social responsibility, monitoring development and investment programmes and preparing proposals to

support the evolution of the labour organisation with a focus on experimentation and innovation. The objective was to identify different involvement programmes in addition to the regular labour agreement procedures. The activities for the year related to the Safety study (LaborHera) began in February 2011, in order to monitor initiatives on this topic; the laboratory met three times during the year.

#### Scientific study to assess "work-related stress" risks

As part of the A year for safety project, Hera completed a scientific study in partnership with the University of Bologna on work-related stress at the Ferrara TOS, which involves the diversified use of data types (objective/subjective) and reporting tools (information sheet, interview, questionnaire).

The assessment was broken down into three main areas:

- surveillance events: absences due to illness, number of accidents; personnel transfers;
- content factors: work hours, shifts and on-call; intellectual commitment;
- context factors: career development, training, services and benefits.

Overall, within the Ferrara TOS, significant work-related stress indicators which would require recourse to corrective actions were not found. However, improvement measures are being analysed both as regards the data collection and analysis model and from the business process perspective.

The data collection and analysis model developed within this project can therefore be extended to other Hera Group territories/structures.

Group- and area-level negotiations with union representatives enabled us to reach an agreement in April on the regulation currently in force regarding tax benefits (detaxation) in the Hera Group for the year 2011.

Regarding Group objectives after the canteen service was expanded in the Ferrara area, the ticket system was phased out, as also occurred in the Rimini and Sassuolo areas.

A specific agreement on geographic mobility was reached with the Bologna area trade unions, regarding the economic conditions which will be provided for transferred personnel following the transfer of some company structures today located in the municipality of Bologna to the Granarolo location. Since the new workplace is not far from the municipality of Bologna, the agreement involves economic conditions which are lower than those set forth in the Group agreement.

By agreement between the parties, in May the objectives of the 2010 Group performance bonus were subject to final reporting and the objectives for the 2011 Group performance bonus were identified. In the same month, meetings to present and explain social responsibility and the Sustainability report were held with Group trade unions.

Furthermore, when the Group stopped providing the public lighting service in the municipality of Bologna, an agreement was reached in June with the Bologna area trade unions on the mobility (Law no. 233/91) of Hera Luce employees, which ensured employment for all personnel affected.

Also during the first half of the year, informational meetings were held with the Group trade unions on the contracting of waste management services in the Romagna area and on probable tender scenarios that public services will have in those contexts.

During the second half, the planned monitoring of the Group's 2011 Performance Bonus objectives began as set forth in the Supplementary Collective Labour Agreement, through the LaborHera study group.

In relation to training, as set forth in the Supplementary Collective Labour Agreement, the Group training plan for 2011 was presented and an agreement was reached on financed training for Hera S.p.A., Herambiente, Hera Comm, Uniflotte and Famula online.

Hera also collaborated with employers' associations to renew the national collective labour agreements for the gas/water sector and for waste management services. For the latter, Hera's direct participation led to the insertion in the Federambiente Agreement of a specific safeguard clause for outsourcing in favour of social cooperatives. That clause sets forth that a portion of outsourcing, totalling 5% to 15% (Hera uses 15%) of the economic volume of sweeping, collections, waste transport, cleaning of septic tanks and cleaning of bins, is excluded from the application of the waste management services collective labour agreement through the definition of socially inclusive projects.

Furthermore, cooperation with employers' associations continues on the renewal of the electricity sector classification and seniority conditions system, on regulations for the entire sector regarding exercising the right to strike, and on drawing up the articles of association and the regulation for the medical assistance fund set forth in the Federambiente national collective labour agreement, along with participation in commissions to prepare the renewed waste management and gas/water sector agreements.

In October, the trade unions approved the "Positive return policies" project related to work-life balance, promoted by the Diversity Manager in order to apply for the loan pursuant to art. 9 of Law no. 53/2000, "Measures to achieve a work-life balance".

Furthermore, many meetings were held with the Group trade unions in order to share methods for identifying personnel dedicated to gas services, in view of tenders which will be called in that sector on the basis of criteria defined by the company.

The 2011-2015 Business Plan was described to the Confederali and Group trade unions. Finally, in implementation of the provisions of the national agreement of 2 February 2009 regarding ongoing union leave for the gas/water sector, an agreement which governs that leave within the Hera Group for the gas/water and electricity sectors was reached with Group trade unions.

The results of the fourth internal climate survey and the Hera S.p.A. SA 8000 certification project were shared with Group trade unions at the beginning of 2012.

# Open-ended contract workers that are members of unions (breakdown by trade union)

no.	2009	2010	2011
CGIL	2,420	2,365	2,298
CISL	542	565	522
UIL	665	661	661
CISAL Federenergia	34	24	24
FIADEL	61	104	104
RDB	35	32	29
UGL and other	6	12	14
COBAS	0	0	0
ASSOQUADRI	24	21	20
Total	3,787	3,784	3,672
Percentage of workforce as at 31/12	58.8%	58.4%	56.6%

The data refer to the following companies: Hera S.p.A., Marche Multiservizi, Hera Comm, Hera Trading, Famula on Line, Uniflotte, Herambiente, Hera Luce, Medea, Sotris, Nuova Geovis, Akron.

56.6% of the Group's open-ended contract workers are members of a union (almost two percentage points less than in 2010). The union membership rate is higher for blue-collar workers (67%), falling for white-collars (53%) and increasing amongst middle managers (31%) with respect to 2010.

# Open-ended contract workers that are members of unions (breakdown by position)

%	2009	2010	2011
Middle managers	33%	30%	31%
Employees	56%	54%	53%
Workers	67%	69%	67%
Total	59%	58%	57%

The data refer to the following companies: Hera S.p.A., Marche Multiservizi, Hera Comm, Hera Trading, Famula on Line, Uniflotte, Herambiente, Hera Luce, Medea, Sotris, Nuova Geovis, Akron.

#### **Strikes (hours)**

hours	2009	2010	2011
Total time on strike (hours)	14,148	23,270	37,188
Time on strike (per capita)	2.2	3.7	5.9

The data refer to the following companies: Hera S.p.A., Marche Multiservizi, Famula on Line, Uniflotte, Hera Comm, Hera Trading, Herambiente, FEA, Acantho, Satcom (in 2009).

12 strikes were announced in 2011 (compared to 4 in 2010, of which none against Hera). Seven one-day strikes were against government policies; two were promoted by CGIL, one by CGIL, CISL, UIL and four by independent unions. A one-day strike announced only by Filctem CGIL regarded the renewal of the Federgasacqua national collective labour agreement and three initiatives of FP CGIL, FIT CISL, UILTRASPORTI, FIADEL, from the environment sector, regarded announcements of 50 minute strikes against the same number of mortal accidents which occurred at work throughout Italy. One one-hour strike was announced against Hera in the Rimini area by CGIL and UIL, from the gas/water sector, for strictly local reasons.

#### **Litigation with the workforce**

no.	2009	2010	2011
Litigation pending at the close of the	55	40	37
year			

Considering the Hera Group with the sole exclusion of Marche Multiservizi, as at 31 December 2011, 34 cases of litigation were pending, with specific balance sheet provisions made in view of the potential costs.

Of these, 5 were for recognition of a higher employment level, 6 for dismissals for just cause or surpassing the protected period, 1 for nullity of the fixed-term contract, 5 for recognition of an open-ended employment agreement, 7 for compensation of damages and payment of contractual indemnity, 1 to appeal a transfer, 3 for disciplinary sanctions, 4 regarding pensions and settlement of contributions, 2 lodged in the first instance by the company for compensation of damages and verification of the legitimacy of the disciplinary sanction applied.

The Marche Multiservizi Group has 3 cases pending with personnel, and one was completed during the year, all for recognition of a higher employment level.

In 2011, 152 disciplinary measures were taken against Group employees, in compliance with the applicable national labour agreements (compared to 187 in 2010). They mainly involved oral or written reprimands (72 cases), withholdings on salary (50 cases totalling Euro 1,130) and 27 temporary suspensions from work (18 less serious and 9 more serious cases). In three cases, it was necessary to resort to termination. Compared to prior years, there was a lower number of temporary suspensions from work (27 in 2011 compared to 28 in 2010 and 46 in 2009). All measures taken are consistent with the establishment of a new sanction system which was agreed with the trade unions and involves the application of withholdings from the accrual of holidays using a progressive system if the work schedule is not respected.

#### **Internal communication**

Many internal communication projects and initiatives began in 2011 to create more sharing, cohesion, information dissemination and workforce involvement, with a view to integration and transparency.

Passaparola ("word of mouth") began at the end of 2011. This top down communication project involved 3,500 workers from the TOSs and aimed to favour awareness of the main corporate activities and initiatives, enhancing and standardising the numerous moments of communication already present in the TOSs. Whether the project will be extended to other Group companies in the future will be assessed on the basis of the results obtained.

In partnership with the Diversity Manager, new work-life balance initiatives were analysed, and topics such as the creation of the fourth intercompany crèche, Filonido in Bologna, was widely disseminated through all internal communication tools.

New elements regarding these tools include, in addition to the large Video Hera monitors placed in the main employee meeting and gathering areas, where the main Hera and Ansa news is published, touch screen monitors to connect to the company intranet which were introduced as a pilot project in Modena. This innovative tool was

planned to favour dialogue with the entire workforce and provide the main content and information published on the corporate intranet to operations staff, who do not have a pc station available.

The content of the House Organ, the monthly employee information magazine, continued to be enriched to favour more use of this tool as a source of useful and updated information and news announcements. It contained numerous features and ongoing and detailed articles, planned to provide visibility to the invisible work and the projects of the company's various structures (such as, "A year for safety in the Hera Group", "Tracking waste", "The large machine of the world", the "Hera Ski Adventure" company skiing trophy and interviews on internal services). General interest articles, curiosities, meetings and events also continue to be published in the House Organ.

Together with the House Organ, all employees received the Sustainability report, distributed as in other years in May in a full and pocket version, the new edition of the Code of Ethics, the leaflet "How to read the bill and other useful information" and the "In buone acque" (In Good Water) report, on drinking water quality.

Employees particularly appreciated recreational and sporting gatherings organised together with the Recreational associations to facilitate meeting and integration amongst co-workers from different areas. Over 250 people participated in the "Hera Cup" and 400 in the "Hera Ski Adventure", both in their fifth year.

### VolontariHeraPer ... National Food Collection Day

VolontariHeraPer continued in 2011, the European Year of Volunteering. This project was launched in December 2010, and unites the company and the workforce in a common effort of social commitment with the many volunteer associations located in the areas served by Hera. In the Hera areas, Group workers were offered the opportunity to participate in the National Food Collection Day carried out throughout Italy on Saturday, 26 November, which was organised with the high patronage of the President of the Republic, by the Banco Alimentare Foundation, a private, non-profit organisation founded to provide food for those in need. Around seventy Hera volunteers worked for the food bank: in Bologna, 20 Hera volunteers managed the booth by themselves at a supermarket, and at the end of the day they had collected 971 kg of food. In the 6 provinces served by Hera where volunteers lent a hand at booths, approximately 800 tonnes of products were collected at over 700 sales outlets: the donated food will be provided to around 100,000 people supported in the over 600 charitable structures accredited by the Banco Alimentare Foundation in this area.

#### The Corporate Intranet

On the corporate intranet reserved for Group employees, broad visibility was afforded in 2011 to information and initiatives involving the workforce, to increase the sense of belonging and favour the sharing of company objectives and values. The use of videos to communicate on the most important topics with increased efficiency was intensified (around forty company videos were created in 2011, approximately double those created in 2010). Employees were also pleased with the online announcement board, on which 400 announcements were posted in 2011.

Some of the other main news from 2011 includes the sections on the Group leadership model (with 3,400 pages viewed from July to December 2011) and on the "A year for safety in the Hera Group" initiative (1,000 hits from September to December 2011). Since November 2011, the home page has contained real time data (half-hourly averages) on electricity production and CO<sub>2</sub> emissions avoided by Hera's photovoltaic plants, which were viewed 687 times as at 31 December. Approximately 500 news items with daily updates were published in 2011. On average, 1,170,000 intranet pages were visited per month, a decrease of 14% compared to 2010, due to the migration in June 2011 of almost all customer area content to the new 4U portal dedicated to front-and back-office workers

#### Renovation and reconstruction of premises

In 2011, all the real estate of Hera S.p.A. was completed and controlled and the analysis of Herambiente's property began with the definition and control of the property deeds to all company assets (approximately 6,000). For non-productive real estate, an energy control and a consumption classification was conducted, which led to the identification of four energy containment projects which will be included in the next business plan, for 2013-2016. Energy class certification was obtained for all main buildings not used for production purposes: 18 buildings owned and 14 rented properties.

Some projects in the headquarters in Bologna regarding activities for company personnel include: completion of the new company management building (for Euro 6 million), with the subsequent entry of personnel and renovation of two additional buildings, which are now partially occupied by Famula on line. Renovations were completed on two additional buildings in the complex at the beginning of 2012, and personnel from the Personnel and Organisation and Quality, Safety and Environment departments have permanently relocated there. Also at the Bologna headquarters, work has begun on an underground car park to be used by the entire building complex. At the via del Frullo office in Granarolo (BO), work began on the new Bologna TOS location, which should be completed by the end of 2012. The site in Imola has also been adapted to resist earthquakes. Work began at the Cesena site to build the new environmental office to replace the current one in Roncofreddo (FC).

As regards company control systems, work continued on improving controls at the operating and production sites and completing the electric redundancies at the Forlì and Modena sites, as well as continuing the control systems for the local CEDs.

In 2012, activities will be carried out to complete and definitively use the two sites in Bologna (Frullo and viale Berti Pichat) and the Cesena and Imola sites. Energy containment measures were adopted for the buildings at Frullo, consisting of the construction of ventilated walls and screening to reduce solar irradiation and the use of particular insulations. These solutions have enabled the building to comply with class A set forth in Decree of the Regional Government no. 152/2008.

#### Recreational associations

The workforce has the option of taking part in the activities organised by the recreational associations of the various areas, set up in order to foster relations among employees. The associations organise cultural, recreational, sports and tourism

activities, promote special commercial agreements, organise dinner parties, outings, Christmas and carnival events, competitive sports events, fishing competitions and ski excursions. These associations also provide theatre season tickets and book-lending services.

For their members, the associations contribute a portion to book spending on the part of student workers and the children of employees and other contributions for sporting activities and discounts from several businesses.

The associations are managed independently by a Management Board whose members are elected directly by association members. The Group contributes to the activities of the associations by guaranteeing the financial resources envisaged as a part of national collective labour agreements and of locally stipulated agreements and provides space for recreational activities or for management of these activities which are also promoted though the internal communications instruments.

In 2011, 4,917 employees were members of the associations. The activities of the associations have been financed with contributions by the company (approximately Euro 602 thousand) and the employees (approximately Euro 21 thousand).

Excluding Marche Multiservizi, roughly 26,000 people participated in the activities organised by the associations.

## The internal climate survey

The internal climate survey is a fundamental instrument in the ongoing process of improvement, involvement and enhancement of the workforce, which are two of the operational principles set forth in the Hera Group Charter of Values. It began being applied in the Hera Group in 2005 and is carried out every two years to facilitate the implementation and consolidation of the actions for improvement.

The analysis of the survey results from 2009 led to the definition of 15 improvement actions. These actions were assigned to a person in charge and monitored on a quarterly basis using the balanced scorecard. Of the 15 actions planned, thirteen were fully carried out in 2010-2011, while two are expected to be fully implemented by the end of 2012.

# Progress to 31 December 2011 of the improvement actions launched as a result of the 2009 internal climate survey

the 2007 internal chinate sai vey				
Role in Hera				
Improvement actions	The situation as at 31 December 2011			
To further consolidate the Scuola dei Mestieri by completing the projects begun in 2009 and assessing the activation of new workshops.	• The projects begun in 2009 (regarding remote control and the electricity grids) were completed, and the new Knowledge Management workshops in Hera Trading and in customer management were activated and completed. The thirteenth notebook called "Training courses for employees who manage and maintain networks and electric stations" was published.			
To further develop the Apprenticeship Communities in the customer management area as a method for organisational integration and sharing of knowledge.	<ul> <li>A project was created to revise operating instructions: a pilot group of Hera Comm back office experts was formed, which defined the methodological layout and rewriting of content through a dedicated online forum, and a wiki environment was created to publish the new operating instructions. The project should be completed at the end of 2012.</li> <li>In 2011, the senior management roadshow in the local areas and</li> </ul>			
To review the methods applied for the realisation of the top	the manager/executive conventions were carried out using the			

- management roadshow in the local areas and the managers/middle managers convention.
- First level managers to carry out top down periodic communication meetings with the personnel belonging to their organisational units on specific issues.
- To realise initiatives aimed at making employees aware of the global economic value of their remuneration, with particular attention to non-monetary aspects and considering the current economic framework.
- Implement communication initiatives directed to employees on the renewal of employment contracts used in the Hera Group and the new collective labour agreement, the performance bonus indicators and the criteria for determination of the latter.

- new procedures rolled out in 2010 (more effective presentation of topics discussed and more attention to the design of the locations where meetings are held).
- Periodic internal communication meetings were held using various operating procedures in all organisational units, generally every quarter, on specific topics such as economic trends and investments, actions were implemented with attention to focus on the customer, TOS index trends and the performance bonus, objectives/actions for balanced scorecard projects. The Passaparola ("word of mouth") project was launched in the TOSs in the fourth quarter of 2011, based on experience gained in Modena.
- The topic was discussed in house organ articles regarding the new Group Supplementary Collective Labour Agreement, the commercial offerings to employees, the CiboAmico initiative, the Top Employers award and the Hera Group leadership model.
- The initiative involved the publication in 2010 of articles in the house organ regarding the renewal of the electricity sector National Collective Labour Agreement and the regular posting of new National Collective Labour Agreements and union agreements on the company intranet. All employees concerned received a copy of the Federambiente National Collective Labour Agreement. A document with a summary description of the performance bonus indices and objectives is published annually on the company intranet.

#### Workplace

#### **Improvement actions**

#### The situation as at 31 December 2011

- To further improve and enhance the internal services (e.g., helpdesk, maintenance requests).
- To carry out an in-depth survey on the perceived quality of internal services.
- To carry out communication initiatives on restructuring of the premises.
- In 2011, office and canteen maintenance service levels were punctually monitored. Maintenance ticket management and premises management procedures were revised. Articles on those innovations were published in the house organ. Ticket management monitoring began at the helpdesk, after which new targets will be defined.
- In the first half of 2011, a questionnaire was issued to a sample of approximately 10% of the company population: based on the results, disclosed in house organ articles, thirteen improvement actions were defined. Nine of the thirteen actions were carried out by the end of 2011.
- In the first half of 2011, articles were published in the house organ and news was posted on the company intranet/VideoHera regarding the opening of new priority customer branches in Vignola, Casalecchio di Reno, San Giovanni in Persiceto and Cesenatico. The planned transfers of personnel to the renovated buildings within the Bologna site were completed, and there was a dedicated article on this event in the July 2011 house organ.

#### **Immediate superiors**

#### Improvement actions

#### The situation as at 31 December 2011

- Ensure continuity in the training initiatives which develop managerial skills for managers, middle managers and supervisors in charge of organisational units and personnel.
- A new edition of the "Regulation and markets in public utility services" course was held in collaboration with the Alma Mater Foundation. The second edition of the "Managerial skills and development" course was also held in collaboration with the Alma Graduate School. The Group leadership model was presented at the managers and middle managers convention in October 2010, training workshops on the Model were held at the beginning of 2011 and specific initiatives took place throughout 2011.

#### Corporate culture

#### Improvement actions

#### The situation as at 31 December 2011

- To carry out Improvement Groups in the structures that are mostly affected by the organisational and corporate changes and proceed with the monitoring and feedback activities on the implementation of approved proposals.
- Three Improvement Groups were carried out: one on the topic of accidents and "near-accidents" in Herambiente, one on the analysis of near accidents at the Forli-Cesena TOS and one on the management of gas, water and district heating meter controls at the Bologna TOS. Monitoring was implemented and the

- To verify and update the Code of Ethics with the involvement of the stakeholders, thus concluding the three year experimentation period.
- To carry out top down initiatives aimed at developing and disseminating a culture of security with the involvement of all the employees and reducing the "work-related stress" factor.
- To carry out initiatives that aim to develop in employees an understanding of the level of customer satisfaction regarding Hera services.
- To realize specific communication initiatives aimed at the environmental impacts of the initiatives carried out by the Hera Group (energy savings, Hera<sub>2</sub>O, separated waste collection, etc.).

- relative reports were drawn up.
- In 2010, interviews were conducted with the DCPO and DCAA Directors and with the Hera Comm Chief Executive Officer and 4 focus groups were formed with employees, after which the Workgroup approved the proposal to update the Code of Ethics, discussed and approved by the Board of Directors on 26 January 2011, together with the dissemination and communication plan. In 2011, seven editions of AlfabEtico were provided for new hires
- At the end of 2011, the planning of top down training on the culture of safety was completed, and the training will be held for all Group employees in 2012. The scientific study on "work-related stress", which is part of the "A year for safety in the Hera Group" project and was carried out at the Ferrara TOS BU, was completed at the beginning of 2012.
- Articles were published in the March 2011 house organ on the residential customer satisfaction survey results, which were also presented in March 2011 during meetings with the senior management.
- Six articles on various initiatives were published in the house organ.

Two interview videos were posted on the company intranet on renewable energies and on the Sustainability report 2010. News concerning various initiatives was posted on the company intranet.

Two articles and eight briefs regarding various initiatives were published on VedoHera.

#### The fourth internal climate survey

The fourth internal climate survey was carried out on schedule in 2011: 6,153 anonymous questionnaires were handed out to workers. A very high number of surveys, 3,906, were filled out and received (63%), which is 6 percentage points higher than the 2009 survey, 17 points higher than in 2007 and 15 more than the first survey in 2005. The overall satisfaction index, composed of several elements relating to personnel satisfaction and motivation, totalled 64 points, compared to 58 in 2009, 53 in 2007 and 50 in 2005. The increase is quite significant, and for the first time it has surpassed the "attention threshold" (60) defined by the external company that handled the survey.

The major improvements are noted insofar as proximity to customers, change, listening and organisation. The most significant improvements in the satisfaction index were recorded for workers in Ferrara (+7), Forlì-Cesena (+9) and Modena (+4). The gap between the satisfaction surveyed through the customer satisfaction surveys and that perceived by the personnel is 9 points, but in any case has decreased compared to 17 points in 2009.

The increased participation and satisfaction involved all positions except for managers, who in any case maintain a very high satisfaction index (77). All positions surpassed the threshold of 60. These are the tangible signs of the positive improvement actions defined and implemented survey after survey.

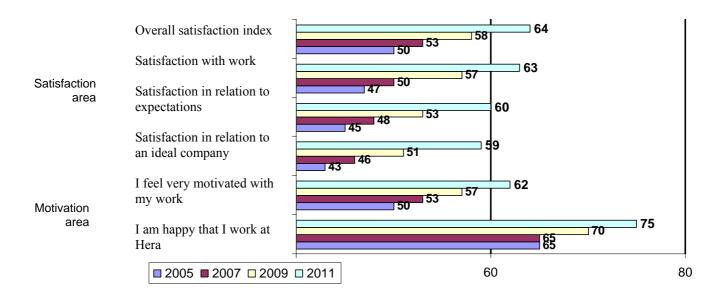
#### The methodology used for the employee satisfaction survey

The internal climate survey is conducted while ensuring the respondents' complete anonymity: the questionnaire is delivered in a pay slip envelope to all employees and returned in a self-addressed sealed envelope within one month (starting this year, the survey may also be filled out online). It has been designed to verify the extent to which

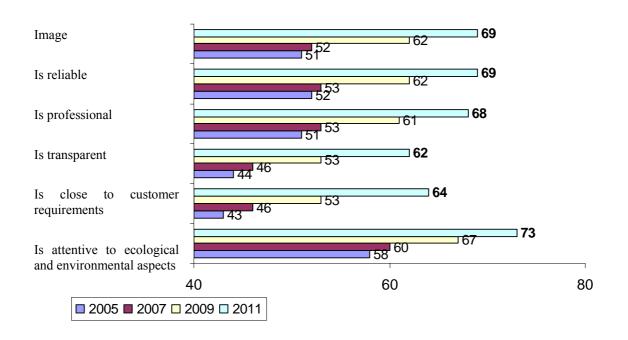
the improvements made following the previous survey are appreciated by the personnel, generating actual satisfaction and greater involvement in daily work.

The assessments of the results are expressed in numerical scales, with thresholds corresponding to the various levels of satisfaction: under 50 points indicates insufficiency, up to 60 indicates a "minimal" satisfaction area, between 60 and 70 indicates a good level of satisfaction and above 70 indicates "very satisfied".

#### **Employee satisfaction indices**

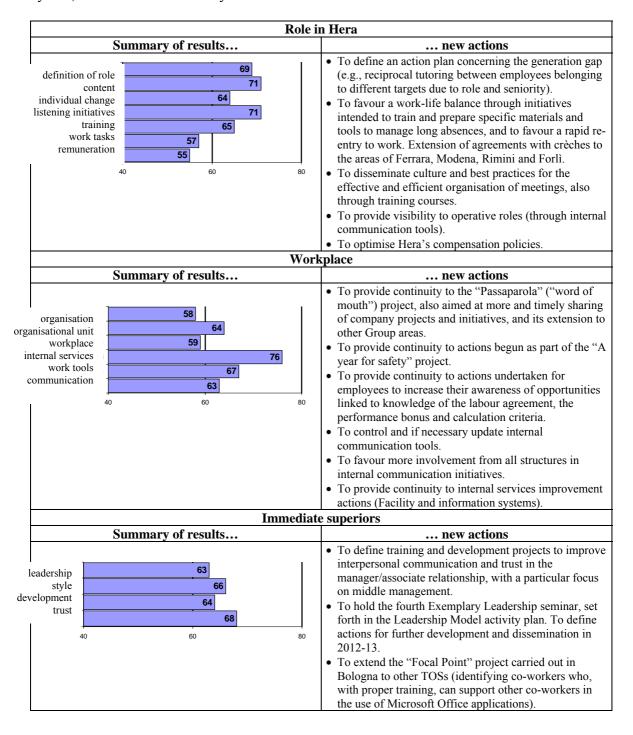


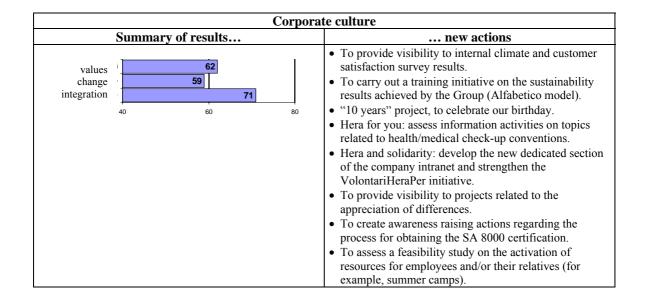
#### Hera's image with employees



Finally, the 2011 survey once again provided concrete points for which new improvement actions can be defined, which were distributed to the entire workforce together with the results of the survey with the House Organ of February 2012. As usual, these actions were assigned to a person in charge and will monitored, also by using the balanced scorecard.

Analysis of the results produced points for reflection which led to the identification of 22 additional internal climate improvement actions to be carried out in the next two years, which will be carefully monitored.





# Other dialogue and consultation initiatives

As is by now tradition, in 2011 the Chairman and Chief Executive Officer once again met with the entire workforce to present the business plan and the results of the annual customer satisfaction survey: 16 meetings were held in the various areas. The involvement of trade unions also continued on commitments related to corporate social responsibility.

Further, in 2011 a survey on employees' perceived quality of internal services (facility management, canteen and information systems) was carried out through a questionnaire issued to a sample of approximately 650 employees.

#### **Internal services survey**

Amongst the internal climate improvement actions defined in 2009 was a survey on the perceived quality of internal services (facility management, canteen and information systems). After interviews were conducted with the managers of the services involved, and focus groups were formed on a sample of employees who manage services and users, in the first months of 2011, a questionnaire was issued to a sample (around 10%) of the company population. An analysis of nearly 400 completed questionnaires (58% of those distributed) showed satisfaction which, on a scale of 1 to 10, goes from 5.9 points for facility to 6.9 points for canteen, from 6.2 points for applications management to 6.6 for the IT helpdesk. The satisfaction with facility management is above satisfactory in all areas except for Bologna and Modena, and it was found that there is little knowledge of procedures for reporting disservices and a low information level on planned maintenance. Satisfaction with the canteen service is good in all territories, with a positive opinion of the cleanliness of the premises, the quality and variability of the menu, the operator's ability to respond to various requirements, and the efficiency and courtesy of the workers.

The helpdesk also reached a good overall score (6.6) thanks to a good perception of the handling of issues, the operators' ability to respond with the proper knowledge and skills to the issues posed and, in general, to know how to suitably respond to requests

and achieve the necessary results: problems remain in the management of "suspended tickets", especially if this depends on the impossibility of contacting the person who sent the ticket. Finally, satisfaction for applications maintenance is moderate, and it is deemed that support provided during the request's progress can be improved.

On the basis of those results, 13 improvement actions were defined, planned and assigned to a person in charge, including technical and organisational improvements in internal services, and better provision of information and communication on the procedures for accessing and making use of those services. Nine of these thirteen actions had been fully carried out at the end of 2011, and the remaining four are expected to be complete within the first half of 2012.

As usual, beginning in March 2011, for the sixth consecutive year, 16 meetings were held in fewer than 3 weeks, during which the Chairman and the Chief Executive Officer explained the Group's business plan, offering a panorama of the competitive scenario and the Group's most significant projects; they also presented the results of the annual customer satisfaction survey. At the end of the meetings, attendees were able to ask questions regarding the various topics related to the company's life. The meeting layout was partially updated: more welcoming rooms were prepared, presentations were simplified, it was possible to ask questions anonymously and video contributions were introduced to make the meetings more involving and participatory.

In line with the provisions of the Group's supplementary agreement, and continuing the actions taken in previous years, trade unions were involved regarding the results published in the Sustainability Report 2010. The initiative was further developed during two meetings when the methods for drawing up the Report and corporate social responsibility tools were explained. Furthermore, involvement initiatives were launched on the topic of safety, and the initiatives planned during the year through the LaborHera study, set forth in the supplementary labour agreement signed in March 2010, were presented.

#### **Customers**

Hera serves approximately 3.2 million residents in the areas where it operates, the majority of which are located in the six provinces of Emilia-Romagna Hera also provides services to local businesses, for which fast track channels have been created. In de-regulated services (gas and electricity), Hera sells gas and electricity to 1.5 million customers in almost all regions of Italy.

Hera has surveyed its customers' satisfaction each year since 2005. Surveys are carried out by telephone and the results are used to define improvement objectives.

## **Objectives and performance**

#### What we said we would do...

- Ensure call centre waiting time of no more than 40 seconds for households and no more than 25 seconds for companies in 2011. Limit calls with waiting time of over 2 minutes to 9% for households and 4% for companies.
- Ensure branch waiting time of no more than 14 minutes in 2011 and reduce contacts with waiting time of over 40 minutes to 7%.
- Further renovate the branches in 2011, adopting the new Group layout.
- Guarantee compliance with specific commercial quality standards for gas and electricity services, and the standards set forth in the approved Service Charters, in 98% of cases.
- Improve response times to complaints, guaranteeing compliance with the response time set by the AEEG in at least 94% of cases.
- Continue to promote delivery of electronic bills: in 2011, increase by 50% the number of customers who use this service.
- Carry out specific actions to improve contact between technical operations staff and customers.
- Continue information/training activities for consumers' associations and implement a dedicated contact channel in all areas.
- Draw up a guide for reading and understanding the bill

#### What we have done...

- Call centre waiting times were 37 seconds for residential customers and 28 seconds for business customers. Calls with waiting time of over 2 minutes accounted for 11% for residential customers and 6% for companies. (see page 124)
- In 2011 the average waiting time at branches was 10.5 minutes. Contacts with a waiting time of over 40 minutes accounted for 5% of the total. (see page 125)
- In 2011, three additional fast track branches were renovated and a new branch was completed. (see page 122)
- The percentage of compliance with specific standards was 98.8%, compared to 98.6% in 2010. (see page 109)
- The claims response time set by AEEG (40 calendar days) was respected in 91.9% of the cases, compared to 86.1% in 2010. (see page 126)
- Customers receiving the electronic bill increased by 65% compared to 2010 (38,832 compared to 23,528). (see page 123)
- Four areas for intervention were identified and carried out, and for the first time, a customer satisfaction survey regarding contact with Hera's technical operations staff was conducted. The survey results show a high level of satisfaction, higher than 70. (see page 127)
- In all areas, a dedicated channel was opened for consumers' associations, with the aim of managing reports and preventing disputes between the company and customers. In 2011, this dedicated channel handled 365 cases. (see page 132)
- The guide "How to read the bill and other useful information" was distributed to the public in

• Publish the In buone Acque ("In good water") report ahead of schedule and expand its content.

October 2011, with the approval of nine consumers' associations. (see page 132)

• The In buone acque ("In good water") report was published in August, one month before it was published in 2010, with an updated graphic design and contributions from Federutility, Arpa, Romagna Acque, Last Minute Market and Inran. (see page 114)

#### We shall...

- Ensure call centre waiting time of no more than 40 seconds for households and no more than 25 seconds for companies in 2012.
- Ensure average branch waiting time of no more than 12 minutes in 2012. Ensure average waiting time of less than 5 minutes for small business customers at the eight main branches.
- Guarantee compliance with specific commercial quality standards for gas and electricity services, and the standards set forth in the approved Service Charters, in 98.5% of cases in 2012.
- Ensure a response within 120 seconds for 95% of calls to the gas service emergency number in 2012.
- Improve response times to complaints, guaranteeing compliance with the response time set by the AEEG in at least 95% of cases in 2012.
- $\bullet$  Continue to promote delivery of electronic bills: in 2012, increase the number of customers who use this service by 40%.
- Continue to promote the quality of tap water with additional information initiatives in 2012.
- In 2012, plan actions to improve the readability and clarity of the bill and work estimates.
- Improve the usability and content of the Her@ on-Line website, and in 2012 plan new services to provide online.
- In 2012, create a website section dedicated to consumers' associations.

#### **Breakdown**

#### **Energy services customers**

(thous.)	2009	2010	2011
Gas customers	1,079.0	1,081.6	1,114.5
Electricity customers	335.9	382.5	482.1

#### **Integrated water service customers**

(thous.)	2009	2010	2011
Total customers	1,170.6	1,181.1	1,185.4

#### **Urban hygiene services**

	2009	2010	2011
Municipalities served (no.)	173	181	181
Citizens served (thous.)	2,705	2,757	2,778

There was an additional increase in the number of customers in 2011, particularly for energy services. That growth was realised both due to commercial activities and as a result of acquisitions. The awarding of the tender for services subject to protection in the regions of Tuscany, Lazio, Abruzzo, Molise, Puglia and Lombardy contributed 21 thousand additional electricity supply points. Together with successful sales activities, this increased electricity supply points by 26%, compared to +14% at the end of 2010. Supply of the gas service also increased by almost 4%, against growth of 0.2% in 2010.

The objective was achieved thanks to the merger by incorporation of Sadori Gas, which works in the Marche area, into Hera Comm Marche, and significant free market sales activities.

The excellent results achieved have been possible due to product innovation, multiservice offerings and simplified management.

Particularly, product innovation was achieved with low costs and transparency, proposed with the new free market options "MomentoGiustoCasa" and "MomentoGiustoLavoro".

Proximity to the customer was strengthened in widespread activities at over 100 branches located throughout the areas served, with excellent service levels and continuous reinforcement of the sales force. Regarding these last two aspects, strong attention was placed on the maintenance of high behavioural standards, in line with the Code of Ethics and the Code of commercial conduct governing the sale of electricity and natural gas.

In 2012, we will continue to work on focusing on customer needs and service levels by:

- developing new products and offers aimed at providing customers with added value;
- continuously improving in management streamlining;
- continuously training representatives and the sales force, maintaining direct and continuous quality controls.

#### **Commercial policies**

The increase in supply points and customers for free market services was obtained by following a policy of commercial development that is based on the following main pillars for Hera:

- multiple services offer: simplifying management for customers by proposing a single contact point and only one bill for energy services (gas and electricity) and the concessions (water and urban hygiene) in the areas handled;
- proximity to customers: to be physically close to customers through a
  widespread network of branches in the entire area served and the widespread
  sales structure; to be quickly accessible through a call centre and the web; to be
  socially responsible and contribute with our activities to the growth of the
  territory and of the local communities;
- simplification of management: customers given the option of managing bills on their own through the Her@ ON-LINE portal and requesting electronic mailing of the bill and the direct debiting of utilities;
- low cost and transparency: to make our offers always competitive and clear and adapted to the needs of all customers (over thirty offers are currently available, many of which can be customised further).

The commercial strategy applies to all customer segments: households, small and medium sized companies, large companies, condominiums and public bodies, with the households segment achieving an increasingly central role.

In 2011, Hera Comm launched the new offers "MomentoGiustoCasa" and "MomentoGiustoLavoro" electricity and gas offers, to provide a discount on the energy component set forth by AEEG, for the households segment and to the companies segment. The innovative and original offers are differentiated based on lifestyles, timing

of life and customer activity, and take into account the organisation of domestic and business life. Each of the profiles analysed, for both gas and electricity, involves a higher discount which is more favourable to the customer, applied during times of day when consumption is highest.

Regarding the sales of electricity to companies, the Energia Verde (Green Energy) option of acquiring energy produced from renewable sources has been renewed. Options offered to large companies, subject to dedicated analyses, are increasingly more in line with their needs and the developments of the wholesale market.

#### The Hera Comm sales network and commercial conduct

To sell energy services to medium and small customers (households and companies), Hera Comm uses multifirm agents which propose contracts through door-to-door sales, by telephone, or by setting up appointments with customers. The Quality system defines agency selection, which involves assessing conduct in similar sectors, loyalty to a principal company, corporate solidity and years of business.

Hera Comm personnel (area managers) regularly provide all of their commercial staff and managers of agencies or their subagents, with specific training including the content of the Code of commercial conduct defined by AEEG and the rights recognised to end customers. For telephone sales, personnel uses a sales script which is regularly updated with new regulatory aspects and represents a guide of information to be transferred to the potential customer during the pre-contractual phase.

Hera Comm Area Managers also periodically support customers in assessing whether the rules provided have been applied correctly. Training is always provided before delivering the materials necessary to conclude contracts with end customers.

Regarding the rules of conduct for agents and subagents, Hera Comm has used a Sales Manual for years (integral part of the Agency Mandate, which includes the Hera Group Code of Ethics), which all partners must sign. Regarding recognisability, sales personnel must display their identity card and must present themselves to the customer clearly explaining that they work for a Hera Comm authorised agency.

There is particular focus on the quality of contracts proposed by agencies, specifically any unrequested contracts, for which the Hera Comm agency mandate sets forth specific penalties. All non-compliances related to any unrequested contracts, together with other types of non-compliance, are tracked in order to apply the penalties set forth and, if the agency does not apply corrective actions, the agency mandate is terminated for just cause. In order to promptly intercept unrequested contracts and ensure more customer protection, Hera Comm has also decided to:

- send a welcome letter to domestic customers for paper contracts as well and not only for contracts concluded by telephone;
- send the welcome letter to non-domestic customers:
- extend the right to back out of the contract to non-domestic customers and to domestic customers, even if the contract was stipulated at a branch and not by telephone.

Furthermore, in order to ensure the prompt receipt of the customer's change of decision, it was decided that the free market supply would be activated two months after the customer signs the contract.

Controls and corrective measures concerning this phenomenon regard contracts formalised by employees and by sales agents. All contracts are subject to a preventive quality check aimed at controlling the authenticity of the contract's signing, while for

telephone contracts, there is also a system to check the quality of a sampling of calls. If fraudulent conduct is suspected, Hera Comm initiates controls and corrective actions aimed at excluding its personnel's sales methods which do not comply with the legal and regulatory context in force and professional integrity.

To confront the phenomenon of unrequested contracts, Hera Comm has proposed a dual approach to AEEG: preventive, and issue management. From the prevention perspective, Hera Comm suggested that it would strengthen the welcome letter instrument before the contract is activated, in order to inform the end customer and to help customers to not enter into contracts which, if informed, they would not have otherwise signed. Related, instead, to management, Hera Comm suggested that it would introduce a regulatory institution founded on the application of a price aligned with the protection conditions to customers who are victim to incorrect commercial practices, without prejudice to the right of customers to change their minds and withdraw.

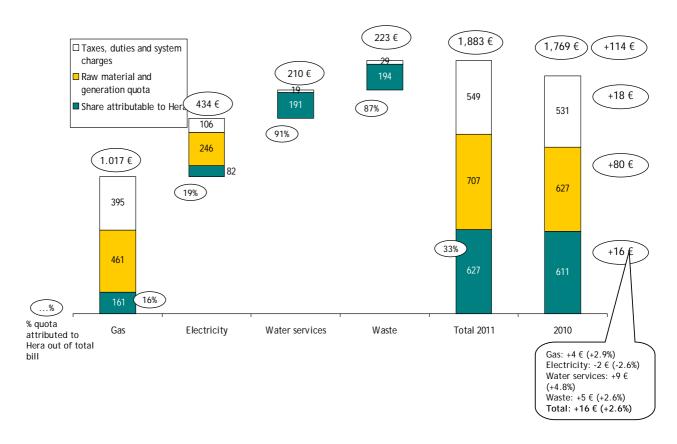
## Tariffs and billing

Hera manages regulated services (e.g. the integrated water cycle, urban waste, and gas and electricity distribution) and free market services (e.g. waste disposal and gas and electricity sales). For regulated services, the tariffs applied by Hera are regulated by controlling authorities (AEEG – Italian Authority for Electricity and Natural Gas and ATO – Water and Waste Regulatory Authorities), while for free market services, tariffs are freely determined by the sales company. For sales tariffs, AEEG defines and updates quarterly the prices for domestic and non-domestic electricity customers which chose to not take advantage of a free market option and for natural gas service domestic customers which, having chosen to not take advantage of a free market option, are subject to the protective economic conditions defined by AEEG.

The costs of Hera services for an average customer

Euro	2009	2010	2011	Change 2011/2010
Gas	947.58	926.06	1,016.96	90.90
Electricity	453.60	425.64	433.98	8.34
Water services	187.45	200.02	209.62	9.60
Waste	211.57	217.16	222.78	5.62
Total	1,800.20	1,768.88	1,883.34	114.46
of which attributed to Hera	592.93	611.34	627.30	15.96
of which attributed to raw materials and generation	701.00	626.64	706.98	80.34
of which taxes, duties and system charges	506.27	530.90	549.06	18.16

#### The costs of Hera services for an average customer



In 2011, an average customer spent Euro 1,883 for Hera's services; of this amount, only 33% represents elements of the falling under the responsibility of Hera. 2011 recorded an increase in the total cost of Euro 114 compared to 2010. This increase was mainly caused by the increase in the raw materials and generation portion, which increased by Euro 80. In percentage terms, the total cost for Hera services increased by 6.5% compared to 2010.

The Euro 16 addition to Hera's portion corresponds to 0.8% of the total amount of Hera bills and mainly concerns the water service (Euro 9), the waste management service

(Euro 5) and the gas service (Euro 4); the portion attributable to Hera for the electricity service decreased by Euro 2. The "Momento Giusto" (Right Time) package that Hera Comm offers to residential customers from February 2011 makes it possible to save up to around Euro 35 on the gas bill.

The gas bill

0				
Euro	2009	2010	2011	<u>-</u>
Raw material component	431.96	388.45	461.17	
Sale quota	39.30	42.79	42.79	Attributable to Hera: 16%
Distribution tariff	115.34	114.05	118.55	out of the total bill
System charges	3.16	13.01	10.73	
Consumption tax	191.01	197.97	197.97	
Regional tax	36.27	37.43	37.43	
VAT (10%/20%/21%)	130.54	132.37	148.32	
Total	947.58	926.06	1,016.96	-

Arithmetical average of six bills for a residential customer in the municipalities of Bologna, Ferrara, Forlì, Imola, Modena and Ravenna, whose yearly consumption measured by the meter totals 1,200 cubic meters of methane gas. The grey areas refer to tariff components not falling under the responsibility of Hera. A customer under "market tariff protection conditions" was considered, to whom the economic conditions defined by AEEG are therefore applied. The complete data regarding the gas supply tariffs are available on the Group's internet site.

The 2011 gas bill increased by 9.8% compared to last year. The main increase was recorded in the raw materials component, a consequence of the increase in the cost of fuel throughout 2011, which is directly linked to the wholesale sales component, which defines natural gas purchase costs (+Euro 73). The distribution tariff increased by Euro 4, while system charges decreased by Euro 2. Consumption tax and the regional tax are unchanged.

Gas distribution tariffs are set annually by AEEG on the basis of the criteria of ARG/Gas resolution 159/2008, which governs the gas tariff scheme for the current regulatory period of 2009-2012. Tariffs are differentiated for the six macro-regional areas into which the country is divided, and are determined to guarantee coverage at the macro-area level of the cost of capital and operating costs incurred by distributors. Specifically, the obligatory tariff levels for the distribution service and natural gas metering for January-December 2011 were approved with ARG/Gas resolution 235/2010. On average, the distribution tariff affected the total bill for 2011 by 11.7%.

Part of the distribution tariff includes components to cover general gas system charges (such as energy saving promotion costs) which the individual distributors treat as contra-items, paying the relative proceeds to the national Adjustment Fund. These bill components are included in the "system charges" item. In 2011, system charges updated by ARG/com resolution 236/2010, as updated quarterly, decreased by approximately Euro 2.27 compared to the previous year.

The portion of sales relative to the economic conditions of the supply for the service subject to protections, defined by AEEG, is governed by ARG/gas resolution 64/2009. This resolution specifically defines:

• the wholesale component, which is updated on a quarterly basis; ARG/gas resolution no. 89/10 then amended, for the thermal year from October 2010 to September 2011, its quarterly updating formula by introducing a coefficient to

attenuate the change related to fuel costs; resolution AEG/gas 77/2011 changed that coefficient for the subsequent thermal year, October 2011-September 2012;

- the components to cover transport and storage costs;
- the retail sales component, the value of which has been in force since 1 July 2009.

The raw materials component is calculated as the wholesale sales components plus the transport and storage components and accounted for an average of 45.4% of the bill total in 2011.

Lastly, in 2011, taxes account for an average of 37.7% of the total. These taxes are due to the State and regional local government authorities (consumption tax, additional regional tax and VAT). Taxes are set by specific provisions by the Ministry of the Economy and Finance and the regional government authorities, and vary according to the use of the gas, whether for heating or only for cooking or industrial uses. Beginning in January 2008, VAT is applied at 10% for up to 480 cubic metres per year, and VAT of 20% is applied to amounts over that for bills issued until 16 September 2011, and VAT of 21% is applied for subsequent bills due to the entry into force of the law converting Decree Law no. 138/2011.

The Hera Comm "Momento Giusto" package has been offered since February 2011. By subscribing to this offer, the customer receives a discount on the wholesale sales component defined by AEEG by choosing from amongst the various profiles and obtaining a higher discount for the time during which consumption is higher. The "Momento Giusto" offer enables savings of approximately Euro 26, or around 3% of the bill mentioned above. Before subscribing to Hera Comm's offer as part of the deregulated market, the customer receives a sheet summarising all payments, set up according to the templates provided by AEEG ARG/com resolution no. 104/2010, which provides a comparison of the estimated annual expenses deriving from the offer with the estimate of annual expenses deriving from the economic terms and conditions of the supply for the service subject to protection, defined by the AEEG.

#### The electricity bill

Euro	2009	2010	2011	_
Energy quota	248.24	214.18	220.18	
Dispatching quota	20.80	24.01	25.63	
Distribution and sales quota	83.91	83.83	81.69	Attributable to Hera: 19% out of the total bill
System charges	37.05	43.96	46.21	
Tax	22.36	20.97	20.82	
VAT (10%)	41.24	38.69	39.45	
Total	453.60	425.64	433.98	_

Bill for a residential customer with an installed capacity of 3kW, whose yearly consumption totals 2,700 kWh. The grey areas refer to tariff components not falling under the responsibility of Hera. A customer of the market with the highest protection with a residential contract was considered.

The electricity bill of a residential customer to which the service subject to the highest protection is applied increased by 2% in 2011 compared to the previous year, mainly due to the increase in generation costs (+Euro 6), dispatching costs (+Euro 2) and system charges (+Euro 2). The distribution and sales quota decreased by Euro 2. It is only this latter portion of the bill which is attributed to Hera for coverage of the management and maintenance costs of the power grid incurred by the distributor Hera

S.p.A. and the costs for sales activities (invoicing, bill sending, etc.) which are incurred by the sales company Hera Comm. This amount is 19% of the bill total.

For domestic customers in the most protected market, since 1 July 2010, AEEG has established the gradual introduction of twin rate tariffs, differentiated based on the different times of day and days of the week during which electricity is used; those prices were applied gradually after a suitable information campaign on the bill for all consumers which have the new reprogrammed electronic meters. The 2011 bill is calculated by using the provisional twin rate tariff and the profile type defined by AEEG (one third of consumption in the peak period and two-thirds during non-peak periods), which causes no difference between the twin rate and single rate prices. Customers can save by consuming more during non-peak hours, when lower tariffs are applied. Bills sent to customers include the following macro-items:

- sales service (costs incurred to purchase energy and for the dispatching service, which ensures a balance between electricity supply and demand at all times);
- grid services (to cover the service for transporting electricity on the national transmission and local distribution grids to the meter, including transport, distribution and metering costs and system charges);
- taxes.

System charges, included within grid services, are set quarterly by AEEG resolutions and are paid by all end customers; these charges cover costs incurred for work carried out on the electricity system as a whole in order to achieve objectives identified by the Government in the interest of the general public. In particular, this item includes the following main components:

- promotion of energy generation from renewable and similar sources (Euro 38)
- dismantling of nuclear power plants (Euro 3);
- coverage of mechanisms to equalise electricity transmission, distribution and metering costs (Euro 2);
- financing of special tariff regimes (Euro 1).

In addition to the regulated tariffs of the highest protection market, customers can choose amongst the various packages offered by free market suppliers: Hera Comm offers "Momento Giusto" for residential customers and small companies; with this offer, customers can obtain advantageous conditions during timeframes in which they consume more, by choosing from three available consumption profiles. Before subscribing to Hera Comm's offers as part of the de-regulated market, such as for the gas service, the customer receives a sheet summarising all payments, set up according to the templates provided by AEEG ARG/com resolution no. 104/2010, which provides a comparison of the estimated annual expenses deriving from the offer with the estimate of annual expenses deriving from the economic terms and conditions of the highest protection market defined by the AEEG.

**Integrated water services bill** 

Euro	2009	2010	2011	<del>-</del> 
Aqueduct	87.55	91.51	94.42	
Sewage	19.26	21.12	22.50	Attributable to Hera: 91%
Purification	52.71	57.35	61.18	out of the total bill
Fixed quota	10.89	11.86	12.46	
VAT (10%)	17.04	18.18	19.06	
Total	187.45	200.02	209.62	_

Arithmetical average of seven bills for a household of 3 residents in the municipalities of Bologna, Ferrara, Forlì, Imola, Modena, Ravenna and Rimini whose yearly consumption totals 130 m<sup>3</sup> of water. The grey areas refer to tariff components not falling under the responsibility of Hera.

The average bill for a residential customer for 130 cubic metres per year increased from Euro 187.45 in 2009 to Euro 209.62 in 2011, an increase of 4.8% in the last year, and 6.7% in the previous year.

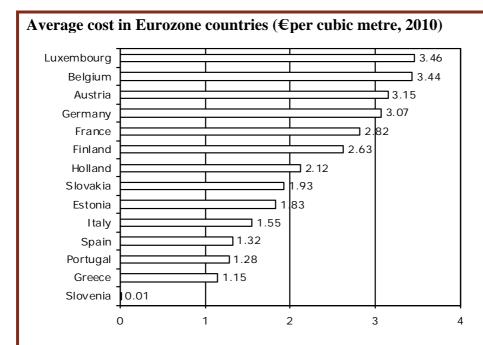
In 2005, the tariffs for the water cycle were set by the Water and Waste Regulatory Authorities (they had previously been defined by the CIPE) with regard to all components relative to the variable water quota, the fixed quota, and sewage and purification quotas.

The tariffs applied for 2008-2011 are those resolved by the Waste and Water Regulatory Authorities in accordance with agreements subscribed for the five-year period 2008-2012, in application of the new regional method introduced by the Regional Council President Decree no. 49 of 13 March 2006 (except for the Modena ATO, for which the agreement refers to 2010-2014, the first regulatory period during which Regional Council President Decree no. 49 of 13 March 2006 applies), and the Bologna ATO, for which the agreement refers to 2011-2015).

Since 2008, the tariff has also included the costs for management of rainwater for Water and Waste Regulatory Authorities of Bologna, Ferrara, Forlì-Cesena (limited to a small part of the municipality of Cesenatico), Modena, Ravenna and Rimini.

#### The cost of water in Italy and Europe

The Blue Book report published by Utilitatis in 2011 compares water tariffs based on a sample of 272 foreign cities in 34 different countries. Our country is on the lower end of the ranking drawn up based on the annual expense for a household which consumes 180 cubic metres. Considering the 14 countries from the Euro area 2010 included in the sample, the average unit cost was Euro 2.09 per cubic meter in 2010, with values above Euro 3 in Luxembourg, Belgium, Austria and Germany.



According to the 9th national survey on a sampling of national water service tariffs published by Federconsumatori Modena in 2011, the average cost in Italy for consumption of 200 cubic metres was Euro 311 in 2010, with significant differences in the 90 provincial capitals analysed: the cost goes from Euro 115 in Milan (Euro 0.6 per cubic metre) to Euro 478 in Florence (Euro 2.39 per cubic meter). During the same year, the average cost was Euro 363 (Euro 1.81/cm) in the provincial capitals served by Hera.

The average expenditure for the integrated water service differs in the various areas in which Hera operates and this depends on the different industrial cost structures in the various local areas, this also being due in particular to the quality of water at the origin, the proximity of the abstraction source used, and investments made.

The tariff trends for the three-year period helped us to make considerable investments, particularly for those sectors with a higher environmental impact, such as reclamation from sewage-purification.

In 2010, the portion of the tariff intended to cover investments made and repay capital invested was 25% of the tariff, while the remaining 75% went to cover operating, maintenance and emergency costs for grids and plants and the fees paid to municipalities and asset companies for the use of infrastructures. In this regard, it should be noted that in 2010, Hera is well above the average of investments in the water sector made by the 13 main Italian multi-utility companies; specifically, it invested Euro 384 per 1,000 cm of water billed, compared to the average of Euro 311.

Ministerial Decree of 30 September 2009, implementing Law no. 13/2009 regarding customers connected to the sewage network without purified sewage, establishes that if there are no purification plants in place, or if such plants are temporarily off-line, users connected to the sewers do not have to pay the portion of the tariff regarding purification. Nonetheless, charges already incurred and expected for the design and construction of purification plants shall be deduced from the amount to be returned/subjected to the provisions of law. The Ministerial Decree sets the term for returning the tariff component regarding purification at five years. Hera surveyed users connected to the public sewerage network and not connected to treatment plants, and

identified the amounts paid by each user for the treatment service, the volumes of water invoiced to them and the relative reference periods and provided this information to all Water and Waste Regulatory Authorities which resolved on the lists and authorised the operator to disburse refunds. Customers can check if they are entitled on the Group's website.

The percentage of users in the areas served by Hera who are connected to the sewer network without purified sewage accounts for 0.9% of the total. In Italy, approximately 17% of users were in this situation in 2007 (Blue Book, Utilitatis, 2009).

#### On tariffs applying to water and waste services....

The Galli law and Ronchi decree establish the principle that the tariffs for integrated water services and urban waste, respectively, must fully cover service management costs while also providing appropriate returns on the capital invested by the operator for the services in question (via application of the "normalized method" for tariff setting). Within the area served by Hera, the tariffs situation is fairly varied from this point of view.

For the urban waste management service, 92% of costs were covered in 2010. The provisional figure for 2011, to be confirmed only after the economic/financial reporting for the service is complete, is 95%.

For the integrated water service, currently 98.4% of the costs and the return on investment foreseen in the plans agreed with the Water and Waste Regulatory Authorities was covered by the tariffs that were effective in 2011.

#### **Billing for waste management**

Euro	2009	2010	2011	-
Fixed quota	73.04	73.81	75.74	Attributable to Hera: 87%
Variable quota	110.93	115.02	117.98	out of the total bill
Additional province charges	18.40	18.89	19.37	
VAT (10%)	9.20	9.44	9.69	
Total	211.56	217.16	222.78	_

Arithmetical average of six bills for a household of 3 people, resident in the municipalities of Ferrara, Forlì, Imola, Modena, Ravenna, and Rimini, in an apartment measuring 80 m<sup>2</sup>. The grey areas refer to tariff components not falling under the responsibility of Hera.

A household of 3 people, residing in an apartment measuring 80 square metres paid approximately Euro 223 in 2011, an increase of approximately Euro 6 compared to 2010 (+2.6%). Therefore, the upward trend recorded between 2009 and 2010 continues, which is lower than the 4.9% average tariff increase for the urban waste service recorded in Italy in 2011 (national consumer price index for the general public, waste collection, source: Istat) and lower than the inflation rate reported by Istat (national consumer price index for the general public, waste collection), which was 2.8% in 2011. A recovery project related to evasion and avoidance continues to be active in all areas managed and helps limit the growth of user tariffs.

Tariff increases are caused by the need to raise tariffs toward completely covering service costs.

#### **Extended hours for waste collection centres**

In the course of 2011, many Collection Centres were open on Sundays in the various municipalities of the Imola-Faenza area, and environmental promotional gifts were distributed to users if they reached the pre-established levels of materials brought to the centres. As well as making residents more aware of the Collection Centres, the initiative recorded 925 average daily accesses and a 15% increase in the number of disposals compared to 2010: a good 285,274 out of a population of 231,222 residents.

In order to incentivise separate waste collection, Hera provides tariff discounts to people who bring their waste to the Collection Centres: the discounts applied differ in the various local areas and are subject to the approval of the Water and Waste Regulatory Authorities and the Municipalities.

Analysing the disposals at the Collection centres, it can be calculated that a for household with 3 members which annually disposes of 245 kilograms of waste (paper, cardboard, glass, plastic, tins, other materials such as oils, small appliances, etc.), the average discount is approximately Euro 23, which, in addition to the VAT and regional tax savings, is 12% of the average bill.

In the areas where domestic composting is also incentivised (if there is no organic waste collection service), the discount applicable to a household of 3 people varies from Euro 15 in Rayenna to Euro 24 in Modena.

With this discount system, residents who systematically bring their segregated waste to the Collection centres and also carry out domestic composting can benefit from a discount of Euro 35 on their bills which, in addition to VAT and regional tax savings, represents 18% of the bill.

#### Waste: incentives for prevention and reuse

The Ferrara Water and Waste Regulatory Authority provided discounts on the TIA (Environmental Hygiene Tariff) for business concerns that donate food and other still usable products to aid associations rather than sending them for disposal as waste (a total of approximately 200 metric tons of products were donated in 2011).

Also with a view to preventing waste, Hera promotes domestic composting, with initiatives which have involved the distribution of around 26,000 composters to date. Further, in order to incentivise that activity, Hera recognises a discount on the bill in municipalities for which it is set forth in the TIA regulation. These discounts were applied to approximately 22,000 users in 2011. Domestic composting reduces the production of waste by transforming organic food waste, leaves and plant scraps into compost, a natural fertilizer.

Hera is carrying out trial projects in two municipalities in order to define a precise tariff model in line with the services offered in the area.

The model's characteristics will include independence from the collection system, the volumetric calculation (counting the emptying tariff) on vehicles, the recognition of disposals for non-separated and organic materials and the bonus system for those who bring their waste directly to the separate waste collection centres (in addition to maintaining the main types of discounts currently applied).

#### The district heating bill

8			
Euro	2009	2010	2011
Meter rental	24.99	25.82	26.64
Variable quota	898.39	886.98	983.29
VAT (10%/20%)	109.05	101.03	100.99
Total	1,032.43	1,013.82	1,110.92

Arithmetical average of the bills for a household resident in the municipalities of Bologna, Cesena, Ferrara, Imola and Modena, with average consumption of 1,200 m³ of methane gas, with a monomial domestic tariff. The bill for Ferrara was calculated excluding the tax incentives recognised due to the prevalent use of geothermal sources. The grey areas refer to tariff components not falling under the responsibility of Hera.

The expenses incurred by a household in 2011 for district heating is 9.6% higher than in 2010. The aforementioned district heating bill was calculated considering a family with an average consumption of 1,200 cm of methane gas.

Comparing the average expenses paid by a household for the district heating service with those which would be required for a methane gas plant, it is clear that district heating brings about significant savings.

These savings amounted to an average of 11%, and are substantially the same in the various areas in which the Group tariff was fully applied, except in Ferrara, where savings were greater, as customers in this area can take advantage of a "tax incentive" due to the prevalent use of geothermic renewable sources.

This savings for district heating compared to the gas expense is caused by the fact that with district heating, lower accessory charges are incurred for the management of the domestic boiler: for district heating, accessory costs come to Euro 45, while for gas, they come to Euro 275 per year (the annual quota for the purchase of the boiler and the related ordinary and extraordinary maintenance costs).

#### **Social tariffs**

For the supply of **electricity**, the "social bonus" is an instrument introduced by the government in 2008, and made operational by the AEEG, in partnership with the municipalities, for the purpose of supporting families undergoing financial difficulties and large families, guaranteeing savings on their electricity expenses. The electricity bonus is also provided for persons with physical difficulties, meaning cases of serious illnesses which require the use of electronic medical devices which are crucial for keeping the patient alive.

For families undergoing financial difficulties and large families, the bonus provides savings of about 20% of the estimated annual expenditure (net of taxes) of a typical family. The amount is differentiated based on the number of members of the family.

Also for gas, the "social bonus" provides a reduction in bills for low-income families and large families. The bonus was introduced by the government in 2009 and made operational by the AEEG, also in this case in partnership with the municipalities. The bonus exclusively applies to natural gas distributed through the network (and not to gas in cylinders or LPG) and to consumption in the user's residence. The bonus can be requested by all domestic customers who use natural gas with a direct supply contract or through a condominium plant. The bonus is determined each year by the Authority in order to provide savings of about 15% of the estimated annual expenditure for the supply of natural gas (net of taxes).

#### The district heating social bonus

For the second year, Hera has voluntarily introduced a bonus to offset expenses for the district heating service, to be applied with the same procedures as those used to apply the offset to gas and electricity service expenses. The bonus varies from Euro 86 to Euro 160 per year, based on the number of household members and the climatic area. 815 applications were submitted in 2011 (862 in the previous year).

For the **water service**, the tariffs set by the Water and Waste Regulatory Authorities of Modena (only in municipalities where the per capita tariff is not applied), Pesaro-Urbino, Ravenna and Rimini envisage a tariff for "domestic use by large families" with reductions for families with more than six members (and with more than 3 members for the Modena Area). The Water and Waste Regulatory Authorities of Ferrara, Modena, Rimini and Forlì-Cesena (only in some municipalities) have also provided incentives for disadvantaged families with ISEE (Equivalent economic status indicator) income below the thresholds set forth by the various municipalities.

#### The per capita tariff rewards water savings

In some municipalities in the provinces of Bologna, Modena and Ravenna, the Water and Waste Regulatory Authorities have introduced a tariff for domestic uses, which takes into account the number of household members (per capita tariff) to incentivise water savings and facilitate large households.

With the per capita tariff, the bill is calculated taking into consideration the number of household members: tariffs are favourable for low levels of consumption, while they are penalising for consumption exceeding the amount set for each person based on the savings objectives of the Water Protection Plan of the Emilia – Romagna Region (a base supply of 150 litres per day per inhabitant was set, so, 55 cubic metres per year). The per capita supply, as well as the consumption brackets, vary based on the number of persons in the household, thereby facilitating large households which necessarily have a higher consumption.

The per capita tariff is applied only to residential users and, in 2011, it was applied in 55 municipalities located in the provinces of Bologna, Modena and Ravenna, where 39% of the population served by Hera resides.

Regarding waste management services, Hera applies social tariff reductions in agreement with some ATOs and municipalities, in favour of parties who are experiencing serious social/assistance difficulties, who can be recognised as totally or partially exempt from the TIA payment. Funds have been allocated for this purpose, and they may be paid directly to the parties concerned, identified based on income, or paid to the Operator to cover lower collections from the bills of those households. From year to year, municipalities provide a list of families assisted and resolve on the necessary funds, which the Operator includes within the financial plans to cover service costs. Furthermore, in some areas the tariff can be reduced in favour of domestic users with one individual disabled household member, or with a degree of permanent invalidity of over 60%.

Hera allows customers faced with financial difficulties to pay their bills in instalments. Usually, three monthly instalments are allowed, which can be increased up to nine in

some cases of financial hardship (registration of the customer in the workers' mobility lists reported by social services). The interest rate applied to the instalment amount is the official reference rate of the European Central Bank (equal to 1% at the end of 2011), increased by 3.5%: with the exception of amounts relating to the TIA tariff, for which the legal rate defined through ministerial decree is applied (1.5% in 2011). The AEEG established that for adjustment bills of significant amounts with respect to the estimated bills, customers can request to pay in instalments: in this case, the official reference interest rate of the European Central Bank is applicable. Throughout 2011, approximately 90,000 instalment plans were applied for residential customers, an increase of roughly 16% compared to the previous year (+4% in terms of value divided into instalments). The number of instalment plans implemented for business customers (approximately 5,800) is instead stable, with a decrease of 29% in the overall value compared to 2010.

The supply agreements involve possible suspension of service if the bill is not paid. In these cases, the procedure involves sending a first reminder approximately 20 days after the bill's expiry (only for debts of up to Euro 500) and a subsequent reminder (after an additional 20 days) by registered mail, which informs the customer that the service is at risk of suspension. If payment is not made, the supply is suspended, on average three months after the bill expires. The customer may request to pay the bill in instalments throughout this period. If the suspension involves condominium users, it is customary to inform the residents individually before the service is suspended. For the supply of water, Hera limits or suspends the supply in compliance with the provisions of the Integrated Water Service Charter and regulations in force in the various ATOs.

#### Benefits for unemployed and laid off customers extended by one year

Hera decided to extend by another year the benefits already set forth for these customer categories, which were set to expire on June 2011. The benefits introduced in 2010 also incorporated a request made by trade unions and local authorities, and were founded on the basis of the desire to contribute in a practical manner to facing the criticalities generated by the economic and financial crisis. The benefit consists of granting 6 months of instalment payments without interest for bills for all services provided between 1 July 2011 and 30 June 2012, or the extension of the payment due date, and is intended for customers who are taking advantage of the extraordinary temporary lay-off fund, in mobility or dismissed for unjust reasons.

# **Service quality**

#### **Electricity and gas**

Regulation of quality divides the standards to be met into "general" and "specific". Failure to meet the latter due to causes attributable to Hera requires the payment of indemnities to customers, which may vary depending on the type of supply (low or medium voltage for electricity, the meter category for gas), the delay in executing the service and the times required for compensation. The automatic compensation varies from Euro 30 to Euro 120 based on the type of supply, and can increase based on the delay in the provision of service or the fulfilment times.

Among the specific quality standards for the distribution service, we note the time limits for executing works, activating supply, and the failure to comply with the punctuality bracket for appointments scheduled with customers (ARG/gas resolution 120/2008). For sales, the standards monitored are compliance with the time limits for adjusting bills and claim response time (Consolidated Regulations on the Quality of Electricity and Natural Gas Sales Service).

#### Water and waste management

When managing the integrated water service and the urban waste management service, the operator is committed to complying with specific minimum quality standards set forth in the Service Charter. The Service charter is drawn up on the basis of a reference template prepared by the Water and Waste Regulatory Authorities and annexed to signed agreements.

The water service charters have been applied for all Water and Waste Regulatory Authorities since 2011, including that of Modena, although it has not yet been approved. The approved service charters were presented to the consumer associations and made available at branches and on the website, following a notification regarding their approval provided in the bill.

The Waste Management Services Charter has only been approved by the Water and Waste Regulatory Authorities of Ferrara.

Since 2008 the monitoring of the quality standards for the approved charters has been in place, as well as the related automatic settlement of compensation to customers whose services were provided outside of the standard time limits (in line with the provisions of the AEEG), due to causes attributable to Hera, in addition to the payment of compensation upon requests from individual customers when automatic compensation is not foreseen. The specific quality standards providing automatic compensation include the timeframe for estimation regarding simple aqueduct works, activation of supply and reactivation in the event of late payment. The base automatic compensation varies from Euro 26 to Euro 32 in the various areas, and can increase by up to three times due to delays in service execution times and by up to three times for delays in paying the compensation.

#### **District heating service**

In 2008, Hera began monitoring the quality of significant services and paying automatic compensation to customers if the commitments set forth in the "District heating service quality charter" are not respected; this benefit is voluntary since there is no external authority in charge of regulating the service. The automatic compensation varies from Euro 30 to Euro 120 based on the type of supply, due to failure to comply with standards, for causes attributable to Hera, such as estimation for the execution of simple works, the activation and reactivation of supply in the event of suspension due to late payment. The compensation may be increased by up to five times due to delays in fulfilment times

**Compliance with specific quality standards** 

%	2009	2010	2011	Number of services provided (2011)
Gas	97.3%	98.6%	98.8%	998,984
Electricity	96.8%	97.6%	97.6%	44,563
Integrated Water Services	98.1%	99.0%	98.9%	130,494
District Heating	99.3%	98.7%	98.8%	760
Total	97.5%	98.6%	98.7%	1,174,801

Data do not include Marche Multiservizi.

Compliance with specific gas and electricity quality standards

%	2009	2010	2011	Number of services provided (2011)
Gas sales	99.0%	94.9%	97.1%	4,242
Gas distribution	97.2%	98.6%	98.8%	994,742
Total gas	97.3%	98.6%	98.8%	998,984
Electricity sales	92.7%	90.0%	95.2%	2,711
Electricity distribution	97.0%	98.0%	97.8%	41,852
Total electricity	96.8%	97.6%	97.6%	44,563
Total	97.2%	98.4%	98.7%	1,043,547

Data do not include Marche Multiservizi.

The table shows the percentage of compliance with standards calculated as the portion of services that conform to the standards (or those which do not conform due to causes not attributable to the company) out of the total services rendered and subject to the automatic compensation. This is the percentage of services subject to the automatic compensation for which Hera responded within the times set forth by AEEG or the Service Charters.

The overall data show an additional improvement: in 98.7% of cases, Hera provided the service requested by the customer within the timeframes established by the Italian Authority for Electricity and Natural Gas or by the Services Charter in force (95.8% in 2008).

Compliance with specific gas distribution quality standards

Companies with specific gas distribution quarty standards						
<b>%</b>	2010	2011	Number of			
			services provided			
			(2011)			
Estimates for simple work	93.2%	90.2%	6,357			
Execution of simple work	90.4%	87.6%	4,737			
Estimates for complex work	97.5%	99.1%	108			
Supply activation	99.7%	99.4%	49,856			
Supply deactivation	97.1%	97.3%	28,303			
Reactivation after late payment	98.8%	99.3%	12,581			
Punctuality bracket for postponed	99.8%	99.6%	15,539			
appointments						
Punctuality bracket for agreed	99.4%	99.5%	77,329			
appointments						
Provision of technical data obtained	83.3%	25.7%	440			
through readings, requested by						
vendor						
Provision of other technical data	73.3%	59.2%	1,457			
requested by the vendor						
Control of metering unit		95.8%	621			
Time of control of metering unit		99.0%	797,396			
Total	98.6%	98.8%	994,742			

Data do not include Marche Multiservizi.

Compliance with specific electricity distribution quality standards

%	2010	2011	Number of services provided (2011)
Supply estimate	96.4%	95.9%	2,146
Execution of simple work	96.4%	97.8%	1,647
Supply activation and transfer	97.2%	96.9%	10,586
Supply termination	98.2%	98.0%	7,165
Control of metering unit	86.8%	87.2%	47
Voltage control	100.0%	33.3%	3
Supply reactivation following	97.5%	96.8%	3,048
suspension due to late payment			
Punctuality bracket for agreed appointments	98.9%	98.7%	13,581
Punctuality bracket for postponed appointments	99.1%	99.4%	2,698
Supply recovery following metering unit malfunction	98.2%	96.4%	524
Provision of technical data obtained through readings, requested by vendor	-	87.5%	31
Provision of other technical data requested by the vendor	-	96.0%	376
Total	98.0%	97.8%	41,852

Data do not include Marche Multiservizi.

Compliance with specific gas and electricity sale quality standards

%	% 2010		Number of services provided (2011)
Response to claims	93.7%	96.8%	6,232
Billing adjustments	93.1%	99.5%	586
Double billing adjustments	60.2%	63.0%	135
Total	93.0%	96.3%	6,953

Data do not include Marche Multiservizi.

Compliance with specific water service quality standards

Compliance with specific water service quanty standards					
0%	2010	2011	Number of services provided (2011)		
Estimates for execution of simple work (water system)	97.3%	93.9%	6,174		
Estimates for execution of simple work (sewer system)	96.9%	96.4%	495		
Estimates for execution of complex work (water system)	99.2%	97.8%	1,231		
Estimates for execution of complex work (sewer system)	99.6%	99.1%	216		
Execution of water connection for interventions related to simple work	96.1%	95.4%	4,188		
Execution of sewer connection for interventions related to simple work	91.2%	88.1%	295		
Service supply activation and transfer	99.6%	99.6%	30,162		
Service supply termination	97.4%	97.9%	19,818		
Supply reactivation following suspension due to late payment	99.5%	99.2%	5,940		
Punctuality bracket for appointments agreed with the user	99.8%	99.7%	49,722		
Punctuality bracket for appointments	99.8%	99.7%	8,125		
postponed with the user					
Billing adjustments	92.0%	100.0%	219		
Response to claims	97.8%	98.0%	3,909		
Total	99.0%	98.9%	130,494		

Data do not include Marche Multiservizi.

For the integrated water service, reference is made to the standards set forth in the Services Charters. Compliance with response times for written claims, although not set forth in the Charters, is voluntarily considered and compensated by Hera for the integrated water service as well, together with the billing corrections.

Compliance with specific district heating quality standards

%	2010	2011	Number of services provided (2011)
Estimates for execution of simple	100.0%	95.5%	22
work			
Execution of simple work	100.0%	100.0%	8
Supply activation	99.0%	98.9%	376
Supply deactivation at the customer's request	97.4%	99.2%	126
Supply reactivation following suspension due to late payment	97.8%	100.0%	95
Punctuality bracket for personalised appointments	100.0%	97.4%	116
Control of correct consumption metering	100.0%	100.0%	13
Response to claims	-	100.0%	4
Total	98.7%	98.8%	760

Data do not include Marche Multiservizi.

## **Quality of drinking water**

In 2011 a total of 336,406 analyses were performed by Group laboratories on drinking water, which amounts to over 900 per day.

The controls on the quality of the water used in the production of water for drinking and human consumption are governed by Legislative Decree no. 152/2006 and Legislative Decree no. 31/2001, respectively.

The controls are carried out by the water service manager and the USL (Local Health Authorities) at the source sampling points, at the potability and accumulation plants and along the adduction and distribution networks.

Hera has developed a Group Control Plan which describes the sampling points and the control methods applied (analytic parameters and frequencies). The Control Plan is developed on the basis of guidelines for the TOSs focusing on the water's chemical, physical and bacteriological characteristics, to protect full compliance with legal requirements and ensure an excellent quality product.

#### How much does water cost?

Consuming tap water instead of mineral water, other than benefiting the environment, also provides economic savings: considering an average yearly consumption level of 1,000 litres for a family of three, and an average price in Italy of 35 cents per litre for certain commercially distributed mineral waters, the yearly expenditure for mineral water totals approx. Euro 350. By contrast, yearly expenditure for the same quantity of mains water comes to only Euro 1.61. Italy is at the first place in Europe and second in the world with 192 litres of water consumed per capita in 2009 (Source: Beverfood 2011), after Mexico and ahead of the United Arab Emirates, which is at third place with 151 litres consumed per capita.

Water quality also means controlling the effectiveness of the treatment process. For example, chlorides and trihalomethanes are searched for, which result, respectively, from the use of chlorine dioxide and sodium hypochlorite as disinfectants. The concentration of chloride and trihalomethanes in the distribution network is constantly kept under control within the legal limits.

Beginning in 2008, the average data recorded for the pH, total hardness, dry solids at 180°, chloride, fluoride, sodium, nitrate ion, nitrite and ammonium are made public every six months via publication on the Group's website, listed by individual municipality. These parameters show the quality of the drinking water distributed and can be compared to the quality of the bottled water available for sale.

Since January 2009, all of the drinking water production plants in Romagna have been managed by Romagna Acque - Società delle Fonti, the company established for this purpose by the local Romagna administrations. So, the water distributed in the areas of Forlì-Cesena, Ravenna and Rimini is purchased wholesale by that company, and Hera's involvement in quality is limited to managing the supplementary disinfection stations along the distribution networks.

### Hera working with Coop for "Acqua di casa mia" ("My home's water")

Labels on the quality of tap water arrived at the Coop Estense points of sale in Modena and Ferrara for the first time in January 2012. Coop's initiative is part of the "Acqua di casa mia" campaign and is carried out with the contribution of Hera, which provided the data on water controls carried out throughout the area and organised information points in the main hypermarkets involved. The announcements with the tap water label were put up in the mineral water aisles at all points of sale. 41 points of sale in 29 municipalities in the Modena and Ferrara areas are involved in the project.

# Quality parameter comparison between water distributed by Hera and commercially available mineral water products

	Mineral waters (min- max)	Tap water limits Legisl.D. 31/2001	Bologna TOS	Ferrara TOS	Forlì- Cesena TOS	Imola- Faenza TOS	Modena TOS	Ravenna TOS	Rimini TOS
pН	5.8-8.4	6.5-9.5	7.5	7.7	7.7	7.5	7.5	7.8	7.5
Hardness (°F)	3-93	50*	27	21	26	31	33	21	28
Fixed solids at 180° (mg/l)	22.3-1,300	1,500*	345	265	319	418	538	288	383
Sodium (mg/l)	0.9-74.7	200	20	17	19	31	52	28	28
Fluorides (mg/l)	0.07-1.1	1.5	< 0.10	0.11	0.14	0.14	0.10	0.10	0.14
Nitrates (mg/l)	1-19.55	50	7	9	5	10	20	4	9
Chlorides (mg/l)	0.3-78.4	250	26	27	23	40	83	36	39

<sup>\*</sup> Recommended values

Comparison carried out with the data provided on the labels of 17 commercially available mineral waters, excluding the parameter "Hardness" for which the data published by the magazine Altroconsumo was used (no. 184, July-August 2005). The data regarding Hera water refer to the average values of 14,431 analyses carried out according to the frequency and withdrawal points on the distribution network set forth in the control and monitoring plan for the water system.

The assessments of the quality of drinking water distributed, as compared to the quality of mineral water, are carried out based on the analytic parameters which are commonly surveyed at the representative sampling points of the water networks: pH, hardness, dry solids at 180°, sodium, fluoride, nitrite and chlorides.

The parameters chosen to measure the quality of water distributed primarily refer to the importance of distributing drinking water that contains a suitable amount of mineral salts.

#### In good water: the report on drinking water quality

In September 2009 Hera published "In buone acque" [In Good Water], the first report published in Italy by a water service operator on the quality of drinking water. The report's 2010 edition was presented at the Festival dell'Acqua (Water festival) in Genoa on 5 September 2011, and it aims to communicate the quality of Hera's drinking water in order to consolidate the trust of the public and motivate them to a more aware and sustainable use of this resource. The report describes the roles and responsibilities of planners, controllers and controlled parties, water treatment, purification and distribution processes, the controls that Hera and public entities carry out and the relative results, and awareness initiatives enacted by Hera with the aim to modify the individual habits and behaviours. The 2010 edition of the report was published in August 2011 with an updated graphic design and with contributions from Federutility, Arpa, Romagna Acque, Last Minute Market and Inran.

Also in 2011 it is confirmed that the average values for Hera water are comparable with those of commercial mineral waters.

Considering several significant parameters in terms of assessing water quality (aluminium, cadmium, chlorites, Escherichia coli, iron, manganese, nitrates, lead and trihalomethanes-total), in 2011 a total of 43,793 analyses were performed. Of these, 99.6% gave a result in compliance with the legal limit, showing essentially stable quality with respect to the previous year (the percentage of non-compliant analysis is calculated through the percentage ratio between the number of compliant analyses, that is, analyses with all parameters in compliance with the limits set forth in Legislative Decree no. 31/2001, and the total number of analyses). In cases where even one parameter falls within non-compliant levels, Hera immediately carries out interventions to return to compliant levels (washing of pipes, controlling disinfection, etc.) also based on the indications of the Local Health Authorities.

For hygienic, health and public safety reasons, the Municipality may issue an ordinance declaring that the water is not drinkable during specific periods of time, when the service will be interrupted. In these cases, it will be prohibited to use water for cooking and drinking, or particular precautions will need to be adopted (e.g., boiling), while as a rule the water can continue to be used for all other purposes.

During 2011 there were no departures from the limits set forth in Legislative Decree no. 31/2001. 13 ordinances referring to unsuitable drinking water were issued by mayors which, in any event, referred to small networks servicing a very low number of users. The main causes were attributable to microbiological pollution caused by sudden worsening in the quality of supply sources or by the malfunctioning of disinfection plants. Five ordinances regarded the municipality of Pievepelago (MO), for which the integrated water service was assigned to Hera in 2011; the inherited plant situation was rather precarious and structural work was planned in order to guarantee a higher level of quality and reliability. All of the cases were resolved in brief periods of time and with limited difficulties, and there was no evidence of hygienic or health consequences for the users.

#### The Hera Group Laboratory System

Analysis is carried out through the Hera Group Laboratory System which consists of three major laboratories, located in Bologna, Forlì and Ravenna and seven logistics units for sampling that are located throughout the region and are in close contact with the water purification and waste water treatment plants. The Group Laboratory System covers 5,000 sq.m. of structures, while over 1 million 200 thousand calculations were carried out in 2011, which is approximately 3,000 per day, by 80 technicians. The main operating units comprise a SINAL (Lab analysis quality certification) accredited "multisite" laboratory that complies with the UNI EN ISO/IEC 17025:2005 standard. The laboratory system quality management system is certified in compliance with the UNI EN ISO 9001:2008 standard.

The Bologna laboratory, dedicated to analysing drinking water, waste water and microbiological analyses is recognised by the Ministry of Education, Universities and Research as a research laboratory and is equipped with highly specialised equipment that is able to carry out research of micro pollutants such as endocrine interference agents: this is the first laboratory in Italy to have accredited those parameters.

The Forlì laboratory, where analyses are carried out on solid waste, sludges, atmospheric emissions and organic micro pollutants, is one of the most advanced facilities in Europe: it is equipped with highly automated, sensitive and accurate equipment, including a mass spectrometer that uses a magnetic sector, an instrument with a very high resolution that is able to analyse organic micro-pollutants such as dioxins, furans and PCB.

In 2011, the Forlì laboratory also obtained a certification in the emissions sector.

As regards water analyses, the Group's Laboratory System has set up a specific sample transport service, which is ISO 9001 certified and operates 7 days per week, in order to transport samples located throughout the area to the Bologna laboratory. The means of transport are extremely suitable to storing the samples withdrawn (refrigeration and recording of transport temperatures), demonstrating the fact that the amount and quality of controls do not depend on the physical place where the analysis is carried out if the correct sampling operations and transport of the samples is guaranteed.

The results of the analyses are published by the operators of the purification plants on the same day as the sampling is carried out. The availability of the results of the microbiological analyses is guaranteed in at least 24-48-72 hours. Tools are also available for analysing numerous parameters in real time, and emergency management services are set up, through which operations of water purification, waste water treatment and waste treatment plants can obtain support for analyses and sampling 24 hours a day.

In 2011 a total of 336,406 analyses were performed by Group laboratories on drinking water, which amounts to over 900 per day, and 56% were carried out in the distribution networks.

#### At Hera, we drink tap water

The Hera<sub>2</sub>O project, which began in 2008, promotes the drinking of tap water by Hera employees. By drinking approximately 460,000 litres of tap water in 2011 thanks to the dispensers installed in the canteens and offices, Hera workers avoided the production of over 700,000 plastic bottles (0.50 litre bottles were taken into consideration for canteens

and individual use, and 1.50 litre bottles for offices and meeting rooms), resulting in energy savings of approximately 48 toe, 135 fewer metric tons of CO<sub>2</sub> emissions and approximately 450 fewer bins of waste to be managed.

Taking into account the considerable concern over the presence of asbestos-cement pipes in Hera's water network, for some time the company has carried out constant checks on the state of the pipes through a plan of controls to test for asbestos fibres in the water. The use of asbestos, a common practice in construction in other industrial sectors up to the end of the 1980's, was definitively banned in 1992. While it has been recognised that the inhalation of asbestos fibres causes serious respiratory illnesses, there is no evidence of toxicity linked to the ingestion of asbestos. In fact, the current law in force regarding the quality of water destined for human consumption (Legislative Decree no. 31/2001 as amended and supplemented) does not set limits regarding the presence of asbestos fibres: in particular, the ministerial decree of 14 May 1996, annex 3, cites a WHO (World Health Organization) document which states that "... There is no serious evidence that the ingestion of asbestos is hazardous to health." The results of controls performed in 2011 show a general absence of asbestos fibres, with the exception of very few sampling points, where, in any event the number of fibres found was significantly below the limit of 7,000,000 fibres/litre indicated by the EPA (US Environmental Protection Agency). Furthermore, the water has generally nonaggressive characteristics with respect to the cement framework.

## Service safety and continuity

#### **Electricity service safety and continuity**

In 2011 the electricity distribution grids managed by Hera S.p.A. served approximately 392,000 customers, in twenty-four municipalities of the Emilia Romagna region, within the provinces of Bologna, Modena and Ravenna, distributing approximately 2,300 GWh of electricity.

The total length of the electricity grids managed by Hera through the Territorial Operating Structures of Modena and Imola-Faenza amounts to 9,942 kilometres, 73.6% of which in low voltage, 26.1% in medium voltage, and 0.3% in high voltage. 31% of the lines are underground, and the rest are overground lines. Following work carried out throughout 2011, there was an increase of approximately 2% in the distribution network extension compared to 2010; the increase occurred on the low and medium voltage lines, while the high voltage grid remained rather unchanged. The physical and administrative losses recorded in the distribution grid stood at approximately 4% and no accidents involving citizens occurred in relation to the electricity grids managed by Hera. In 2011, there were 3,048 cases of service reactivation after it was cut off due to delays in payment, a figure in line with 2010.

In 2011, supplies relative to electricity grid management and maintenance activities involved 12,300 days of work, particularly for activities related to new plants that were installed and grid maintenance. When suppliers sign the agreement, they are requested to train and inform their personnel on the specific risks that could arise when work is being carried out and on the protection and prevention measures to be implemented, and to provide their personnel involved in these activities with the proper clothing for the

tasks they perform. The company has a procedure which specifies the criteria for identifying roles and responsibilities for emergencies, and defines general emergency management rules and procedures.

Polychlorobiphenyl (PCB) is currently present in 12 of the approximately 2,550 power transformers on the grids managed by the Modena Territorial Operating Structure, a strong drop compared to 2011: in fact, during 2011 a good 45 transformers which contained oils with PCB were disposed of. The management and disposal of this equipment is performed by adopting the necessary precautions in compliance with the current laws in force and with company procedures.

The integrated provisions of the AEEG regarding the service quality of distribution, measurement and sales of electricity for the regulatory period 2008-2011, approved with ARG/elt resolution ARG/elt 333/2007, governs, among other things, the continuity of the distribution of electricity, identifying indicators for measuring outages, monitoring systems and standards of reference.

The integrated provisions include the following indicators related to outages originating on the medium and low voltage grids for which the operator is responsible in the incentivising regulations:

- the total annual duration of long outages without advance notice for low voltage customers;
- the total annual number of long and short outages without advance notice for low voltage customers.

#### Continuity of the electricity service

	2009	2010	2011
Average number of outages per customer in high concentration	0.87	1.10	1.03
areas (2011 tendential level 1.10)			
Duration of outages (minutes) per customer in high	10.20	15.66	7.94
concentration areas (2011 tendential level 25.00)			
Average number of outages per customer in medium	1.82	1.93	1.88
concentration areas (2011 tendential level 2.00)			
Duration of outages (minutes) per customer in medium	28.88	21.13	21.32
concentration areas (2011 tendential level 40.00)			
Average number of outages per customer in low concentration	5.72	4.75	4.66
areas (2011 tendential level 4.14)			
Duration of outages (minutes) per customer in low	61.29	42.62	41.34
concentration areas (2011 tendential level 60.00)			

The average figure refers to outages for low voltage service, without advance notice and due to causes that are the responsibility of the operator. The outage duration minutes refer to outages lasting for more than 3 minutes. The 2011 tendeltial level is defined as a weighted average of the value of the indicator in 2010 and 2011.

Regarding the outage duration, there was an average improvement in continuity for Hera customers in high and low concentration areas; there was a slight worsening for customers in medium concentration areas, however the level guaranteed was higher than that set by the Authority.

With a view to always pursuing higher continuity levels, in 2011 the Hera Group continued adapting the control devices to remotely control and motorise some electric stations and disconnecting switches on medium voltage poles.

Planned future developments include increasing the secondary remote-controlled stations and transferring the medium voltage grid from isolated neutral to compensated neutral (continuing to install the Petersen coils). The actions planned will help to reduce the duration and number of outages and the electricity suggestions on Group plants. Furthermore, the closing of some stretches of the loop grid will be completed, in order to increase the ability of the plants to carry out reverse current feeding, with a resulting decrease in outage times.

The number of requests for active connections to the distribution grid managed by Hera has increased significantly since 2007: there were 83 requests in 2007, 296 in 2008, 386 in 2009, and 1,179 requests in 2011, a slight decrease compared to last year, when there were 1,335. The total input power requested for the connection of production plants was 70,411 kW in 2011, a significant drop compared to 157,745 kW in 2010.

#### Replacement of electricity metres

The remote-control electricity metre is an innovative device which, thanks to remote management, allows for many activities to be performed remotely, including the reading of real consumption, activation and disconnection of users, increase or decrease in power and management of late payers.

The remote-control electricity metre provides a simpler and more transparent relationship between the customer and Hera, and, in addition, Hera does not require the presence of the customer in order to perform the remote activities.

In 2011 Hera installed about 26,000 electronic metres. At the end of 2011 there were approximately 249,000 electronic metres present in the electricity distribution grids managed by Hera, 97% of the total and two percentage points over the limit established for 2011 by AEEG resolution 292/2006.

#### Gas distribution service safety and continuity

Hera manages the gas distribution service with the objective of ensuring high safety and service continuity levels.

In addition to the consolidated supervisory activities and technological upgrading of the networks and installation and in adherence to applicable provisions issued by the Italian Authority for Electricity and Natural Gas, the following activities took place in 2011:

- the quantity of planned studies on gas leaks remained at percentages well above the AEEG requirements, with particular focus on the highly critical sections of the grid;
- controls increased on the seismic vulnerability of the plants managed;
- operations were optimised at the Forlì fluid remote control centre, which covers the area managed by the seven TOSs, by significantly improving response times to gas service emergency calls.

Since 2009, Hera has participated in the system providing incentives for safety improvements in the gas distribution service, defined by AEEG. Compliance with strict requirements allowed Hera to voluntarily participate in 2009, while Hera has been required to participate in said system since 2010, which assesses three elements:

• compliance with service obligations, lack of gas accidents due to the responsibility of the operator, lack of breaches on this topic linked to AEEG controls or inspections;

- number of measurements of the level of gas odorization carried out compared to the regulatory minimum;
- number of conventional leaks reported by third parties (two year moving average) compared to the objective set by AEEG for the same period.

The total incentive accrued based on the voluntary participation in the system and Hera's performance in 2009, as set forth in AEEG ARG/gas resolution 215/2010, came to approximately Euro 113 thousand for the six provinces managed. For 2010, a penalty of approximately Euro 420 thousand is expected, which is not yet officially quantified since AEEG is controlling the system application methods and the effective consistency of the results with respect to the objectives and how representative they are. In 2010, Hera achieved positive results for the gas odorization component in all provinces managed. The leaks reported by third parties component was positive in three provinces and negative in the other three.

#### Gas emergency services

	2009	2010	2011
Average arrival time at the call location (min.)	37.1	33.3	29.6
Calls with arrival time at the call location within 60 minutes (%) (service obligation 90%, general level 95%)	96.8%	97.8%	98.9%
Obligation 30%, general level 33%)			

Data do not include Marche Multiservizi.

In 2011, there was an overall improvement of the safety indicators and continuity compared to prior years. In 2011, for 98.9% of the 19,264 calls received (-8% compared to 2010), Hera intervened within 60 minutes, compared to the minimum service obligation required by AEEG of 90% and a general level of 95%. Average call response time decreased to roughly 30 minutes in 2011.

#### Inspections and leaks in the gas network

	2009	2010	2011
Percentage of total high and medium pressure network inspected (min. standard 30%, benchmark level 90%)	78.8%	83.7%	71.8%
Percentage of total low pressure network inspected (min. standard 20%, benchmark level 70%)	70.1%	70.7%	73.4%
Number of leaks on distribution network located upon inspection per kilometre of network	0,076	0,055	0,058
Number of leaks on distribution network located upon notification by third parties, per kilometre of network (min. standard 0.8, benchmark 0.1)	0,078	0,071	0,068

Data do not include Marche Multiservizi.

Also in 2010, the percentage of the grid inspected remained above the required minimum standard: 71.8% for the high and medium pressure network, and 73.4% for the low pressure network, against minimum standards defined by the AEEG of 30% for high and medium pressure and 20% for low pressure, respectively.

2011 was the first year in which the new criteria for planning gas network inspections defined in 2010 were applied, with the objective of increasing inspection effectiveness. The new criteria were defined on the basis of an analysis of historical data related to leaks and to a precise mapping of the hydrogeological risk of each area in which the network is located. The general criteria involve an annual inspection of the entire high pressure network and of the medium and low pressure network if classified as having a

high probability of leaks. In other cases, the inspection is planned every two years. In addition to the general criteria, specific criteria define other situations in which an annual inspection is required (e.g., network made of specific materials or with specific characteristics). Applying the new criteria described above led to a reduction in leaks in the high and medium pressure network in 2011.

In 2011 there were 68 leaks on the distribution network located upon notification by third parties, per thousand kilometres of network, compared to 71 recorded in 2010 and 78 in 2009.

#### The technical call centre

The technical call centre receives and diagnoses telephone calls to the freephone numbers of the Hera Group emergency service. Each call received has the potential to become an effective report of service irregularity; but historical trends show that only around 50% of calls regard issues to be checked in the field and, in turn, only part of these is classified as actual emergency service.

The Hera Group technical call centre has two freephone numbers for the emergency service, one dedicated exclusively to the gas service and the other to the integrated water service and district heating. The simplification of the emergency freephone numbers, in line with AEEG ARG/gas resolution 120/2008, caused a significant improvement in performance related to the minimum response set forth for the gas service. The decrease to only two freephone numbers for the emergency service and a progressive phasing out of old numbers consolidated the 2011 figures to values which cannot be directly compared with the previous year due to the numeric change in call volumes: calls regarding the gas service decreased from 92,084 in 2010 to 58,699 in 2011. 96.9% of these calls were responded to (or were abandoned) within 120 seconds (compared to a general level of 90% established by AEEG).

# Percentage of calls received by the technical call centre answered or abandoned within 120 seconds

	2010	2011
Gas	99.8%	99.8%
Other Services	99.6%	95.7%
Total	99.7%	96.8%
of which for gas emergencies (general level 90%)	90.5%	96.9%

Data do not include Marche Multiservizi.

A call to the Hera Group emergency freephone numbers begins with an automatic responder which allows callers to choose the service related to their issue before speaking with an operator. In 2011, approximately 214 thousand calls were made to the Forlì technical call centre, for which the average hold time was ten seconds, and the diagnosis made by the operator caused only 44% of those calls, approximately 95 thousand, to be classified as emergency requests.

Average waiting times at the technical call centre

Sec.	2010	2011
Gas	8.4	10.0
Other Services	9.0	10.0
Number of calls	210,269	214,077

Data do not include Marche Multiservizi.

#### The Hera Group's remote centre for fluid networks

The remote centre for fluid plants and networks is in charge of supervising and assisting all Hera plants as it operates in synergy with the territories of the Bologna, Ferrara, Forlì-Cesena, Modena, Ravenna, and Rimini provinces. It was inaugurated in May 2008 and completed in April 2011.

Its completion led to the transfer of resources and activities, and today it ensures that approximately 130 thousand points are monitored throughout the area and that the technical call centre dedicated to emergency calls, with its 60 operators and technicians, is supervised 24 hours per day, every day of the year.

#### Safety downstream of the meter

AEEG resolution 40 of 2004 sets out obligatory procedures for inspections of the safety of gas plants for domestic use (that is, which fuel boilers for heating, water heaters and stove tops, for example). The figures for thermal year 2010-2011 confirm the significant results achieved by Hera: 11,302 new user plants were activated following inspections with positive results, following the verification of the existence, completeness and correctness of all documentation required by law. The decrease in the number of requests to activate the supply for new domestic gas plants also continued in thermal year 2010-2011, probably partially due to the continuation of the unfavourable economic trend.

On activating gas supply, Hera carries out another check which is fundamental for safety: inspection of the effective hold of the user plant (post-metre). Before activating the gas supply (opening the metre) the operators use specific tools to verify the effective lack of gas leaks from the end customer's gas plant, and the supply is activated only in the absence of leaks.

Also in case of a fault downstream of the metre, when the Hera emergency services locate a gas leak in the plant of an end customer, it immediately suspends supply in order to eliminate the dangerous situation. The supply is then reactivated only after a qualified installer fixes the plant so it no longer leaks and issues the relative certification (Annex E to resolution 40/2004).

Finally, it should be noted that in compliance with AEEG ARG/gas resolution 79/2010, the new insurance for accidents caused by gas leaks has been in force since October 2010. Domestic consumers can therefore benefit from new services which can be requested following accidents or damage caused by using gas supplied by a distribution network. The policy, informational documents and all information is available on the Italian Gas Committee website (www.cig.it) in the "Insurance" section; detailed information may be requested by calling the freephone number of the Single Buyer's consumer branch.

#### Continuity of the integrated water services

The water network control activity index is expressed as a percentage of the network inspected for leaks.

On the whole, in 2011 almost 4,900 kilometres of network were inspected, comprising 18% of the total water network, in line with 2010.

At the area level, there was a significant increase in the network inspected in the Ferrara area (more than doubled since 2010), which historically has higher leak values.

The index of the status of the water network is expressed as the number of breakages per kilometre of network and it dropped by approximately 10% compared to last year, with the most consistent percentage reductions in the areas of Bologna, Ravenna and Modena.

In 2011, 20,675 water metres were replaced, equivalent to 1.9% of the metres installed.

#### **Continuity of the integrated water services**

	2009	2010	2011
Percentage of network subject to active search for losses	16.8%	18.5%	18.0%
Number of breaks in water system pipes and tanks per km of network	1.34	1.37	1.24

Data do not include Marche Multiservizi.

#### **Information security**

In 2011, as defined in the information security system management model, the actions approved by the Hera Group Information Security Management Committee were completed.

The information risk status was assessed by using the model defined in 2010, and the main actions to be implemented to reduce the risk level were identified.

The significant projects in 2011 include testing a "secure" wireless network infrastructure, revising the Security Policies in order to comply with the most recently issued privacy measures and implementing an infrastructure to continuously monitor network services.

### **Customer relations**

In 2011, the Hera Group continued the policy of building up the channels through which customers can contact the company so as to render contact simpler and quicker. Hera has 5 different contact channels: the call centre for residential customers, the call centre for business customers, branches, the internet and mail.

In 2011, contact from customers increased by 10%, and there was significant growth in the web channel and the sending of electronic bills. The percentage distribution shows that the call centre is still the prevalent channel (56% of contacts), followed by branches (29% of contacts). Use of the web channel is increasing (approximately 10% of contacts, compared to 6.5% in 2010), to the detriment of mail (6% of contacts).

Hera confirms its choice to invest in and develop its branch network, which is deemed strategic and distinctive in relation to its competitors. Specifically, in 2011, the new priority branch in the municipality of Cesenatico opened and three branches (Casalecchio di Reno, San Giovanni in Persiceto and Vignola) were renovated.

Furthermore, a new point of presence was opened in the district of San Pietro in Vincoli, in Ravenna, while two temporary points of presence were closed (in Cesenatico and Cattolica). There are 84 branches in the areas managed by the seven TOSs, and 8 have standardised opening hours set at 33 hours per week from Monday (8:00 a.m. - 3:00 p.m.) to Friday (8:00 a.m. - 1:00 p.m.). In 2011, Hera had 18 branches located on third party premises in the areas managed by the seven TOSs.

In the course of 2011, initiatives to standardise the management procedures of outsourced branches were launched, and an IT system to manage commercial and institutional communications with the branches was implemented.

At the end of 2011, there were 130 thousand people registered with the HER@ ON-LINE portal, an increase of 31% over the previous year. The company continued to promote electronic bills, also when new agreements are signed, by offering customers the option of immediately beginning to punctually receive bills directly by email, thereby avoiding printing and sending paper documents. In 2011, other than proposing the electronic bill along with each new contract stipulated with Hera, this service was also promoted in an enclosure with the bill, which makes it possible to request that electronic bills be sent instead of the paper version. Initiatives to promote enrolment for electronic billing led to an increase of over 60% in the use of that method compared to 2010. Approximately 39 thousand customers were enrolled at the end of 2011, avoiding the printing and sending of approximately 270 thousand envelopes containing bills in the same year. In 2012 the Hera Group will continue to promote behaviour aimed at reducing environmental impacts in terms of lower CO<sub>2</sub> emissions generated by less production of paper bills and fewer trips to the physical branches by privileging the online portal.

#### The call centre

In 2011, a total of 1,653,000 calls were received at the Hera call centre, essentially stable with respect to that figure in 2010. The technical indices were basically in line with the stated objectives, while the customer satisfaction level increased.

In 2011, the call centres were open for an additional two hours, so until 8:00 p.m. from Monday to Friday. Particular focus was placed on the topic of training representatives, for which, in addition to traditional training methods, a knowledge management system was implemented and became fully operative. This system is a receptacle of all information necessary to manage customer relations as well as a model for daily knowledge updating; the system is supervised and managed by a dedicated editorial staff. Furthermore, the work of standardising and streamlining front end procedures continues.

Call centre quality

	2009	2010	2011
Average waiting times at the call centre for residential customers (sec.)	33.2	33.8	37.4
Calls with satisfactory outcomes for residential customers (%)	94.2%	93.8%	93.5%
Number of residential customer contacts at the call centre (thous.)	2,428	2,495	2,488
Average waiting times at the call centre for business customers (sec.)	25.2	22.1	27.5
Calls with satisfactory outcomes for business customers (%)	92.6%	94.9%	93.9%
Number of business customer contacts at the call centre (thous.)	152	282	430

The average waiting time based on a telephone call by a customer that wishes to speak to an operator is the time between the moment the request is made for conversation with an operator and the beginning of the conversation. It does not take into account the initial information provided by the answer phone. Data do not include Marche Multiservizi. Calls for automatic metre readings and automatic information are included in the contacts.

In Resolution 168/2008, the Italian Authority for Electricity and Natural Gas defines telephone waiting time as the time from the start of the call being answered, even if through the use of an automatic answering machine, to the start of the conversation with the operator or the conclusion of the call if the caller hangs up before speaking with the operator. Calculating the waiting time according to the method established by the AEEG, the Hera call centre had a performance in 2011 of 89 seconds for residential customers and 67 seconds for business customers: both values are significantly below the 240-second objective set by AEEG.

Regarding the stated objectives, the average response time was 37.4 seconds for households, compared to the objective of 40, and 27.5 seconds for companies, with an objective of 25. These results have reached or are close to the objectives set, and certainly have a positive value if it is considered that the average weighted result of response times for households and companies was 35.4 seconds. For households, 11% of calls had a waiting time of over two minutes, against an objective of 9%, while for companies this figure was 6%, while the objective is 11%.

As regards the quality perceived by customers, please note that both the internal satisfaction survey (carried out on a monthly basis) and the AEEG survey (every six months) showed an improvement in all indices, particularly in problem solving. Also in terms of ability to resolve customer problems and requests, and to provide consistent responses over the course of many calls, Hera Comm came out above national standards. The last AEEG survey on call centre satisfaction for the first half year of 2011, out of a total of 32 companies selling electricity and gas with more than 50,000 customers, reported an increase in the score for Hera Comm customer satisfaction: from 92.4 points in the second half of 2010 to 93.5 in the first half of 2011. In the ranking drawn up by AEEG, the Hera Comm call centre is in ninth place out of the 32 companies considered.

The improvement in internal company procedures and company information systems and continuous training for front end personnel caused an improvement in customer satisfaction in terms of clarity of the responses provided and ability to resolve problems. Specifically, thorough process innovations were implemented in the business call centre, which privileged the development of problem solving abilities. Operator training focused on assertiveness techniques when managing critical situations, with good results in terms of both relationships and problem solving times.

In 2012, other than maintaining high standards for front end personnel training, new information system functions will be implemented in order to facilitate the understanding of customer requests and improve conversation times between customers and operators.

#### **Branches**

Once again in 2011 there was an additional increase in the use of branches compared to the previous year (+10%), with around 32,000 contacts. Despite this, the implementation of optimisation processes caused an improvement in quality indices. The increasing similarity in the values of the different areas also bears witness to the success of the organisation as a whole.

#### Waiting times at branches

8			
(min.)	2009	2010	2011
Bologna TOS area	13.2	11.3	10.7
Ferrara TOS area	13.8	14.7	13.0
Forlì-Cesena TOS area	10.3	10.0	10.4
Imola-Faenza TOS area	13.2	11.8	8.8
Modena TOS area	21.0	20.2	11.2
Ravenna TOS area	13.2	14.4	9.3
Rimini TOS area	8.5	8.7	9.7
Weighted average	14.6	14.5	10.5

Data do not include Marche Multiservizi.

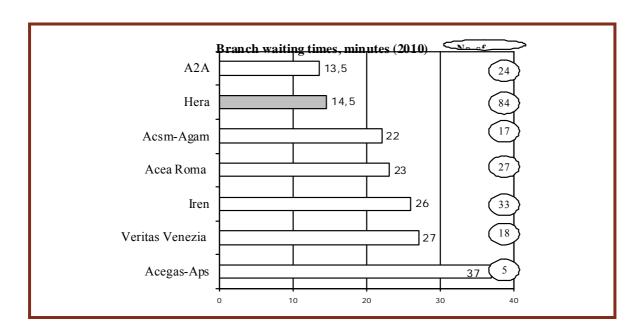
The established goals were surpassed by a wide margin. The average waiting time decreased to 10.5 minutes and the percentage of customers who waited for over 40 minutes decreased to 4.6%. These results were achieved thanks to the significant reorganisation of some branches (in Ferrara and Modena) and the implementation of the SPRINT system (Sistema Previsionale Normalizzazione Tempi - Temporary Time Standardisation System) at the "top" and priority branches; branch usage estimates were drawn up, resources were streamlined based on medium and short term objectives and "day by day" analyses were conducted on results in terms of deviations from estimates. The SPRINT system (Integrated Temporary Time Standardisation System) is an innovative software programme developed based on Hera specifications, which carries out three functions:

- it draws up daily estimates of customer use of individual branches;
- it optimises the resources available based on the influx of customers, balancing the efficient use of resources with the attainment of quality objectives;
- it offers branch coordinators a tool to support "real time" decision making, so that the branch structure can be adapted to the circumstantial reality.

In the second half of the year, SPRINT was also extended to some priority branches, and it is expected to be implemented in other Group branches in 2012.

#### Waiting time at the branches of the main Italian utility companies

Hera is in second place in terms of branch waiting times among the 7 multi-utility companies considered in the comparative analysis between the main Italian utility companies.



#### **Complaint management**

Overall, in 2011 there was a 21% increase in complaints compared to the previous year, mainly concentrated in the gas and water (+18%) and electricity (+43%) services. This trend was influenced by the following factors:

- the worsened financial situation of customers notably increased credit requests and the possible relative complaints;
- the transfer of contacts from the call centre to the internet channel, which increased written requests (emails), classified as complaints in compliance with regulations;
- the notable increase in the acquisition and loss of customers in the free market, which are complex transactions that can cause problems and misunderstandings, which are sometimes also associated with correctly managed operations.
- the increase in the customer base (+5%);

Despite the increased number of complaints, significant progress was made in terms of the average response time, which decreased from 33 to 18 calendar days. Given the scenario described above and the decision to adopt the strict definition used for energy services for the water, environmental hygiene and district heating services as well, even a response level within the standards of 91.9% is to be considered positive; this is 2.1 percentage points lower than the objective of 94%, but almost 6 points better than the result from 2010.

In general, also thanks to the ability to quickly resolve problems and to filter existing channels (branches, consumers' association channel, call centre and website), the number of complaints in relation to the number of Hera customers is only 4 complaints for every 1,000 contracts managed. In particular, thanks to the new contact channel for consumers' associations, it was possible to process a significant number of cases and resolve almost 90% of them successfully without having to formalise complaints, which could result in mediation procedures or recourse to the Consumer Branch of the AEEG Authority.

**Complaints received** 

	2009 (first	2009 (second	2010	2011
	half)	half)		
Average complaint response time (days)	23.9	24.0	33.2	18.5
Percentage of complaints that were dealt with within the standard timeframe (%)	76.7%	95.7%	86.1%	91.9%
Number of complaints received (n)	2,559	5,126	11,381	13,727

Data do not include Marche Multiservizi. The complaint response time for the first half of 2009 is indicated as the number of business days, and for the second half of 2009 and 2010 in calendar days, with a benchmark standard of 20 days in the first half of 2009 and of 40 days in the second half of 2009 and in 2010.

The current economic environment contributes to the general increase in consumer awareness of prices. This also can be found in an analysis of complaints by type: in 2011, 60% of the disputes were related to the bill. Of these, 30.6% regard complaints related to advance payments and consumption, 19% is related to payment or collection issues (instalment plans, extensions and reminders), while 10.5% refers to supply activations or deactivations.

In 2011, a path was taken to further improve response quality and increase the timeliness of issue resolution.

At the same time, significant reorganisations were carried out in order to create dedicated, uniform teams which are especially knowledgeable in relation to specific customer and market segments.

# Improvement in contact procedures between technical operations staff and customers

In 2011, Hera initiated actions aimed at improving the efficiency of non-commercial contacts which occur each year between customers and local technical resources. The data show approximately one million contacts with metre-readers, around half through cards; roughly 350,000 contacts from customer requests and approximately 100,000 contacts due to maintenance and internal control activities.

The areas for intervention identified by the project are:

- definition of operating procedures aimed at increasing information exchanges and customer communications (advance notice on the day before the appointment, verification telephone call to customers who are not present at the appointment, etc.);
- inclusion of the defined operating procedures in all agreements with contractors for technical services carried out at the users' locations;
- standardisation of customer forms, with a particular focus on readability, through the use of understandable terminology and graphics presenting the most important content;
- initiation of training courses intended to improve communications and customer relations, even during dispute situations.

At the end of 2011, the satisfaction level was also monitored regarding customers who had had recent contact with Hera for technical work or estimates regarding the managed distribution networks (opening or closing metres, connections and transfers), and a total of 983 people were interviewed in the entire area for all services. The score achieved was between 71 and 81 on average, always exceeding the high satisfaction threshold of

70: the survey referred to intervention times, cost and personnel conduct and professionalism.

#### **Mediation**

As at 2011 a total of 74 requests for mediation were received: 41 regarding the gas service, 11 regarding the electricity service, 7 regarding both services and 15 which could not be accepted for various reasons.

Requests for mediation primarily regard problems relating to objections to consumption totals and to alleged invoicing errors or delays.

In terms of outcomes of the mediation cases defined in 2011, 18 cases were concluded through settlement, 1 with a waiver of the request, as the problem was solved in the meantime, and 4 with failure to reach a settlement. The remaining 36 cases are currently pending. Regarding the 15 requests which could not be accepted, there were:

- 9 requests for which the deadline for replying to the complaint had not yet passed, or for which a complaint had not been submitted;
- 2 cases regarding services to which the mediation procedure does not apply (i.e. water service, district heating);
- 2 cases regarding non-domestic customers, or customers which were not entitled to submit such request;
- 2 requests lacking other requisites, such as the simple request for paying by instalments.

#### **Disputes with customers**

At the close of 2011 there were 172 pending disputes with customers (of which 64 initiated during the year) mainly regarding the application of the tariff regime for the services provided and the recovery of payments. Of these 64 disputes, 44 refer to the gas, electricity and district heating service, 16 to the water service and 4 to the waste management service. The higher number of customer disputes compared to 2010 (113) is due to the fact that in 2011, unlike in prior years, disputes also included customers' objections to injunctions sent by Group companies.

#### **Confidentiality**

In 2011, the Hera Group's work aimed at implementing a management system to protect personal information continued, in order to increasingly comply with the privacy regulation, a basic principle which guarantees consolidation of the trusting relationship between the Company and its numerous stakeholders (customers, shareholders, employees, suppliers and the Public Administration).

After the "network" privacy organisational structure (consisting of the assignment of privacy responsibilities) was formalised, the Group privacy guidelines, broken down into the principles set forth in the "Personal Data Protection Policy", were issued and, finally, when distribution of new assignment letters for employees and associates was completed, the process of sharing the text of the Procedure for governing the management of all company privacy requirements began. That Procedure aims to redefine a management system for privacy responsibilities that are centralised, shared and therefore operationally applicable throughout the Group, in order to best outline the activities, requirements and responsibilities, thereby making it possible to adapt the

privacy system and guarantee its effective incorporation with regard to the necessarily changing nature and complexity of the company.

In terms of governance, knowledge and increased skills, which the Company has set as a goal, represent the basis for the development of a complete privacy system, increasingly connected to the Group's organisational and management structure.

The following actions have also been undertaken with the goal of extending knowledge and skills, also in order to prevent illegal conduct: the intranet's privacy section has been revised and tools useful for "Data processing managers" have been added, including the publication of a routinely updated system of responses to frequently asked questions and the dissemination of information and knowledge both through the House Organ and on the Group's institutional website; the commitment to raising awareness amongst personnel with respect to the correct and safe manner for processing data continues, and thanks to the e-learning training course, "Mentore", 2,280 people have been trained, for a total of 4,560 hours, as at 31 December 2011.

Revision has begun on documents regarding the company information security policy in order to further consolidate personal data protection principles.

During 2011, the tool dedicated to punctually surveying all company databases was further improved, in line with company processes as well as with the framework of related IT applications. This survey resulted in: a detailed analysis of the processing of specific types of data (for example, sensitive and legal) and a more punctual formalisation of the outsourcing of this data to third parties, carried out through the system for the appointment of Privacy Managers.

At the same time, the data flows between the Group and the Public Administration were mapped and systematised in order to standardise the relative and underlying processing. The new provisions regarding the processing of personal data for telemarketing purposes came into force in 2011 (Law no. 166/2009 and implementing measures). After having necessarily analytically assessed their impact, the Group adapted to those new rules by completely revising the relative company processes. Pending the adjustment, Hera Comm received information requests from the Personal data protection authority for unwanted telephone calls, referring to 9 residents, 8 of which were customers. The Authority imposed two sanctions on Hera Comm in relation to those requests in 2011.

In relation to contacts regarding access rights pursuant to Art. 7 of the Privacy Code, in 2011, the perimeter of request surveying was completed, including the main access channels (branches, call centre, website and mail). Over 400,000 access requests were recorded, for which the response time was approximately 1 day on average, compared to a maximum response time set forth by law of 15 days.

## **Customer satisfaction survey**

In November 2011, for the seventh consecutive year, the satisfaction of the Group's residential customers was surveyed; beginning from last year, this survey also includes data regarding the satisfaction of free market customers.

In 2011, the high satisfaction objective, with a Customer Satisfaction Index (CSI) of 70 points out of 100, was met. All components of this index increased, particularly those

related to more "emotional" elements of satisfaction, that is, how Hera is perceived in relation to an "ideal" multi-services company.

Customers who chose the free market for gas and/or electricity also achieved a score of 70 points; they particularly appreciate the quality of the sales channel and of the procedures for activation and transfer to the free market.

#### Assessment of overall satisfaction of residential customers

CSI (from 0 to 100)	2006	2007	2008	2009	2010	2011
Service satisfaction index (Services CSI)	71	71	72	72	74	73
Overall satisfaction index (CSI)	67	65	67	69	69	70
Global satisfaction	70	68	70	73	71	72
Satisfaction with respect to expectations	66	63	66	68	68	69
Satisfaction with respect to the ideal	65	62	64	67	66	68

The services index decreased by one point, due to the essential stability of energy services with respect to last year: gas at 77 points and electricity at 74. The water service decreased by 1 point compared to 2010, and also came out at 74 points. Finally, waste management services reached the high satisfaction level of 70, an increase of one point compared to 2010.

This year, the Group's branches and call centres met or surpassed 70 points (70 for the call centre and 72 for the branches), which demonstrates the effectiveness of training initiatives and the streamlining of internal procedures.

Finally, aspects related to Hera's image improved (+4 points), confirming that its strong points are professionalism, trustworthiness and attention to sustainability.

Satisfaction with contact channels will continue to be monitored during the year in 2012, and the detailed analyses on customers who state that they are unsatisfied will also continue. Other initiatives planned involve increasing the readability of the multiservice bill and improving the use of services available on the HER@ ON-LINE portal and on the Hera Comm website, which showed a slight decrease, despite the fact that they maintained a positive score (above 70).

#### The methodology used for the customer satisfaction survey

For the sixth consecutive year, the Customer Satisfaction survey was conducted, in November, to assess the quality of services offered and our customers' satisfaction with Hera overall. Approximately 3,000 telephone interviews were carried out to understand what customers think about the company, how it worked and whether efforts are going in the right direction.

The survey is based on a research methodology that has been fine-tuned, thanks also to studies carried out at the University of Michigan, that involve theorising and calculating the causal relation between elements of perceived quality and the satisfaction of customers.

The survey was conducted by telephone via CATI (Computer Aided Telephone Interviews), a computerised system that allows for random selection of the individuals to interview, while ensuring that they are representative of the population to be described. Monitoring was carried out by interviewing the main Hera contact within the nuclear family. The questionnaire is organised in such a way as to keep the average duration of the interview under 18 minutes including for those customers that use

several services and is designed to ascertain the extent to which the improvement actions taken by Hera are appreciated by customers, generating an actual greater level of satisfaction.

The assessments of the results are expressed in numerical scales, with thresholds corresponding to the various levels of satisfaction: under 50 points indicates insufficiency, up to 60 indicates a "minimal" satisfaction area, between 60 and 70 indicates a good level of satisfaction and above 70 indicates "very satisfied".

With regard to the survey of business customers, the global index that represents the entire business segment, from small businesses to large concerns, has increased by 1 point compared to last year, reaching 66. This is a positive result which confirms the increasing trend over the last 5 years. Satisfaction with respect to expectations (+1) and with respect to the ideal (+3) particularly increased. Like the findings related to residential customers, the summary services index dropped slightly, but remained above the high satisfaction threshold (71 points), confirming the excellent level achieved. Free market customers state that they are highly satisfied with the sales channel and activation procedures, and that they are inclined to speak well of the company. Finally, the propensity to remain customers (loyalty) and to cross-selling grew considerably; both indices contribute toward consolidating the customer base.

Also during 2011, initiatives aimed at improving the satisfaction of business customers were rolled out. In particular, improvement was achieved in call centre service quality thanks to the more efficient management of requests sent by companies, which were previously managed by the households call centre. At the same time, case management flows in the back office were optimised, which clearly contributed to increasing the efficiency of customer care. The issues with which customers are most unsatisfied are continually monitored to analyse the most critical areas, on which greater focus will be placed for additional future improvement.

In 2012, training on the customer contact channels as well as permanent monitoring of management processes aimed at customers will continue, in order to ensure continuously improving service.

#### Assessment of business customer satisfaction

CSI (from 0 to 100)	2008	2009	2010	2011
Service satisfaction index (Services CSI)	70	69	72	71
Overall satisfaction index (CSI)	62	65	65	66
Global satisfaction	65	68	69	68
Satisfaction with respect to expectations	61	64	63	64
Satisfaction with respect to the ideal	59	62	61	64

Also in 2011, continuous monitoring was carried out in order to control the satisfaction of customers who call the freephone number or go to one of the branches. The interviews are conducted by qualified operators during the week after the contact. The interviews regard all aspects of the service and subsequently, the situations in which satisfaction is lowest are analysed so that any systematically critical areas identified may be addressed. The call centre and branch levels are stable on average, and well above the high satisfaction level.

In November 2011, the survey on the satisfaction of residential customers with the district heating service was carried out for the fourth year. Also this year, this service achieved a score of 75 out of 100, confirming the excellent perception of customers with a centralised plant as well as of those with an independent plant. The probability of suggesting the service to an acquaintance or a friend, which came out at 73 points, is in line with the satisfaction level. The overall CSI satisfaction index of customers who used district heating in 2011 came out at 68 out of 100, as in 2010.

Communication improvement projects are underway, such as: research on new brochures, the publication of documents which explain tariff changes and a series of meetings planned with customers who use the service and consumers' associations. Furthermore, complaint cases are being analysed so that service supply processes can be improved.

Assessment of the satisfaction of district heating customers

CSI (from 0 to 100)	2009	2010	2011
Overall satisfaction index of the district heating service (district	72.	75	75
heating CSI)	12	13	13
Overall satisfaction index (CSI)	69	68	68
Global satisfaction	71	71	71
Satisfaction with respect to expectations	68	67	67
Satisfaction with respect to the ideal	68	65	66

Also in 2011, a survey was carried out to measure the level of satisfaction with district heating services, on a sampling of 60 customers (out of a total of 600) who had opening, closing and other work carried out during the year. The survey went into detail on aspects related to time needed to open the plant, the professionalism and conduct of technical staff, and the cost. The overall score was 72/2010, and specific criticalities were not found, except in relation to cost (considered high, but did not particularly impact satisfaction with the work carried out).

# Other dialogue and consultation initiatives

In 2011, the channel dedicated to direct contact with consumers' associations was activated in all areas served by the Hera Group. This is a new relationship model, designed at the request of these stakeholders at the end of 2010, with the objective of managing reports and preventing the emergence of disputes, through the intermediation of consumers' associations. Thanks to the highly qualified personnel identified and trained for this project by Hera customer management, in 2011 365 cases (for a total of 582 contacts) were managed by the dedicated channel: 88% of these cases concluded successfully. Many meetings with the associations involved were required in order to present and discuss the opening of this new contact channel: in 2011, 16 meetings in the seven areas in which Hera operates were held for this purpose.

#### Clearer bills with the reading guide

The guide "How to read the bill and other useful information" was distributed in October 2011. Its objective is to provide useful information to help customers

understand the bill and all services provided by the Hera Group. The document was completed after months of controls on the main information requirements of residents, and the editorial project was approved by 9 regional consumers' associations (ACU, Adiconsum, A.Di.Do., ARCO, Codacons, Federconsumatori, Lega Consumatori GOT Felsineo, Movimento Difesa del Cittadino and Unione Nazionale Consumatori). "How to read the bill and other useful information" was presented to the public at a press conference on 17 October 2011 and published on the website, and over 80,000 copies were distributed at the Group's 84 branches. The guide was also gradually made available at the URPs of the main municipalities and presented at numerous meetings with representatives from the institutional world.

The publication of a dedicated consumers' association section on the www.gruppohera.it website was postponed to 2012, since we intend to continue to adopt the shared design approach used to produce the "How to read the bill and other useful information" guide.

Hera maintains a daily relationship with trade associations in the area it serves, and its actions are focused on responsibility to the local community, competitiveness, innovation and trustworthiness, all elements which represent the model for an initial approach with the Associations.

Daily dialogue with associations helps to simplify bureaucracy and formalise procedures aimed at satisfying the member customers.

The partnership with associations and a constant commitment on general topics and shared innovative projects (e.g., the development of solar communities, the sports club energy project and the clean energy savings and production project at the sports clubs in Modena) guide Hera's commitment and attention in relation to trade associations.

Hera has a consolidated relationship with over 60 trade associations and 200,000 members, which fuels a climate of increasing trust and cooperation.

## **Shareholders**

Hera's shareholder structure is particular among Italian utility companies, as it does not have one shareholder with absolute control while its shareholder base consists of more than 21,000 private Italian and foreign investors (individuals and legal entities active in non-financial businesses) and 187 public shareholders (mainly Municipalities within the local area of reference) and, lastly, 401 professional investors (consisting of legal entities operating financial businesses, such as insurance companies, banks, trusts, banking foundations, mutual funds, pension funds and hedge funds).

## **Objectives and performance**

What we said we would do	What we have done			
<ul> <li>Further increase the number of financial analysts that follow Hera's stock to promote Hera as an investment choice.</li> <li>Further improve the instruments for dialogue with non-professional private investors.</li> </ul>	<ul> <li>Coverage of the stock involves 11 Italian and international research departments (down with respect to 2010 due to the reorganisations which took place in the banking system). (see page142)</li> <li>Instruments for dialogue with the investors, already implemented, were maintained: quarterly</li> </ul>			
	newsletters, weekly chats, meetings with investors, in-house visits, conference calls, etc. (see page 143)			
We shall				
• Increases meetings and dialogue specifically with retail funds, etc.).	ethical investors and small investors (small cap,			

• Increase the number of financial analysts that follow Hera's stock to promote Hera as an investment choice.

#### **Breakdown**

The presence of a widespread shareholder base and the lack of single shareholders with absolute control are the distinctive points that characterise Hera's shareholder structure. These particular characteristics reflect the history of the Hera Group, formed in November 2002 as a result of the merger and integration of 11 multiutility companies in the Emilia- Romagna Region and contribute towards significantly limiting the risk of governance problems that affect almost all companies in this sector in Italy.

Following listing on the Milan Stock Exchange in the All share segment of the Mercato Telematico Azionario (the electronic equity market) in June 2003, Hera continued its development through additional mergers and integrations with other multi-utilities in the surrounding areas, enlarging the geographic perimeter of activities and including more public institutions in the shareholder structure through the "reserved" issue of new shares (from 155 in 2002 to 187 in 2011).

Hera's share capital grew from 789 million ordinary shares in 2002 to 1,115 million with the latest reserved share capital increase resolved on 21 October 2009.

Hera's shareholder structure consists of public entities, and private and professional investors

Local Authorities represent the most sizable category among Hera's investors, with 60.1% of the share capital, and they mainly comprise Municipalities of the Emilia-Romagna provinces in which the Group operates. Almost all local authorities holding shares renewed the so-called "Shareholders' Agreement" in December, which binds them to maintain equity investments representing 51% of Hera' share capital, as stipulated in the company's Articles of Association. The so-called "free float" of shares therefore comprises 49% of the share capital, and 80% of it is held by private and professional investors, both Italian and foreign.

Over the year, private and professional shareholders have remained extremely diversified: on the dividend coupon date in June 2011, 29.6% of Hera's shares were held by Italian and foreign professional investors such as insurance companies, banking institutions, banking foundations, pension funds, mainly Anglo-American mutual funds, whilst 9.9% of them were held by mainly Italian private investors.

Since its listing, Hera has had thousands of residents of the areas served, who are therefore, also customers of the Group, among its shareholders.

On the dividend registration date in 2011, Hera held 5.2 million treasury shares in the portfolio, totalling 0.5% of the share capital. Since 2006, Hera has in fact adopted a treasury share buy-back plan providing for a maximum rotating limit of 24 million shares for a total amount of Euro 60 million. The purpose of the plan is to finance possible additional opportunities for integration of small companies and to normalise any anomalous price fluctuations compared to those of the main Italian securities. The Shareholders' Meeting of 29 April 2011 renewed the treasury share buy-back plan for an additional 18-month period, for a total amount of Euro 60 million.

#### **Shareholders**

No.	2009	2010	2011
Municipalities and other public Entities	186	187	187
Professional investors	465	369	401
Private investors	21,916	21,546	20,581
Total	22,567	22,102	21,169

Figures refer to the dividend registration date. Data source: Hera processing of data from Servizio Titoli S.p.A.

#### Shares held (breakdown)

%	2009	2010	2011
Municipalities and other public Entities	58.8%	61.3%	60.1%
Professional investors	30.6%	25.2%	29.6%
Private investors	10.5%	13.0%	9.9%
Treasury shares	0.1%	0.5%	0.5%
Total	100%	100%	100%
Total shares (million)	1,032.7	1,115.0	1,115.0

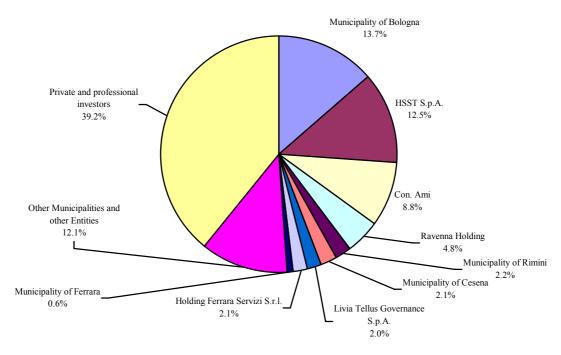
Figures refer to the dividend registration date. Data source: Hera processing of data from Servizio Titoli S.p.A.

The decrease in the share held by private investors coincides with the negative situation of most companies in the energy industry as a result of the macroeconomic recession. At the same time, the share held by professional investors increased in 2011, when, in

spite of the macroeconomic recession, the Group maintained its policy of paying dividends, stable or increasing, confirming the approach maintained since the inception of the Group. This dividend policy was deemed sustainable by financial analysts for years to come as well, both in light of the results published in 2011 and of the 2011-2015 Business Plan.

The professional category investors increased their percentage with respect to last year, taking the investment to 2009 levels to the detriment of a reduction in the portion of "non-professional" private investors and, to a lesser extent, that held by minor municipal shareholders. This increase coincided with the satisfactory financial statement results for 2010 and the consequent rise in the divided authorised in 2011.

#### Shareholder breakdown as at 31 December 2011



HSST S.p.A. (Holding Strategie e Sviluppo dei Territori modenesi), is comprised of: Frignano Association of Mountain Communities, Unione terre dei Castelli, Municipality of Castelfranco Emilia, Fiorano Modenese, Formigine, Frassinoro, Guiglia, Lama Mocogno, Maranello, Marano sul Panaro, Modena, Montefiorino, Palagano, Pavullo nel Frignano, Polinago, Riolunato, San Cesario sul Panaro, Sassuolo, Serramazzoni, Sestola, Zocca and Acquedotto Dragone Impianti.

CON.AMI is a consortium comprised of the Municipalities of Conselice, Massa Lombarda, Sant'Agata sul Santerno, Medicina, Castel Guelfo di Bologna, Castel San Pietro Terme, Dozza, Imola, Mordano, Solarolo, Bagnara di Romagna, Castel Bolognese, Faenza, Riolo Terme, Brisighella, Casalfiumanese, Borgo Tossignano, Fontanelice, Castel del Rio, Fiorenzuola, Marradi, Palazzuolo sul Senio, Casola Valsenio.

Ravenna Holding comprises the Municipalities of Cervia, Faenza and Ravenna. Holding Ferrara Servizi S.r.l. is wholly owned by the Municipality of Ferrara. Rimini Holding S.p.A. is wholly owned by the Municipality of Rimini. Livia Tellus Governance S.p.A. is wholly owned by the Municipality of Forli.

Public shareholders progressively increased their share until they reached 60.9% of the total. This came about due to the Group's constant expansion, which in recent years integrated additional municipal companies. The singularity of Hera's public

shareholders consists of the broad and progressive diversification of the shares owned by 187 different municipalities, of which the majority shareholder holds 13.7% of the shares.

The changes over the last three years in the shares of individual public shareholders have been small and they are mainly caused by the fact that the Municipalities that owned the merged companies have become shareholders. The public shareholder component is an element of stability in the shareholder structure and of sound governance.

In 2011, the Municipality of Forlì established a financial holding company to which it transferred nearly all the shares held in Hera, without, therefore, substantially altering the shareholder structure (a number of minor Municipal shareholders slightly reduced their investment in Hera during 2011).

The organisation of road shows for the presentation of the business plan and the shareholders' meeting for the approval of the annual financial statements made it possible to encourage dialogue with these investors. Furthermore, the Sustainability Report was presented to the shareholders' meeting, meeting with positive feedback regarding the sustainable approach of management.

No. of local resident private shareholders (as of date of dividend registration)

No.	2009	2010	2011
Bologna TOS area	4,086	3,992	3,714
Ferrara TOS area	369	351	323
Forli-Cesena TOS area	1,485	1,447	1,371
Imola-Faenza TOS area	1,438	1,456	1,363
Modena TOS area	1,104	1,141	1,107
Ravenna TOS area	1,163	1,114	1,043
Rimini TOS area	590	572	555
Total local resident private shareholders	10,235	10,073	9,476
Total private shareholders	21,916	21,546	20,581
% of private shareholders resident in areas	46.7%	46.8%	46.0%

Figures refer to the dividend registration date. Data source: Hera processing of data from Servizio Titoli S.p.A.

Its characteristic as a company that is closely linked to its local area is particular evident in the analysis of Hera's shareholder structure, which shows a significant historical presence of private "non professional" resident investors. Around 9,500 thousand private investors, i.e. 46% of this category (which includes citizens and private companies that are not professionally dedicated to management of savings, both Italian and foreign) resides in the areas served by Hera and holds 62% of the shares held by private investors.

In the past three years, the number of non professional resident and non resident investors in the local areas has stably remained above 20 thousand individuals.

Dialogue with private investors during 2011 was more frequent than in past years, due to the instability of the financial markets, in particular the Italian one, which suffered a sharp adjustment due to the sovereign debt crisis. Relations with investors made it possible to contain concerns, permitting investors to evaluate the investment choice with greater peace of mind. The macro-economic crisis suffered in 2011 in any event coincided with a drop in private savings invested on the market in general, with visible effects also for Hera.

In light of the positive results achieved as a result of relationships established with private investors, Hera decided to commit itself for actively furthering initiative for meeting and dialogue, so as to extend the number of contacts and more fully support consensus with category of investor.

## Corporate Governance and safeguards for shareholders

Since the inception, Hera has adopted a traditional Corporate Governance system based on a Board of Directors, in order to guarantee protection and return on capital for shareholders and fulfilment of stakeholder interests in line with the company mission.

Hera's activities are managed in compliance with the Group's mission and Code of Ethics, as well as according to the provisions of the Code of Conduct promoted by Borsa Italiana S.p.A.

For years, Hera has been committed to guaranteeing full transparency to shareholders and all other stakeholders by providing clear, complete and timely information about the decisions taken, the strategies adopted and the results achieved, so that investors may make investment decisions based on effective knowledge of the company, its future prospects, business performance and the forecasted levels of profitability with respect to the quantities of capital invested.

The Investor Relations Department and External Relations Department report directly to the executive Chairman of the Board of Directors, while the Corporate Social Responsibility Department reports directly to the Chief Executive Officer; the direct relationship between these Departments and the top management attests to the importance assigned by the Group to control and dissemination of information to stakeholders.

Price sensitive information is communicated in accordance with the procedures established by Consob resolutions and Internal Dealing regulations, and the principles of transparency, clarity, completeness and timeliness which are the foundation of the Group's communications policy.

The yearly publication of the calendar of corporate events for the year allows the company to announce in advance the most important dates for company life: All communications of a certain importance such as approval and publication of financial statements, quarterly and interim reports, business plans and significant operations are published in real time, in Italian and English, on the Group's website, in the Investor Relations section.

Hera Shareholders' Meetings are generally well attended by shareholders; at the last meeting held 29 April 2011, for the approval of the 2010 financial statements, shareholders representing 79.6% of the capital were present.

Diversification and fragmentation of the shareholder structure, transparent, clear governance supported by the Code of Ethics and the Code of Conduct, as well as advanced, timely, symmetrical financial communication are the distinctive foundations of Hera governance.

### **Distribution of dividends**

In its mission, Hera has stated its intention to guarantee continuous creation of value for its shareholders, offering suitable return on capital invested.

As a result of the pursuit of growth strategies along all lines of development since its inception, and the numerous activities to enhance operating, Hera has achieved positive economic-financial results which constantly increase, also allowing the Group to distribute dividends to shareholders, demonstrating the profitability and security of their investments

2011 was an unusual year due to the challenging macroeconomic environment which, since late 2008, has impacted financial markets even in the most advanced countries: despite the effects of the crisis in terms of a decrease in demand, Hera was able to continue the growth strategies set forth in its Business Plan, to reach the set targets and keep the promises made in previous years.

In this context, the Group in fact closed extremely positive financial statements with operating results on the up, going against the trend with respect to expectations for the sector in Europe. These results, together with a standardisation of growth investments (consequent to completion of a long-term plant expansion project) supported a positive cash flow generation, a rise in financial returns and maintenance of a sound and sustainable financial structures judged by international brokers as among the best in the sector in Italy. These results have permitted the Board of Directors to propose to the shareholders' meeting which will approve the annual financial statements, the distribution of a dividend in line with the previous year once again confirming the promises made to the investors despite the lasting economic crisis underway.

#### **Distribution of dividends**

	2009	2010	2011
Earnings per share (Euro cents)	8.7	10.5	9.4
Dividend per share (Euro cents)	8.0	9.0	9.0
Price/earnings	18.6	14.9	11.7

The price/earnings ratio expresses the relationship between the official share price as at 31 December divided by Group earnings per share. 2009 does not consider the effects of the tax moratorium.

The economic-financial results illustrated previously demonstrate the soundness of Hera's multi-business approach which protects the results also from situations of serious macro-economic crisis such as the current one, setting itself against the trend with respect to the rest of the sector. The results are also the fruit of corporate policies aimed at reducing and effectively handling the risks, which strengthen the conservative profile of the portfolio of assets managed.

The Hera Group has reached an operating, competitive and dimensional structure of primary standing further to the significant growth achieved in the last 10 years based on modern, efficient plants able to support the further commercial expansion envisioned in the corporate plans. During the year, activities continued, for boosting the efficiency of operating units, and, in addition to the usual maintenance investments, plant development investments were made for amounts more "ordinaries". In comparison with 2010 net income must be considered an extraordinary tax benefit recorded in 2010; net of which would be an increase in 2011 net profit of around +5.3%. The financial

results also disclose who operations have been able to generate resources to cover the investments and create a financial surplus continuing the 2010 positive trend and confirming the full capability to cover the plane for future investments described in the Business Plan.

## Stock exchange share performance

The worldwide recession that started in 2008 had severe repercussions on global financial markets during 2011 as well, causing high uncertainty among operators. The situation was further exacerbated by economic analysts' concern about the sovereign debt of some European countries which in the first half of 2011 reached levels deemed as no longer sustainable. The joint action of EU institutions, together with rigorous budget policies implemented by the certain European countries, attempted to restore confidence in the system which bear still a widespread sense of uncertainty.

In this context, the Italian local utility sector followed the negative market trend, registering at the end of 2011 performance lower than the Italian stock market index. The FTSE Italia All Share index, which includes all shares listed on the Milan stock exchange, closed 2011 with a performance of -24.3% from the beginning of the year, whereas the index of Italian local utilities closed the same period at -32.3%. In this context, Hera was the second best Italian local utility: the last quoted Stock market price for the year was Euro 1.096, with a performance of -29.7% since the start of 2011. In the rankings of the stock market performance of major Italian local utility companies, Hera was only bested by the Lombard company A2A, which benefited from the Edison reorganisation.

The average liquidity level recorded by Hera stock disclosed lower trading in 2011 than in 2010, in line compared to that registered on all the European stock markets. The average value of the daily transactions involving Hera stock in 2011 decreased compared to that of 2010, from Euro 2.3 million to Euro 1.8 million.

Official share price and average traded quantities in 2011

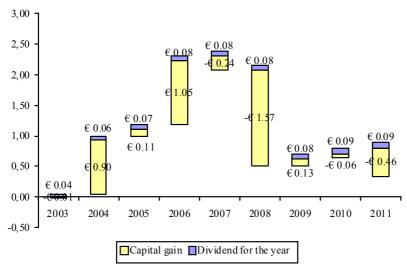
	QI	QII	QIII	QIV
Official price at close of period (Euro)	1.682	1.464	1.141	1.096
Average volume traded (thous.)	1.188	1.290	1.771	1.068
Average value traded (in thousands of €)	1.928	2.108	2.138	1.193

At the beginning of 2011, Hera stock disclosed one of the best performances in the sector in concurrence with the publication of the excellent annual results for 2010, taking prices to over Euro 1.73 (+13% from the start of the year) at the beginning of June. Subsequently, following the results of the referendums and the sharpening of the sovereign debt crisis in peripheral European countries, the trend of all the stock in the sector disclosed an emphasised bearish trend until the end of the year, at levers never seen before. In this context, Hera continued to stand out maintaining an improved performance with respect to the other local utility companies in the second half of the year partly thanks to the publication of satisfactory quarterly financial results and a business plan with further growth prospects for the future.

At the beginning of 2012, with a progressive improvement in confidence in the italian public debt shown by foreign investors, a reduction was seen in speculative phenomenon and a progressive improvement in the prices of sector securities which however remain significantly under-estimated in the opinion of the financial analysts with respect to the Hera book value, when compared with many assessment parameters (on EBITDA and on the dividend) and with respect to the solid growth prospects announced.

In addition to the usual presentations of its financial results, in 2011 Hera's top management maintained its commitment to dialogue with investors, despite the difficult context; an international road show was organised, which made it possible to meet major international investment funds and to discuss in depth Group performance and strategy. The total number of encounters and contacts made during the year came to 330, in line with sector best practices.

#### Yield of the share compared to the price



The changes are calculated with reference to the price of the share at listing.

The graph illustrates the returns to a shareholder who owned Hera shares from the year they were listed (2003) to 31 December 2011, including the proposed dividend for 2011 (which will be distributed in 2012). Despite the effects of the economic and financial recession of recent years, the overall return from listing for shareholders remains positive, with an overall value of over 42%. This result was entirely attributable to the dividend growth policy pursued since the establishment of the Group, which represents confirmation of the success of Group operations and the attention paid to shareholders. For 2012, too, international road shows will be organised: as usual, they will enable top management to illustrate Hera's financial results and strategy in detail. During 2012, moreover, new instruments will be implemented to reply ever more effectively to requests for information from the financial community and, in particular, from private non professional shareholders and "sustainable" investors.

## Stock exchange indices

Hera stock is included in many ethical indices, as evidence of the company's sustainable profile: in fact, for years it has been included in the "Kempen SNS Smaller Europe SRI

Index" and in 2008 it was included in the "ECPI Italy SME's Equity" and the "ECPI Ethical Index EMU" ethical index, which consists of 150 listed companies in the European Economic and Monetary Union market which are considered ethical investments under the "ECPI SRI" methodology. This methodology was developed by ECPI, a company that has been researching social, environmental and governance aspects of companies, assigning ethical ratings and developing, calculating and publishing sustainability indices of the companies at global level since 1997.

Furthermore, during 2011, "Oekom Research AG", one of the leading world rating agencies in the sustainable investments segment, judged Hera to be a "Prime" investment, since it satisfies the environmental and social criteria established by the agency.

#### **Share coverage**

The Investor Relations Department promotes awareness of Hera with Italian and foreign financial analysts to increase interest in and awareness of the company and raise the number of opinions and independent professional assessments on the business results. The dissemination of this information enables investors to make well informed decisions on the use of their resources.

Despite the financial crisis of recent years has caused major restructuring in banking institutions, Hera still has a widespread coverage consisting of 11 independent research firms, half of which are international: Alpha Value, Banca Akros, Banca IMI, Centrobanca, Cheuvreux, Deutsche Bank, Equita, Exane (BNP Paribas), Intermonte, Kepler and Mediobanca. Moreover, the Banca IMI, Cheuvreux, Kepler and Deutsche Bank analysts included Hera stock among the best investment opportunities for 2011. At the end of 2011 Hera received 9 Buy/Outperform ratings, 2 Hold/Neutral ratings and no negative ratings. The average target price over 12-18 months, expressed by the evaluations of the analysts, is Euro 1.48 per share. At the end of 2011 Banca Aletti began Hera coverage.

# Relations with investors and financial analysts

Since it is impossible to access all information necessary to assess an investment opportunity with full knowledge, the relationship between company and investors must necessarily be based on esteem and confidence in the management of the company. The Hera Group considers shareholders' trust and confidence to be very important, because a fair evaluation by the market promotes growth development and value creation through growth through external acquisitions.

For this reason, the Investor Relations Department was established at the time of listing, specifically dedicated to providing information to shareholders and financial operators. These activities have become crucial in a period of crisis such as the current one, which featured extremely volatile financial markets.

Hera's primary communication tool is its institutional website, easily accessed by all stakeholders (private and professional shareholders, bondholders and financial analysts). The Investor Relations section is continuously updated in real time and contains detailed information and analyses on the main issues of interest to shareholders (financial statements, plans and strategies, financial analysts' opinions).

In 2011 too, communication to private investors was aimed at full disclosure with the quarterly publication of a newsletter on the Group website which illustrated the financial results, the significant initiatives carried out by the Group and an analysis both of the performance of the shares on the stock market and of the opinions expressed by independent financial analysts. Additionally, direct relations were maintained with the investors who contacted the company through the different instruments made available on the website.

Web-based communications pursued the objective of increasing the usability of information also for private shareholders, introducing new tools such as the accessible version of the financial statements, (including the half-yearly report), an interactive description of the company's governance, a simple analysis of the historical trend in the share price and the opinions of independent financial analysts. To provide stakeholders with an additional information support, a weekly chat line was opened which enables the users to interact with the company in real time.

#### Hera's 3rd place in the Webranking standings by Halvarsson & Halvarsson

For the third consecutive year, Hera's on-line financial communication took its place on the podium, confirming disclosure quality in line with the main capitalised companies on the Italian market.

With its 85.5 points, Hera was behind Telecom Italia (winner with 89 points) and Eni (87 points) in the KWD Webranking standings for 2011 prepared by the prestigious consulting firm Halvarsson & Halvarsson in collaboration with Corriere della Sera. Behind Hera were such Italian stock market giants as Piaggio (81.5 points), Pirelli & C. (80.25 points), the Unicredit Group (77.25 points) and Edison (76 points). The other Italian multi-utilities were far behind.

The Webranking analysis, which this year reached the tenth Italian edition, assesses the quality of online communication of the 100 Italian companies with the highest market capitalisation listed on the Milan Stock Market and, in this field, it is the most thorough research in Europe. The subjects of the analysis are the financial and institutional information and functionalities published in the English-language version of the websites.

In addition to organising specific meetings upon request of individual investors, Hera promotes meetings each year between the Group's top management and Italian and international financial market operators. In 2011, Hera counted 330 contacts with investors, comprising direct meetings, company and plant visits, conference calls, and videoconferences (webcast) which involved Italian and foreign investors (mainly British, French, American, Swiss, German and Scandinavian). The intense relations also maintained made it possible to fuel a constant exchange of information with shareholders and to respond to the growing sense of uncertainty perceived by stakeholders in the recessive environment.

As has become tradition, Hera participated in the Oddo Environment Forum which takes place each year in Paris, an occasion for meeting with over 20 SRI investors to whom the Group's sustainable policies were illustrated. During the institutional road shows organised by Hera, around 10 SRI investors were also met, including the leaders in the category in Europe.

During 2012, the intention is to offer private investors communication instruments designed *ad hoc* and occasions for discussion with Hera top management, intensifying collaboration with the Private Banking facilities of banks, international and otherwise, setting up new occasions for dialogue with the private investors and/or their financial consultants.

## **Financial Institutions**

The Group continues with its policy of providing financial institutions with fully transparent and correct information as part of its communication activities, with a balanced distribution of debt.

Major loans (breakdown) as at 31 December

%	2009	2010	2011
European Investment Bank	37.7%	42.8%	47.6%
Banca Intesa	21.5%	17.0%	12.0%
Unicredit	9.3%	8.6%	8.0%
Banca Credito Cooperativo Ravennate Imolese	0.0%	0.0%	5.4%
Dexia Crediop	6.7%	5.9%	4.7%
Banca delle Marche	3.5%	4.1%	4.2%
Cassa depositi e prestiti	4.3%	4.1%	3.8%
Banca Popolare di Milano	3.2%	3.4%	3.2%
Other institutions	11.5%	11.8%	11.1%
Total	100.0%	100.0%	100.0%

The goal of the Group's financial management is to maintain an adequate current and prospective balance between capital expenditure and sources of funds, both in terms of duration and of type of rates.

**Net Financial Indebtedness** 

(in millions of €)	2010	2011
Cash on hand	538.2	415.2
Other current loans	44.3	39.1
Current financial indebtedness	-150.7	-118.3
Net current financial indebtedness	431.8	336.0
Non-current loans	10.3	10.9
Non-current financial indebtedness	-2,302.3	-2,334.0
Net non-current financial indebtedness	-2,292.0	-2,323.1
Total net financial indebtedness	-1,860.2	-1,987.1

The net financial position as at 31 December 2011 came to Euro 1,987.1 million compared with Euro 1,860.2 million in 2010. The increase in net indebtedness is mainly due to the investments made in the local area and the dividends paid out during 2011. Investments made amounted to around Euro 325 million, while dividends distributed during 2011 totalled Euro 117.2 million.

As at 31 December 2011, the Group had about Euro 415 million in cash, Euro 280 million in unused committed credit lines, as well as uncommitted credit lines (over Euro 1,100 million), for the purpose of guaranteeing sufficient liquidity to cover any financial commitments at least for the next two years.

The policies and principles for the management and control of the Group's financial management are set out below.

### **Debt quality**

The Group aims to assure such a level of cash as to enable it to fulfil its own contractual obligations both under normal business conditions and in a recession, by maintaining available credit lines, cash and promptly starting negotiations on loans reaching maturity, optimising the cost of funding in relation to current and prospective market conditions

We note the balanced asset structure of the Group, which offsets the high level of fixed assets with a financial position mainly comprising medium/long-term debt.

Credit lines and the related financial assets are not concentrated in any specific financial institution but are evenly distributed among the principal Italian and international banks with a use largely inferior to total availability.

With regard to medium-long term debt structure, mention should be made of the drawing, carried out on 10 October 2011, of Euro 50 million, envisaged contractually, of the Put Bond maturing in 2031.

As at 31 December 2011, the Group's structure is such that the long-term debt portion is equal to 98% of total financial payables.

Average maturing is about 9 years, of which 59% comprises debts with maturity beyond five years.

There are no financial covenants, apart from that, on a number of loans, relating to the limit on corporate rating, even by a single Rating Agency, below Investment Grade (BBB-).

#### **Cost of Debt**

The Group uses external financial resources in the form of medium/long-term financial debt, bank credit facilities of various types and uses the liquidity available mainly in monetary market instruments which can be immediately unfrozen. The changes in the levels of the market interest rates influence both the financial charges associated with various technical forms of lending and the income of various forms of using liquidity, therefore affecting the cash flows and the net financial charges of the Group.

As at 31 December 2011, the exposure to the risk of unfavourable fluctuations in interest rates, with a consequent negative impact on the cash flows, equates to 31% of the total gross financial indebtedness.

The derivatives are perfectly consistent with the underlying debt and in compliance with IASs (International Accounting Standards).

The Group's hedging policy does not provide for the use of instruments with speculative aims and its goal is the optimal allocation between fixed and floating rate within the scope of a conservative strategy with respect to rate oscillation risks. Interest rate risk management essentially aims to stabilise financial flows in order to assure the margins and the certainty of the cash flows from ordinary operations.

During in 2011, even in the presence of a structure that is strongly characterised by long-term debt, the Group was able to maintain its cost at an overall average level around 4.4%.

The portion of value added allocated to financial institutions in 2011 came to Euro 119.5 million.

### **Credit ratings**

The significant development plan implemented by Hera over the past years has involved a continually balanced recourse to financial indebtedness, so as to permit a sound financial statement structure.

The Group's financials are assessed by the two leading international specialised ratings agencies: Moody's ("Baa1 Outlook Negative") and Standard & Poor's ("BBB+ Outlook Stable").

2011 saw a very difficult financial and economic situation which, as is known, led to the downgrading of Italy's sovereign rating. Within this context, on 25 January 2012 Moody's reviewed the Hera Group rating over the long-term, reducing it from "A3 Outlook Stable" to "Baa1 Outlook Negative", while in 2011 Standard & Poor's rating of "BBB+ Outlook Stable", was confirmed. The negative outlook assigned by Moody's depends exclusively on the decision made on the sovereign rating and is linked to the potential impacts which could affect the Group due to deterioration of the Italian macroeconomic situation and uncertainty regarding the country's prospects.

Thus, given the current context, action and strategies aimed at ensuring the maintenance/improvement of adequate rating levels have been further enhanced.

### **Suppliers**

Hera does not consider the role of suppliers exclusively that of value chain participants. They are also strategic partners for corporate growth.

Currently, Hera's suppliers are 6,100 and are mainly located in the area served (61%), highlighting the Group's positive impact on the local economy. In 2011, the value of supplies requested from social cooperatives came to around Euro 29.7 million: 537 persons facing hardships were included among suppliers.

### **Objectives and performance**

#### What we said we would do...

# • Extend the application of the procurement guidelines approved in February 2011 to all subsidiaries. The new procurement guidelines contain tender awarding criteria consistent with Article 49 of the Code of Ethics.

- Further increase the value of the tenders awarded according to the most economically advantageous bid.
- Further increase suppliers' use of the e-procurement platform, by continuing supplier involvement and training activities; provide access to the e-procurement platform for more than 90% of suppliers.
- Guarantee assistance to suppliers on the use of the e-procurement platform, maintaining the service standards reached in 2010.
- Continue on the path to involve social cooperation representatives, aimed at defining shared ways to promote employment projects.
- Constantly monitoring work accidents at major suppliers.

#### What we have done...

- The procurement guidelines approved have been applied to all subsidiaries. At the end of 2011, 9 Group companies adopted the Procurement protocol envisaged in the organisational model pursuant to Legislative Decree no. 231/2001 (there were 5 in 2010). (see page 161).
- The value of the tenders awarded according to the most economically advantageous bid passed from 45% to 53%. All the 12 public tenders carried out in 2011 were done so on the basis of this approach. (see page156).
- Use of the platform was also extended to public tenders. 93% of the qualified suppliers had accessed to the e-procurement platform (89% in 2010). 70% of the transactions were carried out via the e-procurement (see page 163).
- In 2011, 99% of the almost 10,000 requests for telephone assistance received by the helpdesk were sorted out within the timescales envisaged by company procedures maintaining the service standards achieved in 2010. (see page 149).
- We continued to hold periodic meetings aimed at monitoring employment of disadvantaged personnel by type B supplier social cooperatives. The meetings also pertained to the ways to promote employment projects (see page ).
- Monitoring was started for 71% of suppliers (56% in 2010). (see page161).

#### We shall...

- Extend the adoption of the Procurement protocol envisaged by the Organisational model pursuant to Legislative Decree no. 231/2001 to another seven companies in 2012.
- Further increase the value of the tenders awarded according to the most economically advantageous bid.
- Launch and monitor the first year of experimentation of the Vendor management system so as to streamline the supplier qualification and handling processes, increasing transparency in the dealings and the efficacy of the periodic checks made.
- Further improve monitoring of work accidents at major suppliers.

- Launch operating activities in relation to suppliers associated with the SA 8000 certification procedure.
- Further extend the purchases made by means of the e-procurement platform: achieve 75% of the total value purchased in 2012.

### **Breakdown**

The Group's suppliers were 6,114 at the end of 2011, companies providing goods, services, professional services and work. Most suppliers are included in the pool of suppliers in several goods/services categories.

All data provided in this chapter, unless otherwise indicated, refers to the companies in the Hera S.p.A. Group, Herambiente, Hera Comm, Fea, Uniflotte, Famula on Line and Hera Luce and exclude intercompany purchases. The presence of a single list of qualified suppliers for the entire Group entails, for suppliers, expanding their possible business for all goods/services categories associated with them.

### **Pool of suppliers**

No.	2009	2010	2011
Goods	5,477	4,503	3,489
Services	5,920	5,101	4,134
Job orders	894	807	757
Total	9,307	7,749	6,114
of which suppliers who received at least one order during the	4,577	3,902	3,639
year			

The table provides a breakdown of suppliers by goods/service class. Because some suppliers belong to more than one class, the total for suppliers by class does not tally with the total for suppliers.

In 2011, a further rationalisation of the suppliers in the Hera Group supplier pool was conducted, on the basis of the checking of their qualification status and on their actual utilisation in the past three years; as a result, the number of suppliers in the pool was reduced from 7,749 to 6,114 (-21%). Of these 6,114 suppliers, over 3,600 had at least one active contract in 2011. Rationalisation activities were carried out mainly during the second half of the year at the same time as the launch of the new supplier portal which led to a further monitoring of the supplier database.

The further decrease in 2011 when compared with 2010 in the number of active suppliers (who received at least one order during the year), is essentially due to the pursuit of rationalisation of purchases undertaken in 2010; the use of master orders and qualification systems reduced the number of orders and increased their average value.

### Supplies from social cooperatives

In 2011, consistently with the provisions of the Protocol signed in June 2009 with associations representing social cooperatives, we continued to hold periodic meetings to monitor the employment of disadvantaged personnel by type B social cooperatives in the management of the work contracts awarded by Hera Group companies.

Monitoring is carried out according to an operating instruction defined in 2009 in accordance with the Protocol signed and following the Hera procurement guidelines and covers all Group contracts in which social cooperation personnel operate. Quarterly

verifications are made of the total number of persons facing hardship employed, the type of hardships faced by individual workers used in the supply and their qualifications within each single contract. It is thus possible to check observance of the work induction project presented at the time of the tender by the supplier with a consequent assessment of the same.

### **Supplies from social cooperatives**

	2009	2010	2011
Social cooperatives (number)	36	34	32
Value of supplied goods/serv. (in	23,590	25,989	29,675
thousands of €)			
Persons facing hardship hired	468	474	537
(number)			

Among the persons facing hardship hired, workers employed for less than one year were also counted.

In 2011, the value of the supplies regarding types of work or services requested from social cooperatives came to more than Euro 29.7 million, disclosing an increase of 14% on 2010.

Of this amount, about Euro 27.8 million was assigned for the execution of waste management services, equal to 23% of the total awards made by the Group for these services. The increase in supplies to social cooperatives mainly concerned the increase in certain waste management services handled by Herambiente and by the local operating structures of Forlì-Cesena and Rimini.

Supplies to social cooperatives involved a total of 32 cooperatives or consortia of social cooperatives and resulted in the employment of 537 persons facing hardship. Persons facing hardships employed under permanent contracts amounted to 362 while those under full-time contracts came to 287. The highest number of persons facing hardship employed was recorded by the Territorial Operating Structures of Modena (158 people), Forlì-Cesena (116 people) and of Rimini (115 people).

Hera contributed to the inclusion in the national collective agreement for waste management services (renewed in February 2011) of a specific protection clause regarding outsourcing in favour of social cooperation. This clause envisages that a portion of outsourcing equating to 5% and raisable at company level to 15% of the economic volume of the sweeping, collection, waste transportation, septic tank cleaning and rubbish skip cleaning activities are excluded from the obligation to apply the CCNL (national collective labour agreement) for waste management services by means of the definition of social inclusion projects.

Research carried out by Aiccon in collaboration with Legacoop and Confcooperative, published in 2010, quantified the economic advantage for Public Administration deriving from social inclusions carried out by type B social cooperatives. The research revealed that the benefits essentially derive from minor welfare costs (disability pensions, insertion in public rehab structures, etc.) and greater tax revenues deriving from the payment of taxes on income from the employment of persons facing hardships. The lower revenues for the State deriving from tax and contributions exemptions which type B social cooperative benefit from have been deducted from the benefits. All of this ends up being a benefit for the Public Administrations of around Euro 7,100 a year for disabled individuals facing hardships and around Euro 1,600 a year for able-bodies individuals facing hardships. The economic benefit for Public Administrations deriving

from Hera awarding social cooperatives can be estimated at around Euro 1.9 million for 2011. This calculation considers that 54% of the 537 individuals inducted in 2011 further to Hera Group supplies concern disabled individuals and takes into account part-time insertions.

### Raw material supplies

The natural gas sold by the Hera Group in 2011 was purchased from Eni Gas & Power (42%), from Edison (16%), from EGL (5%), from Econgas Italian (3%), from Shell Italia (3%), from other minor national operators (3%) and via Hera Trading (28%), (which, in turn, mainly purchased gas from Econgas, Eni, Edison and VNG).

With regard to electricity, 53% of sales to end customers on the eligible and protected market were covered by bilateral purchases from other operators, 16% by the production from high-efficiency thermoelectricity power stations of companies in which Hera holds investments (Tirreno Power, Calenia Energia and SET) and 4% was covered by the Imola Co-generation plant. The remaining 27% was sourced on the electricity market. The methods for trading electricity, both via sourcing on the electricity exchange and through bilateral agreements, do not allow for tracing the sources of energy in order to be able to certify the type of production upstream.

With regard to generation from non co-generation thermoelectric power stations in which Hera holds investments, green certificates for 65 GWh were acquired, so as to comply with the obligations set out in the Bersani Decree.

During 2011, about 65% of water resource needs (water introduced onto the civil and industrial aqueduct networks) were covered by our own production (collection from springs, rivers and lakes, capping water tables). The remaining 35% was covered through third party purchases. The major supplier of wholesale water is Romagna Acque - Società delle Fonti, which, since 1 January 2009, has managed all the main water production plants in the Romagna area.

### Training and communication for improving citizen holidays

The Rimini TOS organised a 6-day training course in 2011 for the staff of the cooperatives which carry out separate waste collection services during the tourist season, with the aim of informing them of the correct methods for carrying out the service observing good norms of conduct in their approach with customers. Furthermore, in May 2011 Hera sent out a communication, house by house, business by business, throughout the coastal area, illustrating how to correctly separate waste, and the days and times when the bins are emptied. Commercial businesses can also use a new dedicated web channel, My Green Page, so as to request services linked to separate waste collection around the clock.

### **Operations within local communities**

Once again in 2011, the positive impact generated by the Hera Group on the local areas and communities where it operates, continued. An indication of this positive impact is that 61% of Hera suppliers were made up of businesses with commercial headquarters in the area covered by Hera. The decrease in the overall number of suppliers with

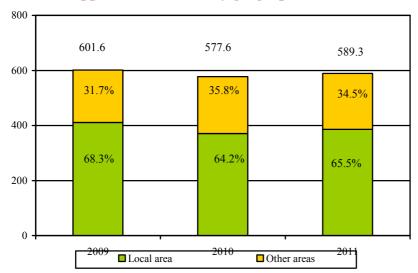
respect to 2010 is attributable to the additional rationalisation of the archive of qualified suppliers which followed the criteria indicated below: checking of effective use in the previous three years, failure to conclude the qualification process, transfer of activities previously seen to by the Group (such as the winter road network service).

Suppliers (breakdown by geographic area)

No.	2009	2010	2011	% on 2011
Bologna TOS area	1,333	1,131	917	15.0%
Ferrara TOS area	436	353	299	4.9%
Forli-Cesena TOS area	771	671	527	8.6%
Imola-Faenza TOS area	528	486	391	6.4%
Modena TOS area	1,613	1,075	743	12.2%
Ravenna TOS area	616	543	420	6.9%
Rimini TOS area	705	557	429	7.0%
Total area	6,002	4,816	3,726	60.9%
Other provinces of Emilia-Romagna	353	263	196	3.2%
Other Italian regions	2,850	2,567	2,109	34.5%
Other European Union nations	60	63	54	0.9%
Other	42	40	29	0.5%
Total	9,307	7,749	6,114	100%

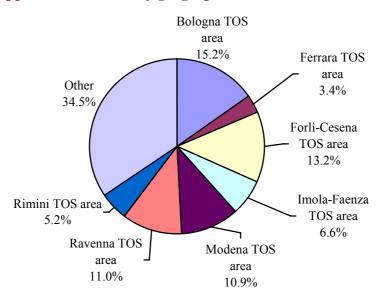
The countries outside the European Union were purchases were made are Switzerland, the Republic of San Marino, Norway and the United States.

### Value of supplies: breakdown by geographic area (in millions of €)



In 2011, the Hera Group issued job orders worth almost Euro 386 million equating to 65.5% of the total, to businesses based in the same area as that covered by Hera, slightly increasing the positive repercussion ratio with respect to last year. In 2010, by contrast, the reduction in percentage value of the supplies in the local area, dropping from 68.3% to 64.2%, was partly due to the December 2009 acquisition by Aimeri (a Milan-based company) of the waste management division of Manutencoop (a Bologna-based supplier of Hera in waste management services).

### Value of supplies: breakdown by geographic area (2011)



### Creation of indirect employment by the Hera Group

The Hera Group's direct impact on employment is in the first instance gaugeable on the basis of the number of its employees. The company employs a workforce of 6,484 individuals in the local area under permanent employment contracts. All the information relating to employees is contained in the section "Workforce".

In order to globally assess the social repercussions on the country, it is however useful to consider the employment maintained care of suppliers who procure sundry goods and services or support certain stages of the company process. Therefore, indirect employment can be estimated as that portion of the workforce of the suppliers which carries out activities for Hera businesses: the individuals indirectly employed by the company are estimated at approximately 4,150. The figure was obtained by analysing the financial statements of the Group's leading 100 suppliers which cover 60% of the volume purchased in 2011. In order to estimate the number of employees of the suppliers involved in activities requested by Hera, the ratio between the value commissioned by Hera in 2011 and the total sales turnover of the supplier was considered; this percentage was then multiplied by the number of total employees declared in the suppliers' financial statements. In certain cases, the data relating to employees involved in activities requested by Hera were provided directly by the suppliers.

### Qualification and selection of suppliers

Supplier qualification and assessment is handled a Group level and is based on verification of technical, economic, and organisational quality requirements, compliance with environmental and safety regulations, as well as acceptance of the rules set forth in the Group's Code of Ethics. The Supplier Qualification and Assessment Department of

the Procurement and Tender Contract Management Department manages the supplier qualification and assessment process for the whole Group, manages the database of qualified suppliers and prepares reports for their assessment.

### Supplier assessment and checking

With regard to supplier assessment, the monitoring model and the handling of the periodic assessment of the suppliers was improved in 2011 by means of the introduction of quarterly reporting which permits the company contact person to check the contractual performance of the suppliers in the three fundamental areas of quality, safety and the environment with the possibility of temporarily suspending the contractual relationship for 3 or 6 months in the event of serious or very serious non-compliance.

The checks carried out by the company contact personnel take place for the deliveries of goods on receipt, while in relation to the provision of services and work the check takes place quarterly during the execution of the services by means of compiling and updating specific assessment check lists which take into account the elements concerning any sub-suppliers as well. The number of checks on services and work is defined on the basis of the contractual amount, the term of the order and the contract, and the impact on quality, safety and the environment of the services monitored. During the last quarter of 2011, 4 check lists were up-dated regarding the emergency service, scheduled network maintenance, separate waste collection and the collection of outsized waste, introducing additional monitoring elements for sub-suppliers as well as checks on safety. In the event that goods or services delivered are found to be non-compliant, the company contact must record and manage the event to guarantee its traceability and its impact on the periodic supplier assessment.

In 2011, internal audits continued, to check the procedures adopted: the training plan for company contacts was developed on the elements noted during the encounters as well. In 2011, inspections were also continued at the facilities of suppliers of strategic goods, in some cases noting partially non-compliant behaviours which were promptly highlighted and corrected in a short space of time, with subsequent verification of the effectiveness of corrective actions.

10 inspections were carried out, care of qualified suppliers so as to assess the compliance of the production processes in line with the ISO 9001, ISO 14001 and OHSAS 18001 standards.

With regard to Group suppliers, 838 cases of non-compliance were detected in 2011, of which 714 were closed by 31 December 2011.

#### The Vendor Management system

The Vendor management project was an important evolution for the Hera Group in the relationship with its suppliers, supplementing the e-procurement platform, introducing new instruments aimed at streamlining the operational relationship with the suppliers making the supplier qualification and assessment process more central within the Group's certified system.

Within the supplier qualification area, it will be possible to access the Hera Group's procurement product categories, making it possible to use the following services:

• independently update the profiles of interest, putting oneself forward for any new commodity groups within the accredited suppliers system;

- keep ones details up-to-date independently (in particular, contact person and email address) as well as the schedule of the supplier qualification documents;
- check one's qualification and assessment status;
- gain the possibility of being called more frequently to present bids;
- gain the possibility of receiving information relating to the awarding of a contract;
- being updated on the Group's initiatives of economic interest;
- access to the digital signature formalities (development envisaged in 2012).

As a consequence of the launch of the new Vendor management system during 2011, numerous training sessions were scheduled, divided up by subject area, preparatory for once gain running through the salient phases of the supplier monitoring and the related periodic assessment, with particular attention paid to aspects linked to safety and accident monitoring.

At the end of December, all the Environment and Network subject areas received the envisaged training (more than 400 contact persons and their assistants were called); courses were held in the first two months of 2012 for other structures (individuals trained amounted to around 700). Group subsidiaries were also involved in the training. With regard to the suppliers who request that they be included in the Hera supplier qualification system managed using the e-procurement platform, an annual membership fee is envisaged in keeping with the number of commodity groups which the supplier shows interest in.

### Qualified suppliers: breakdown by type of certification

In 2011, the Hera Group maintained and strengthened the percentage of suppliers holding certification, with a considerable increase in certification relating to OHSAS 18001 safety and SA 8000 work conditions, while the slight drop in ISO 9001 certificates was partly due to the rationalisation of suppliers already mentioned.

**Qualified suppliers (breakdown by type of certification)** 

No.	2009	2010	2011
Quality certification (ISO 9001)	2,035	2,176	2,125
Certification of qualification for the execution of public works (SOA)	567	586	586
Environmental certification (ISO 14001-EMAS)	363	427	459
Occupational safety (OHSAS 18001)	72	101	136
Lab analysis quality certification (SINAL)	41	42	45
Measurement instrument calibration quality certification (SIT)	32	32	30
Social certification (SA 8000)	21	25	31

In 2011 there was a further significant increase in the value of supplies ordered from certified suppliers. This was the result of direct action taken by the company via systematic inclusion of quality certification as an obligatory requirement in the public invitations for tenders or the supplier approval stage. The increase was also the result of a greater awareness in the business system that qualitative growth, on the whole, is a component of competitiveness. Of note is the 29% increase in purchases from suppliers holding the OHSAS 14001 certification and 38% increase in those holding OHSAS 18001 certification. Purchases from suppliers with SA 8000 certification doubled during 2011.

## Procurement from qualified suppliers (value breakdown by type of certification) - % of total supplies)

0/0	2009	2010	2011
Quality certification (ISO 9001)	76.9%	78.3%	78.7%
Certification of qualification for execution of public works	41.3%	38.5%	37.3%
(SOA)			
Environmental certification (ISO 14001-EMAS)	33.5%	35.2%	44.4%
Occupational safety (OHSAS 18001)	5.8%	11.3%	15.3%
Lab analysis quality certification (SINAL)	2.8%	2.5%	3.1%
Social certification (SA 8000)	2.6%	2.5%	5.1%
Measurement instrument calibration quality certification (SIT)	0.1%	0.2%	0.2%
Total supplies (in millions of €)	601.6	577.6	589.2

# Tenders for contracts awarded on the basis of the most economically advantageous bid approach

In line with the Code of Ethics and the objective of further extending application of the criteria for the awarding of tenders on the basis of the most economically advantageous offer, in 2011 the Hera Group awarded 53% of purchases according to said method in place of the highest discount method (44.6% in 2010).

The operating instruction approved in 2009 and whose purpose is to identify sustainability criteria for the various commodity categories for purchasing goods, services and work, continues to be the benchmark for the identification of the elements for assessing social and environmental aspects, to be added to the economic aspects involved in choosing a supplier, where tender procedures allow for use of the method of the most economically advantageous bid.

In the specific areas identified in the Hera Group's Procurement guidelines - "social commitment", "quality of services" and "economic value" – sustainability criteria have been identified which are the fruit of the experience acquired in managing calls for tenders according to the method of the most economically advantageous bid, based on doctrine and also on regulations on the matter, in line with Hera Group objectives.

In the operating instruction "Identifying Sustainability Criteria by Goods/Services Purchasing Sub-Category" a minimum number of sustainability criteria for choosing suppliers were established, based on the amount and importance of the tender (if it is a tender with a significant impact on the environment, occupational safety, the quality of services provided to customers, the term or amount of the contract). The other criteria include: management of atmospheric emissions and sound, prevention, reuse and recyclability of waste, energy efficiency, reduction of the dangerousness of substances used, reduction of water consumption (for the environmental protection criterion), supplier's adoption of their own Code of Ethics, hiring of persons with disabilities and persons facing hardship, accident prevention (for the social commitment criterion), quality of materials, equipment and instruments, professional qualifications and skills, technical services and performance (for the service quality criterion).

The Procurement and Tender Management Departments are responsible for selecting the sustainability criteria. They chose the criteria to be used based on the type of tender, the importance of the sustainability criterion in relation to said tender, and assessments of previous tenders assigned and their results. For assistance in selecting the criteria and assessing bids in the tender phase, the Purchasing and Tender Management Departments can use the technical support of the Corporate Social Responsibility Department and the Quality, Safety and Environment Central Department.

The method of awarding involving the most economically advantageous bid is applicable to the entire purchasing cycle, with a clear predominance for purchases of services and work, given the already high standardisation of the technical specifications with regard to the sphere of materials supplies. We would like to point out that 63% of contracts managed by the Procurement and Tender Contracts Management Department (by public tender, as a result of qualification system or by negotiated procedure without public tender) to which the most economically advantageous bid criterion is applicable took place according to this method, in place of the largest discount (it was 55% in 2010). Also considering the purchases carried out by the Procurement and Tender Contracts departments of the TOS, this value is 53% (it was 45% in 2010).

Excluding the tenders developed on behalf of third party financial institutions, possibly restricted to the largest discount awarding method, in 2011, a total of 12 public invitations for tenders were announced, for a total starting price of over Euro 180 million, all to be awarded based on the criteria of the most economically advantageous bid.

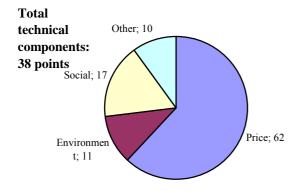
Public tenders for contracts adopting the economically most advantageous bid method

	2009	2010	2011
Value of the public invitations for tenders published (in	47.4	43.5	182.6
millions of €)			
% of total value of public invitations for tenders published	100%	100%	100%
No. of public invitations for tenders published	10	11	12

Additionally, 16 public tenders for qualification systems were held, which were not included in the total as the regulations require that the tender amount and the award method be defined as and when in the subsequent negotiation procedures.

With respect to calls for public tenders indicated in the table, the average score assigned to the technical component was 38 points out of 100, of which 28 relating to environmental or social sustainability criteria.

Public tenders for contracts adopting the economically most advantageous bid method: scores assigned to the various components (weighted average on the basis of the call amount)



Among the tenders awarded in 2011, the public ones described below are particularly significant for the importance of the tenders and the significance assigned to sustainability criteria when assessing the bids:

- In the tender for the execution of the services for emergency support activities, the maintenance of networks and the accomplishment of connections in the gas, water and sewage sectors in the area of Bologna, Forlì-Cesena, Ravenna, Imola-Faenza and Rimini, with a bid starting price of Euro 44.6 million, of the 40 points reserved for the technical component 31 were reserved for environmental and social sustainability components (training on safety at work, monitoring of the accident frequency and severity indexes, "green" quality of vehicles used, age of the equipment and use of procedures aimed at containing environmental impacts).
- In the tender for the awarding of scheduled maintenance, network extension, connection and accessory work to be carried out in the areas of Imola-Faenza and Modena, with a bid starting price of Euro 4.8 million, of the 25 points reserved for the technical assessment 16 have been reserved for environmental and social sustainability components (safety training, containment of the accident frequency and severity indexes, containment of the environmental impacts, minor environmental impacts of the vehicles used).
- In the tender for the awarding of the water, gas, district heating and electricity meter reading service, with a bid starting price of Euro 10.1 million, of the 30 points reserved for the technical component 12 have been reserved for the stability and experience of the dedicated staff (number of meter readers under permanent contracts and experience in reading meters of at least 2 years), 8 for the operating methods for increasing the number of positive readings (e.g. anticipation of the changeover with bulletins, reading by appointment), 7 for the certification of the reading figure with particular reference to the internal control operating methods, 3 for the ease in identifying the personnel and mediums on a consistent basis with the Hera Group image.
- In the tender for the construction of new headquarters for the waste management services in Cesena, for a bid start price of around Euro 4 million, of the 30 points intended for technical assessment, 10 points have been reserved for environmental sustainability (use of photovoltaic panels, floor heating panels, air conditioning units with a better energy efficiency class, high efficiency heater recoverers).
- In the tender for the awarding of the activities associated with the solid municipal and similar waste collection and transportation, separate waste collection, skip cleaning service, that for the running of the collection centres in the area of the provinces of Forlì-Cesena, Ravenna and Rimini for an amount of around Euro 61 million, of the 40 points reserved for the technical component 20 points have been reserved for social sustainability (development of the projects for the work induction of individuals facing social hardship) and 12 for environmental sustainability (age and impact of vehicles used).
- In the tender for the awarding of the activities associated with the manual and mechanical sweeping service in the area of the provinces of Forlì-Cesena, Ravenna and Rimini for a bid start price of Euro 29 million, of the 40 points reserved for the technical component 25 points have been reserved for social sustainability (development of the projects for the work induction of individuals

facing social hardship) and 7 for environmental sustainability (age and impact of vehicles used).

- In the tender for the awarding of the activities associated with the solid municipal and similar waste collection and transportation, separate waste collection, skip cleaning service, that for the running of the collection centres and manual sweeping activities in the area managed by the Imola-Faenza Territorial Operating Structure for a bid starting price of around Euro 12.5 million, of the 40 points reserved for the technical component 20 points have been reserved for social sustainability (development of the projects for the work induction of individuals facing social hardship) and 12 for environmental sustainability (age and impact of vehicles used).
- In the tender for the awarding of the activities associated with the solid municipal waste (various types) collection service and the related transportation to the recovery and disposal plants in the area managed by the Bologna Territorial Operating Structure for a bid starting price of Euro 1.4 million, of the 35 points reserved for the technical part 18 have been reserved for the sustainability aspects (age and impact of the vehicles used, age of the skips, preventive maintenance schedule for guaranteeing the maximisation of availability of the levels of safety and efficiency of the vehicles and equipment, adoption of the internal Code of Ethics and SA 8000 certification of the suppliers).

### **Contract management**

Hera S.p.A.'s Purchases and Contracts Department handles purchases for Hera S.p.A., in close collaboration with the area purchasing departments, and those for the Group companies for which a purchasing service exists (Herambiente, Hera Comm, Fea, Uniflotte, Famula on Line and Hera Luce).

In 2010, Procurement Protocol 231 was approved by Hera S.p.A.'s Board of Directors; it defines roles, responsibilities, behavioural principles and operating procedures which Group personnel involved in procurement activities must follow.

The procurement guidelines, in line with the Group's Code of Ethics, the organisational model as per Legislative Decree no. 231/2001 and the related Protocol, is the corporate reference for supplier selection activities, determining the principles inspiring the Group's procurement for the acquisition of goods, services and work, aimed both at activities carried out under free market conditions and subject to public works contracts. In February 2011, the review of the procurement guidelines was approved with the aim of unequivocally identifying the reference legislation for the awarding of supplies, services and work for Group companies. It is stated in this document that the Hera Group operates within the sphere of an organisational and management model adopted in pursuance of Legislative Decree no. 231/2001, for the purpose of ensuring the application of specific rules in the management of procurement in line with the Hera Group Code of Ethics and with the objectives of the Procurement Protocol (approved by Hera S.p.A.'s Board of Directors on 23 June 2010). It is confirmed in the guidelines that the Hera Group favours the economically most advantageous bid method as the approach for assessing bids, using sustainability criteria consistent with the principles established by the Group's Code of Ethics.

Furthermore, in accordance with the provisions contained in the AEEG 11/2007 resolution, as amended by the AEEG 57/2010 resolution concerning functional separation (so-called unbundling), it was also emphasised that the Hera Group handles the activities for the procurement of goods, services and work ensuring the application of efficiency, inexpensiveness, neutrality ad non-discrimination criteria. In dealings with suppliers, it guarantees the adoption in the contractual documentation of clauses aimed at observing the confidentiality of the commercially sensitive information relating to the activities functionally separated.

In December 2011, the review of 5 of the procedures containing the procurement methods of the Hera Group was approved, on a consistent basis with the principles contained in the "Group Procurement" guidelines, which define the Group procurement process for goods, services and work.

The procurement guidelines approved have been applied to all subsidiaries. At the end of 2011, 9 Group companies adopted the Procurement protocol envisaged in the organisational model pursuant to Legislative Decree no. 231/2001 (there were 5 in 2010).

### The monitoring of work accidents at suppliers

In order to further improve the impact of outsourced activities in terms of accidents, in 2009 Hera began monitoring work accidents at major suppliers. This commitment is part of the implementation of the Safety Management System, which also resulted in the definition of the procedure for "injury, near-accident and accident management" and the introduction of the "Annual Summary of Injuries or Accidents Occurring at Contracting Companies in Performing Work for Hera" form into technical specifications and in tender contracts. During 2011, the request to compile the form was extended to all the suppliers of work, services and consulting activities.

The improvement in the monitoring of the suppliers in connection with health and safety in the workplace was subject to specific analysis within the "Un anno per la sicurezza nel Gruppo Hera" (A year for safety in the Hera Group) project, during which a training initiative has been envisaged addressing company contact individuals (around 700) who handle contractual relationships with suppliers.

### Suppliers' workplace injuries

	2010	2011
Value of total supplies (in millions of €)	577.6	589.3
Value ordered from suppliers under monitoring (in millions of €)	321.5	417.9
Value ordered from suppliers under monitoring (%)	56%	71%

During 2011, monitoring concerned Hera suppliers with regard to the commodity classes relating to the purchase of services and work (with the exclusion of goods and organisational consulting). The value of orders to suppliers under monitoring in 2011 was Euro 417.9 million, i.e. 71% of total orders.

At the date of drafting of this report, data was collected from 717 suppliers (101 in 2010), equal to an amount of Euro 243 million ordered in 2011, or 41% of the total amount of the Hera Group's orders in the year.

Calculations based on the collected data identified a frequency index of 27.2 with a severity index of 2.5. This last figure is affected by a lethal injury; without this event, the severity index drops to 1.5.

The E-procurement system

	2009	2010	2011
Volumes handled via the e-procurement platform	12%	39%	70%
Suppliers with access to the platform	56%	89%	93%

2011 saw further consolidation of the e-procurement platform which led to the achievement of 70% of the volumes negotiated on this platform (39% and 12% respectively in 2010 and 2009) and over 93% of qualified suppliers with coded access to the electronic platform.

The system was streamlined even further, improving stability and use. The bases were laid making it possible to introduce other functions at the start of 2012 which make accrediting by the suppliers direct and access to the system even more transparent, via the new Vendor management system. New instruments such as certified e-mail and the digital signature (for the sending and signing of contracts and orders) could permit a further improvement in the purchasing process at the same time reducing recourse to paper.

In conclusion, during 2011 use of the platform was extended also to public tenders, in fact establishing the conditions for considering it for all purposes to be the sole negotiation instrument adopted by the Purchases and Contracts Departments of the Hera Group.

### **Tender contract management manual**

During 2011, a review of the Tender Contract Management Manual was approved; this document contains confirmation of its purpose as an essential instrument supporting activities of parties tasked with the control of the contracting and subcontracting companies with particular attention paid to protection of the staff used in outsourced activities.

In the first instance, the regulatory references were updated as a result of the entry into force, in particular, of Law no. 136/2010 containing norms concerning the traceability of cash flows. The obligation, to the charge of company contacts/works directors, to request - on the C.I.P.E. (Comitato Interministeriale della Programmazione Economica. Interministerial Economic Planning Committee) portal - the CUP code if public investment is involved, was first and foremost introduced. Again following the enforcement of this law, legislative updates were also included regarding identification cards for contractor staff (which must show the date of employment and, in the case of sub-contracting, the related authorisation) and regarding the use by the contractor of the customer's machinery (Article 72 of Legislative Decree no. 81/2008).

Furthermore, monthly monitoring of the sub-contracts authorised by Hera Group companies has been included, as an attachment to the Manual, a document which must be compiled each month and up-dated by the company contacts/works directors.

#### The use of sub-contracts

The Hera Group makes the works directors and the company contacts - parties tasked with checking outside companies - responsible for the preliminary activities necessary for prior authorisation of the sub-contracts, as well as all the subsequent fulfilments necessary for monitoring the activities of sub-contractors on site.

The company document which contains the fulfilments of both works directors and company contacts, and those of the contracting and sub-contracting firms regarding

tenders, is the tender contract management manual, which specifies the matters envisaged by legislation on the topic of public work and service tenders.

The Hera Group works directors and company contacts send reports each month on the sub-contracts authorised within the sphere of all the tender contracts, using a pre-drafted procedure form. The Purchases and Contracts Department reports quarterly regarding the related checks.

28.6 million was sub-contracted out in 2011, equal to 6.4% of the amount of work and services outsourced by the Group.

### Times of payment as per contract

Consistent with the financial stability objectives of the Hera Group as well as Group guidelines, the times of payment as per contract are set at least to 120 days, month-end invoice date. Certain types of supplies may depart from said limit, according to the matters envisaged by specific Group guidelines and procedures.

### **Supplier relations**

The supplier portal is the main tool for communications with the market of suppliers, especially following the consolidation of the negotiation activities via the e-procurement platform which today can rightfully be defined as the only negotiation instrument adopted by the Hera Group Purchases and Contracts Department, with 70% of the total volumes handled via this e-procurement platform.

Supplier telephone assistance activities continued via the Hera Group suppliers' helpdesk: in 2011, almost 10,000 requests for assistance were received, around 99% of which sorted out within the timescales envisaged by company procedures. The helpdesk also considerably increased and consolidated its professionalism, offering an increasingly efficient and effective service, acquiring what is more expertise in supporting suppliers at the time of public tenders. In 2011, the first public tenders were handled on the e-procurement platform.

At the beginning of 2011, meetings with representatives of social cooperatives working in the areas served by the Hera Group were organised, to share the 2010 results and opportunities to work together in 2011. In early 2011, based on the analysis of the data collected, the work group confirmed the validity of the procedures defined for monitoring. The meetings held in 2011 also pertained to the ways to promote employment projects.

#### **Litigation with suppliers**

At the end of December 2011, there were 31 pending disputes with suppliers (there were 33 at the end of December 2010), of which 4 initiated in 2011, mainly concerning tender issues.

### **Public Administration**

### **Breakdown**

The area Hera operates in is made up of 244 municipal authorities, most of which are company shareholders. Hera has close relations and collaboration with technicians and administrators of municipalities, provinces, regions as well as nationally, and their associations and local bodies.

In the area managed by Hera, the organisation of the integrated water service and the municipal waste management service will be regulated by the new Emilia-Romagna area agency, set up by Regional Law no. 23 dated 23 December 2011. The energy sector (gas and electricity) is regulated by the Italian Authority for Electricity and Natural Gas (AEEG), an independent regulatory and control authority for the sector established by Law no. 481/1995.

The research and development activities undertaken by the Group entail collaboration with various bodies (universities, research centres such as ENEA, public bodies and other companies). These activities are conducted via partnerships or quite simply through sponsorship.

### When environmental and social sustainability go hand-in-hand

The Hera Group has implemented projects for the prevention, recycling and recovery of waste also with the aim of socially requalifying categories facing hardships. "Manolibera" is a project developed by Hera in collaboration with Techne and Comieco, involving the creation at the Forlì prison of an artisan paper factory, overseen by an artist and a paper expert. The prisoners produce artistic hand-made items, writing paper and other objects for bodies, institutions, stores and bookshops, from scrap paper and cardboard.

The "RAEEbilitando" workshop, started up in Bologna in collaboration with the Remedia Consortium and the Opera dell'Immacolata, employs disabled youngsters in activities for the dismantling of non-hazardous waste electrical and electronic equipment (WEEE). The 8 youngsters involved handled nearly 30 tons of WEEE at the end of 2011, recovering nearly 90% in weight of the materials (copper, aluminium, plastic, glass).

The "RAEE in carcere" (WEEE in prison) experience also continued, started up in 2008 in Bologna, Ferrara and Forlì. Developed and co-ordinated by Hera and Techne, it involves the Emilia-Romagna Regional Government, the Regional Prison Superintendent's Office, Provinces and Municipalities of Forlì-Cesena, Bologna and Ferrara, the RAEE Ecolight and Ecodom consortia, professional training agencies, social cooperatives. The prisoners are employed in disassembly of WEEE from the Hera Group separate waste collection centres. The various components of the waste are dismantled and sent to specialised plants: recovery is over 85%. 27 prisoners were involved (of which 11 taken on). 2 of these workers on conclusion of their sentences were accompanied in work induction in the area. The quantity of waste treated to-date amounts to around 1,300 tons, with an annual growth trend of 30%.

### **Integrity in relationships with the Public Administration**

Hera is committed to guaranteeing the highest levels of integrity and honesty in relationships with public administration. For this reason, the Group has adopted, and keeps updated, a model for organisation, management and control designed to identify specific risks associated with the crimes identified in Legislative Decree no. 231/2001. Currently the organisation model includes twenty-four protocols that strive to ensure transparency and a sense of ownership in internal and external relationships. For each "high risk" process, the protocols identify principles, roles, and responsibilities which should be followed in managing the activities and define the periodic information flows for control. Each protocol ensures the constant monitoring of high risk activities for the Supervisory Body. The subjects dealt with include: relationship management with the Authorities, public loans, sponsorships, donations and gifts and procurement, protection of the environment and health and safety in the workplace. During 2011, Hera S.p.A.'s Board of Directors approved new protocols: "Sales activities" and "Formalities for conduct and management of the activities for environmental protection purposes". The protocol "Handling of relations with Shareholders, Statutory Auditors and Independent Auditors" was also reviewed.

The procedures adopted conform to the principles of the Code of Ethics with the aim of guiding Group management based on the values and principles defined in the Charter of Values.

### Recycling pays at the Le Befane shopping centre in Rimini

"Recycling pays"; this is the slogan by means of which Hera joined E.Leclerc-Conad and Tetra Pak Italia to promote the separate collection of polylaminate packaging. Near the hypermarkets cash registers, a special machine for the collection of Tetra Pak containers issues receipts to those who feed in packaging, entitling the holder to a discount on their shopping. Involving the Municipal Authority of Rimini and numerous schools, the initiative raised awareness of the importance of separating waste to save resources.

### Relationships with municipalities and other local authorities

The administrators of the shareholder municipalities are major stakeholders in Hera since they are majority shareholders and constitute a link between Hera and the areas in which Hera is operational.

Forms of structured dialogue with mayors are present: in 2011 the Bologna TOS met once with the Bologna area Municipalities Committee and held a series of encounters with the Intermunicipal Association and/or Associations of Mountain Communities. In Ferrara, a by now consolidated relationship with the Chairmen of the District Councils lies at the basis of an important venture aimed at improving the decor and implementing separate waste collection both in the town centre and in the various districts of the town. The Imola-Faenza TOS periodically took part in the meetings with CON.AMI, informing the Mayors of its local area on the investments made, the scheduled measures, the situation of the services and the information and promotion initiatives. The Modena TOS met periodically with the Mayors Panel, which includes the Mayors, or their delegates, from the pertinent local areas. The Ravenna TOS held meetings with

the municipal authorities and their decentralised offices in order to examine issues relating to the services managed in the area and took part in various meetings of the Council Committees so as to provide information and clarification on specific aspects of particular interest to the general public. The Local Shareholders' Committee in the Rimini area met twice. These meetings specifically examined the subject of the financial relationships between the Municipal Authorities and Hera, the tariffs for the municipal waste management service and the possible scenarios further to recent legislative provisions of the Regulatory Authorities. Besides the meeting with the local Mayors' Territorial Committee, the Forlì-Cesena TOS had a number of meetings with the new mayors elected in 2011 to get to know them.

A number of experimental projects for waste collection in the Forlì-Cesena area led to exacting planning and relationship activities with the Municipalities in which they were activated, including the Municipality of San Mauro Pascoli (FC) where the implementation of a pilot project was launched, for waste collection using electronic devices on rubbish skips.

Hera has published a newsletter, sent to the Mayors of municipality shareholders via email, containing local area news as well as news of the entire Group. In 2011, 8 issues were published.

### An educational grant in memory of Simone Messina

Simone was the voluntary fire fighter who died in the collapse of the building in S. Benedetto del Querceto caused by a gas leak. Five years on from the tragedy, Hera - in collaboration with the Faculty of Engineering at University of Bologna and the support of Simone's family - handed over two grants in December 2011, for a value of Euro 2,500 each to two young graduates who had presented thesis dealing with "Safety, management and technologies in gas distribution networks and plants".

Water and waste management policies involve the participation of numerous local institutions, who are the protagonists of the various phases: regulation, planning, management and control.

#### Regulation

By defining guidelines and strategies, the Emilia-Romagna Regional Authority exercises the legal function of regulation of water resources and management of waste in harmony with the national regulation bodies if existing and in agreements with the Provincial, Municipal and Catchment Area Authorities.

The Region of Emilia-Romagna, among the first in Italy, complied by means of Regional Law no. 23/2011 with Law no. 191/2009 which established the abolition of the Water and Waste Regulatory Authorities, envisaging a sole regulatory authority covering the entire regional area, as well as the outside municipalities which had previously obtained annexation to one of the pre-existing provincial areas. The same law established the Emilia-Romagna area agency for water and waste services, a body endowed with administrative, accounting and technical autonomy, which will perform the functions of the previous Water and Waste Regulatory Authorities.

### Planning

Regional strategies are set out and applied by the Provincial, Municipal Authorities and the area Agency.

For the Integrated Water Service, the Water Protection Plan is the main document which sets forth both the qualitative and quantitative objectives pursued:

- maintenance and re-balancing of the water balance between availability and withdrawals, in order to define usage compatible with water resources, for the purpose of protecting said resources;
- assessment of the characteristics of water bodies through monitoring and the consequent definition of actions for the purpose of achieving quality objectives.

Alongside the Water Protection Plan, the planning instrument that each Water and Waste Regulatory Authority uses (under Regional Law no. 23/2011 the entire regional area is the water and waste regulatory authority) to define the measures necessary for meeting the requirements of the local area is the Authority Plan. In accordance with the planning ordered above, and on the basis of the recognition of the existing works, the Area Plan establishes the management and organisational model for the integrated water service, establishes the service levels to be guaranteed for customers, the priorities for the preparation of the programme of measures, the criteria for defining the related financial plan and the pertinent tariff proposals for the plan years.

The Municipal Authorities contribute to the regulation of the services by means of specific Regulations adopted in harmony with the Regulations authorised by the Area Authority.

Decree Law no. 201/2011 transferred the functions pertaining to the regulation and supervision of the tariff for the water services to the Electricity and Gas Authority which will see to the same using the criteria and formalities currently being defined.

Similarly, with respect to waste, the regional guidelines should be represented, as envisaged in Article 199 of Legislative Decree no. 152/2006, in the Regional Waste Management Plan. This should set forth measures aimed at favouring the reduction of waste production and the recovery of waste and the regulation of waste management activities through the promotion of integrated waste management, providing incentives for the use of suitable, modern technologies in order to provide the utmost guarantees of significant environmental protection, safeguarding of the health of residents and self-sufficiency in terms of the capacity of waste recovery and disposal.

The waste planning system was completed by the Area Waste Plan which is the "instrument for the government of the municipal waste treatment and provides the interventions, the management model and the economic and financial plan." The province participate in the planning process with the provincial Waste Management Plan and the Territorial Coordination provincial Plan.

### Waste traceability Hera Spilamberto at the forefront

A management system has been created in the Municipality of Spilamberto which guarantees the complete traceability of the waste cycle. Thanks to the funding of the Emilia-Romagna Regional Authority as part of the Environmental Action Plan, the system envisaged the installation of devices on all the road rubbish skips for the collection of waste which make it possible to register waste placed inside via a smart card. The vehicles for the collection of waste are equipped with equipment for the

weighing of the skips and, in conclusion, the recovery and disposal plants register the transported loads.

### Management

The organisation and regulation of the municipal waste management service and the integrated water service are seen to by the Emilia-Romagna Area Authority for the water and waste service which is responsible for representing the collective demand for the services and governing the production and supply of said services.

The operators are the companies that materially provide the services to residents. The services are governed through service agreements, contractual documents which specify the standards and performance that must be guaranteed, the cost of the services, and the related financial plans, and penalties and sanctions in the event of breach of the provisions. Therefore, the operators and the Area Authority collaborate in their areas of operation in order to draw up the best services framework, with a view to optimising the system.

Generally, operators are also in charge of the administrative activities, such as stipulating, amending and terminating supply contracts for the integrated water service or part of the service, measuring and recording the products supplied and services provided, invoicing and collecting payments for tariffs.

The authorisation processes envisaged by national and regional regulations for various types of plants managed by Hera involve – in an integrated manner – the technicians from various local institutions in the Services Conference, a meeting point for the various skills required for a complete assessment of the different impacts on the environment of a new plant or the operation of an existing plant.

### Control

Environmental management and control of water are exercised at local level, by numerous parties, each with specific duties.

The Area Authority is specifically responsible for the control of the methods used for providing the services, their monitoring and assessment - taking into account the quantities and entity of the service rendered in relation to the costs - for the purpose of determining the tariffs for the users.

With regard to product quality, environmental management and control of water are exercised at local level, by numerous parties, each with specific duties.

For the purpose of protecting public health, the Regional Authorities are in charge of coordinating the activities of the Local Health Authorities, which mainly consists in issuing directives containing criteria for drawing up plans for control of water for human consumption.

The Local Health Authorities carry out controls on water based on plans which take into account the regional directives, fixing the points representing the quality of the aqueduct plants. They also carry out inspections of the plants to assess the structural and functional conditions and identify any criticalities.

In line with the duties assigned by the Area Authorities existing before Regional Law no. 23/2011, also Hera, in its role as an operator of Integrated Water Services, controls the quality of drinking water according to the provisions of current regulations and, specifically, according to Legislative Decree no. 31/2001 which states that the Operator must guarantee that water is suitable for drinking up to the point of delivery to users (meters).

ARPA carries out controls on all waste management plants resulting from the Hera Group's operations, with specific reference to verifying the limits defined in the authorisations. It draws up reports on specific issues for the purpose of providing a basis for possible environmental reclamation and quality improvement policies. It also provides technical support for laboratory tests.

As from the effective efficacy of Decree Law no. 201/2011, converted by means of Law no. 214/2011, which will take place with the issue of the DPCM (Prime Minister's Decree) which as of the date of this Report still has to be issued, the functions for regulating and controlling the Water Services will be the responsibility of the Electricity and Gas Authority which will take steps to do so in line with criteria and formalities currently being defined.

During 2011, the Hera Group received 54 warnings. These warnings mainly concerned disputes raised by the supervisory bodies and refer to violations of provisions laid down by Legislative Decree no. 152/2006, the Consolidated Environmental Law, pertaining essentially to the integrated water service and the lack of observance of the regulations contained in the respective authorisation deeds. The fulfilments required by the supervisory bodies were met in relation to the receipt of these warnings and none was challenged before the competent authorities.

Additionally, 89 administrative sanctions totalling Euro 184,239 mainly for environmental violations, were paid in 2011. The majority of the disputes raised by the supervisory bodies refer to violations of provisions laid down by the afore-mentioned Legislative Decree no. 152/2006, the Consolidated Environmental Law, pertaining essentially to the integrated water service and in particular the running of the plants and the exceeding of the tabular limits set for the treatment plant drains. These violation disputes are administrative and defence briefs have been filed in relation to the same, with the principal aim of revoking the measures adopted by means of archiving the proceedings and, subordinately, the payment of the fine to the minimum extent envisaged by sector regulations.

### When business and university research meet

In February, "Il Ciclo Integrato dell'acqua, Hera e Laboratory Terra&AcquaTech: esperienze sul Campo e Ricerca" was held in Ferrara, a conference organised by the Hera Group and Laboratory Terra&AcquaTech at the Technical Hub of Ferrara University. The event concluded with the signing of the agreement between Hera and Laboratory Terra&Acqua Tech, aimed at developing collaboration and research activities in the field of the integrated water service.

### **Relations with authorities**

### The Italian regulatory authorities

The Italian regulatory authorities that mainly affect the Group's activities are the AEEG [Italian Authority for Electricity and Natural Gas] (insofar as monitoring and regulating quality levels, setting rates for grid activities and the regulated components of the sales activities, monitoring of economic, accounting and organizational aspects of the activities that concern the equal treatment of competitors and the transparency of the

conditions for access to the networks) and the Italian Antitrust Authority [AGCM] (antitrust, authorizations for mergers and acquisitions, protection of consumers and monitoring of the correctness of commercial policies).

Relations with the AEEG are specifically structured, also in view of the obligations to consult with regulated operators, prescribed by the law that instituted it. During 2011, given that the new Board had been appointed, officially in office from 16 February, regulatory activities were resumed along with the disclosure of numerous opinion papers in which Hera actively took part.

Again during the year, the authority definitively closed the two investigations launched vis-à-vis Hera S.p.A. in 2009:

- with respect to the obligation to replace cast iron tubes with hemp and lead joints, by means of VIS 39/2011 the Authority fined Hera S.p.A. Euro 55,000;
- with respect to the obligation to make metering data available to sales companies, by means of VIS 86/2011 the procedure was closed imposing a fine of Euro 84,900.

The status of the investigations started by AEEG in 2010 and still underway is as follows:

- notices to customers about the application of bi-hourly tariffs for the sale of electricity (AEEG VIS 45/2010 resolution): Hera transmitted the information to the AEEG and aligned itself with respect to the notice obligations (the proceedings are still ongoing);
- cognitive investigation into the installation of turbine gas metres (AEEG VIS 18/2010 resolution): the requested information has been provided and a hearing was held at the Offices of the Authority. By means of resolution VIS 138/2010, the Authority closed said investigation with the publication of the related report;
- alleged improper or misleading commercial practices in the water services sector (late communication of tariff changes; acceptance of an insurance fund for leaks by means of tacit consent) (AGCM PS/681 investigation): the investigation ended on 1 December 2010 with a fine of Euro 190,000. With regard to this fine, duly paid, Hera has made an administrative appeal to the Lazio administrative court

During 2011, the AEEG launched another three investigations which involved Group companies:

- resolution VIS 5/2011, launch of cognitive investigation into the disbursement of dispatch, transmission, distribution and metering services and the energy Protection services at the Terni chemical complex. The investigation directly involved Hera Comm in its capacity as the party which runs the Protection service responsible for the area; said company was called to a hearing at the Authority Offices and was requested to provide information. The investigation was closed by means of resolution VIS 82/2011;
- resolution VIS 42/2011, launch of a cognitive investigation into the disbursement of the connection services to the network of electricity generation plants by the network operators. The investigation was closed by means of resolution VIS 99/2011 in which the AEEG published a report on the information collated. It envisaged a collation of data inherent to observance of the regulations for active connections;

• resolution VIS 76/2011, launch of reconnaissance activities concerning contracts not requested for the supply of electricity and/or gas. Within the sphere of this investigation, Hera Comm was called to a hearing at the Authority Offices.

In conclusion, it should be recalled that during 2011, the AEEG did not make any inspections care of the Group.

### The Area Authority for water and waste services

One of the pivotal points of the evolutionary process that has involved the local public services system in recent years is the separation of the functions of regulation and inspection on one side (maintained by public administration) and management on the other side, opening the supply of services to public-private or completely private businesses. The other fundamental concept identified is that of "optimal regional environment", meaning the size of the area necessary to guarantee management based on the principles of efficiency, effectiveness and economy, overcoming the current fragmentation.

The laws that introduced this concept for water services and municipal waste management are Law 36/1994 (Galli Law) and Legislative Decree 22/1997 (Ronchi Decree), respectively. The Emilia-Romagna Regional Authority, in Regional Law no. 25/1999, had identified the optimal regional environments in the province providing for the establishment of ATOs for public services, subsequently Area Authorities, with jurisdiction over integrated water services and management services for municipal waste and related functions. The Area Authorities had taken over the functions, previously carried out by Municipalities, of regulating and overseeing services, introducing a large area view to assure greater operating efficiency, effectiveness and economy.

In brief, the functions of the Area Authorities included:

- specific planning activities for services and preparation and approval of investment programmes;
- regulation: this function is concerned with defining procedures for contracting services, defining relationships with operators, drafting regulations related to services, and setting rates;
- inspection of services performed by the operator;
- protecting users interests, guaranteeing continuity and quality of fundamental services, and avoiding the risk of critical or emergency situations.

Regional Law no. 23 dated 23 December 2011, after repeated postponements of Law no. 191/2009 which established the abolition of the ATOs, set up the Emilia-Romagna Area Agency for water and waste services for the associated exercise of the functions relating the integrated water service and the municipal waste management service formerly carried out by the previous Water and Waste Regulatory Authorities.

### GIDUT, a sea of... separate waste collection on the beaches of Ravenna and Cervia

In June 2011, separate waste collection arrived on the beach. The beach separate waste collection project (entitled G.I.D.U.T, "Gestione Imballaggi Differenziati Utenze Turistiche") is furthered and achieved by the Hera Group, in collaboration with the Emilia-Romagna Regional Authority, ATO and the Municipal Authorities of Ravenna and Cervia. Millions of tourists on the Ravenna and Cervia coast can adopt the best practices of separate waste collection also on the beach thanks to the 2,600 plus bins

which make up a small waste separation and recycling unit for the disposal of plastic, glass/tin cans and paper and also residual waste.

### Hera's participation in the development of public policies

In order to safeguard its interests and to promote discussion on the development of the market and regulated services, the Hera Group is involved with the appropriate institutional offices both by participating in developing the positions issued by the relevant associations (especially Federutility and Federambiente at national level and Confservizi at regional level) by being present in delegations and roundtables organised by them, as well as, increasingly, individually, by direct involvement with the public administration and national and local regulatory and law-making entities.

With regard to local public services, at national level Hera intervened with its own written and participative contributions, also in collaboration with economic research centres of institutional importance, so as to spread modern concepts of effective regulation of the sectors and infrastructural development. The Group has taken steps in order to obtain greater legislative certainty within the sphere of incentive systems for renewable sources, with particular regard to energy recovery deriving from the combustion of waste, so as to encourage the promotion of alternative energy and achieve the targets required by EU law. At local area level, Hera has offered its expertise and ideas in the process for the formation of the new regulatory governance of the water and waste management services, further to the abolition of the Water and Waste Regulatory Authorities, so as to achieve an efficient and adequate set-up

In the energy services area, Hera continued to support intense activity in 2011 by means of taking part (via Federutility) in the activities of the Ministry for Economic Development concerning the decrees regarding future tenders for the awarding of the gas distribution services, as well as the consulting processes of the Electricity and Gas Authority. The individual observations of the Group in particular concerned the retail market, with regard to the remuneration of the marketing activities in sales and the criteria for the application of the fees to the end customers, the discipline of the execution of the contracts by withdrawal/delivery point already active, the general retail sales monitoring system, the publication of the performances of the operators regarding claims handling, the Find Offers system for facilitating the end customer, the refund of the charges incurred by operators and protection of customers whose supply cannot be cut off. Again via consulting processes, Hera intervened, by means of trade association activities, via its proposals regarding the regulation of the fiscal and economic items of the new gas balancing system, the launch of the "Integrated Information System", and the quality of the electricity distribution service for the 2012-2015 regulatory period. Hera contribution was also explicitly represented by means of participation in work groups, such as, for example, the round table for the review of the new regulations for the default services within the sphere of the handling of arrears, which was followed by a consulting process which continued in 2012.

Lastly, with regard to tariffs, Hera actively took part in the long process for the formation of the provisions relating to the electricity sector for the regulation of the 2012-2015 period, as well as to make changes to the tariff regulation of the metering services on the natural gas distribution networks, in relation to the obligations envisaged for district metering.

### **Research projects**

The Hera Group's research activities in 2011 chiefly concerned the technological development of renewable sources, the development of environmental monitoring and control technologies, energy efficiency, optimisation of the network management and waste management services. Particular focus was placed on applied research on systems for the production of energy from renewable resources through the launch of work for the creation of the Hera Group Laboratory for Energy (Hlab). At the end of 2011, 11 patents for inventions and utility models were held, 7 pending validation of which 4 filed during the year. Leading research projects were:

- Laboratory per l'Energia "Hlab" The Energy Lab. It is an experimental centre for research applied on technologies for the production and use of energy from renewable and alternative sources, whose construction was started in November 2011 at the Hera Forlì premises. Conclusion of work is envisaged for the end of 2012. The Laboratory will make it possible to assess different technologies, starting from those available on the market and those still in the prototype stage, thanks to an advanced measurement and data acquisition network. Focus will be on gauging the effective efficiency and evolution of the same over time. Another significant aspect will concern the identification and prevention of running problems and the assessment of the real management costs. Initially, the Laboratory will have a photovoltaic section and a "supply chain" linked to the production, storage and use of hydrogen. The experimental work will be managed in collaboration with the University of Bologna.
- Emerging Pollutants. The term "Emerging Pollutants" (EP) refers to various biologically active substances of anthropic origin such as personal care products, medicines, psychoactive substances associated with drug addiction and their metabolites. One particular category that runs across the above categories is endocrine disruptors. The presence of such substances in water is considered one of the most significant environmental issues of the past decade. In 2007, Hera began a research project designed to identify the primary emerging pollutants in water systems (with particular attention on drinking water), to improve analytical methods for quantitative determination, to carry out surveys on the presence of these substances in the pertinent water systems and evaluate the effectiveness of removal from the current treatment systems (water treatment and purification). Collaborations were started with the Italian Institute of Health, the Mario Negri Institute and the study group called "Endocrine disruptors and water intended for human consumption" (EDinwater) promoted by the Amga Foundation of Genoa. In 2010, the set of parameters to be monitored was defined and a control plan was implemented. During 2011, collaboration was started with Milan Polytechnic so as to assess the best treatment technologies in the water treatment processes.
- Automatic Leakage Detection. The project consists of studying innovative systems for automatically locating water leaks, to be used with a remote reading system. A test site was set up in 2007, and tests in different environmental conditions were carried out. In 2008, the survey techniques were refined through the creation of a device for automatic acquisition of samples from the field, the development of an instrument for statistical analysis and the design of a device

- that simulates water leaks, achieved in 2009 and installed with real users. In 2010, a device that makes it possible to easily acquire data in different connections and under different operating conditions was designed and built. Acquisitions were made in various areas during 2011, making it possible to further streamline the analysis algorithm of the reports. Experimentation will continue in 2012 with the comparison between the current sensor (accelerometer) and an innovative one for this type of application (hydrophone).
- Bio-Hydro. This project aims to develop a cycle for the disposal of organic waste from the agricultural and livestock sector which consists of fermentation using hydrogen of at least one type of agricultural-livestock waste and the codigestion using methane of the residue from this process with other agricultural and livestock waste and/or the organic portion of solid municipal waste. The project is carried out in collaboration with Herambiente and the Faculty of Engineering of the University of Bologna while it is co-financed by the Ministry for Agriculture and Forest Policy. In 2010, initial work was carried out for the characterisation of agricultural-livestock waste and different waste matrices were acquired, to be used in the hydrogen-based bio-conversion process and anaerobic co-digestion of the effluent from hydrogen-based fermentation. During 2011, activities were launched for the assessment of the use of hydrogen produced biologically for the feeding of fuel cells and the assessment of the use of solid residues from combined bio-production of hydrogen and methane as compost.
- Automatic Plant Management. This project, in collaboration with ENEA, provides for the development of a system for the automatic management of the main operating parameters of the water service plants. The system must maintain the process conditions of a specific plant in a state of maximum efficiency, and depending on the composition of the waste water (waste water treatment plants) or raw water (treatment plant). In 2009, the instruments for analysis and control were installed at the test site of Calderara di Reno (BO) and the data was collected from the field. The data acquired during 2010 validates prior knowledge on continuous flow waste water treatment systems, and identifies the existence of new characteristic points in the signals related to the monitored quantities, with the possibility of identifying characteristic or anomalous operation in the plant. In general, the applicability of automatic control to full scale plants was demonstrated. During 2011, the second stage of the project was launched, with the aim of developing a prototype system in the three-year period.
- Water Cycle Plant Modelling. The project, carried out in collaboration with ENEA, provides for the development of mathematical models for the hydraulic and process simulation of treatment plants. The objective consists of acquiring the instruments and the know-how necessary to launch the coordination of the mathematical modelling of the water service plants for the Group. In 2009, the preliminary activities were carried out for the development of the sample site model and the selection of the calculation software from among the software available on the market. In 2010, at the end of the evaluation work, the software licenses were acquired. 2011 saw the launch of modelling activities within the Group, still in the experimental stages.

- Energy recovery in water service plants. A number of assessments were started up in 2010 on the possibility and the technologies for carrying out energy recovery in the water service plants. A first feasibility study was developed to perform energy recovery work within the Bologna purification plant through high performance volutes. During 2011, another two studies were launched: the first concerns energy recovery in aqueduct networks by means of "In Pipe Turbine" (IPT) or "Pump As Turbine" (PAT) systems; the second project concerns the recovery of thermal energy from aqueduct networks by means of systems with low enthalpy heat pumps.
- Characterisation and analysis of polyethylene pipes in operation. Polyethylene water pipes are characterised by a failure rate higher than that of pipes made of other materials. To study the causes of this situation in greater depth, a project was launched for a critical analysis of failures, with the goal of increasing know-how on such pipes, providing simple criteria to classify the different types of failures, identifying the main causes and defining improvement plans. The project is developed in collaboration LyondellBasell, one of the world's leading polyolefin manufacturers, and with the Plastic Material Testing Laboratory Foundation of the Chemistry, Materials and Chemical Engineering Department of Milan Polytechnic. In 2010, samples were collected from segments of pipes with breakages and the sampled specimens were visually analysed, and the statistical analysis of the failures and laboratory tests was also started. Laboratory analysis was launched in 2011 for the accurate characterisation of the breakages, whose results will form the basis for the definition of Improvement Plans and Action. Presentation of the results of this study is envisaged during the WaterLossEurope 2012 event, the largest international event organised by the IWA on the subject of water losses.
- Anti-freezing water meters. During 2011, the Hera Research & Development unit designed and carried out a series of tests for checking the possibility of identifying meters and devices which can reduce the case histories of breakages affecting water meters under unfavourable weather conditions. The study, which will end in 2012, has already made it possible to identify the type of meters normally available on the market which are less vulnerable to freezing conditions than those usually installed.

### Hera invests in innovation and research

In 2011, the envisaged studies continued; they pertained to the agreement signed in September 2009 between Hera, the University of Modena and Reggio Emilia and the Alma Mater Foundation in Bologna, which calls for funding of Euro 248 thousand in 4 years by the Group. Through awards, a doctorate scholarship and funding for new research, education is promoted for the attainment of high levels of technical-scientific knowledge and the development of applied research within the Department of Engineering of Modena. During 2011, implementation of the studies continued for the improvement of the quality and safety of the electricity distribution networks, as carried out in previous years, for improving the operation of electrical and thermal generation plants and fume purification systems in waste-to-energy plants. All the thermodynamic simulations for the finalisation of the combined heat cycle layout between waste-to-energy plant and thermoelectric power station, will be carried out in 2012.

In order to improve the fume purification systems of the waste-to-energy plants, steps were taken to supplement the previous studies into mercury and acid gases, analyzing both the process and plant figures relating to the pollutants considered. Estimates were made on the quantity of mercury present in the incinerated waste and a study was carried out on the impact on the emission from the incineration of objects which are typically sources of mercury in municipal waste. Other fume purification systems will be looked at in depth in 2012, as an alternative to the dry purification system.

This agreement joins those already existing with DIEM (Dipartimento di Ingegneria delle Costruzioni Meccaniche Nucleari Aeronautiche e di Metallurgia - Department of Engineering for Mechanical, Nuclear, Aeronautical and Metallurgical Constructions) of the University of Bologna, ENEA and Milan Polytechnic. During 2010 and 2011, the DIEM worked together in the executive design of the Energy Laboratory, work on which was started up at the end of 2011 in Forlì. A contract has been entered into with Milan Polytechnic, involving Hera's commitment for Euro 45,000, relating to a research project in the field of technologies and processes for the removal of emerging contaminants in water intended for human consumption.

In conclusion, collaboration has taken place with the CIRI (Centro Interdipartimentale di Ricerca Industriale Edilizia e Costruzioni) and DICAM (Dipartimento di Ingegneria Civile, Ambientale e dei Materiali), both at University of Bologna. These agreements, amounting in total to Euro 14,000, concern the study of advanced methods for the assessment and control of water losses and the recovery and production of energy in the aqueduct systems.

### **Disputes**

With regard to waste-to-energy plants, some litigation proceedings are reported. With regard to the Ferrara plant, until the decision no. 7892/2010 was filed, 5 complaints were pending before the Regional Administrative Court of Emilia-Romagna. With the first three complaints, Hera S.p.A. had appealed against some deeds considered to infringe its rights; specifically:

- The Integrated Environmental Authorisation (IEA) issued by the Province of Ferrara in 2008, which confirmed the limiting quantity of 130,000 total metric tons of waste which could be disposed of in the plant (whereas in the EIA, 142,000 metric tonnes had been allowed), also limiting the disposal of special waste to 30,000 metric tons (within the aforesaid total limit);
- The modification to the Provincial Waste Management Plan (P.P.G.R.) adopted in April 2009, which established that, in view of a greater demand for the disposal of municipal waste, the waste-to-energy plant would assign top priority to the processing of municipal waste, still within the limit of 130,000 metric tons, so the possibility of processing 30,000 metric tons of special waste became merely residual and therefore of an incidental nature;
- A further IEA, issued in June 2009, as it completely implements the aforementioned contents of the modification to the Plan.

The fourth appeal made by the WWF and various environmental associations aims at completely annulling the IEA issued by the Province of Ferrara in 2007 and then replaced by the IEA of 2008, had been rejected by the Regional Administrative Court of

Emilia-Romagna under Sentence no. 21/2010, subsequently challenged by the WWF before the Council of State. Hera S.p.A. regularly appeared in the aforesaid appeal.

By means of Sentence no. 7892/2010 filed on 20 September 2010, the Regional Administrative Court of Emilia-Romagna rejected the aforesaid first three claims proposed by Hera S.p.A., which, deeming the decision made by the first Judge objectionable, appealed against it before the Council of State, requesting that it be changed.

By means of appeal presented to the Regional Administrative Court of Emilia-Romagna, Herambiente S.p.A. challenged the decision of the Ferrara Provincial Council no. 251 dated 20 September 2011 concerning the "Decision regarding the screening procedure for the production of energy from biomass combustion at the waste incinerator" located in Ferrara.

Despite the fact that the environmental compatibility study presented by Herambiente demonstrates that the projects does not have negative effects on the environment (so the conditions for the EIA procedures would not apply), the Ferrara Provincial Authority, under resolution no. 251 dated 20 September 2011, established the project be subject to EIA. The fixing of the pertinent hearing is pending.

With regard to the Rimini plant, a lawsuit is pending with extraordinary appeal to the President of the Republic, made by WWF Italia against the province of Rimini and Hera S.p.A. for the cancellation, following suspension, of Provincial Council of Rimini resolution no. 13, of 28 January 2009, pertaining to the Integrated Environmental Authorization of the waste-to-energy plant of Coriano, Rimini, deemed defective by the counterpart who objected to the illegitimacy since:

- the terms set by law for the duration of the proceeding were allegedly not complied with;
- the Province of Rimini allegedly allowed Hera S.p.A., without reason, not to treat healthcare waste in the new Line 4 and not to build the district heating line prescribed in the EIA;
- the IEA, as issued by the Province of Rimini, allegedly failed to specify the limits to atmospheric emissions with reference to each incineration line and is also allegedly in contrast with law provisions on mandatory percentages of separate waste collection.

Hera S.p.A. submitted its own deductions in which it requests that the application for interim relief and the appeal be rejected due to the groundlessness and inadmissibility of the reasons set forth. Ruling of suspension is still pending.

In conclusion, mention is made of two disputes which arose in 2011 with the Municipal Authorities of Castello d'Argile and Cento. These municipal authorities announced public tenders for the awarding of the gas distribution service. Hera, deeming these procedures as not compliant with the matters envisaged by current legislation - which envisages that the awarding of the gas distribution service should take place no longer on a municipal basis but on the basis of minimum local areas - challenged the aforementioned tender procedures before the Regional Administrative Court of Emilia-Romagna. With regard to the Municipal Authority of Cento, the Regional Administrative Court upheld Hera's appeal cancelling the tender procedures. The proceedings brought against the Municipal Authority of Castello d'Argile are by contrast still pending.

### **Local Communities**

Hera intends to take stock of the needs of the area in which it is operational. This commitment is expressed through listening to and involving the main associations, in particular consumer and trade, in an intense activity of dialogue on environmental issues and numerous other initiatives involving the raising of awareness in schools.

In 2011, proving the transparency in the management of the Group's plant 120 visits were made to the waste-to-energy plants booked online; this initiative joins the two consultative committees (RAB) of citizens residing near Hera plants.

### **Objectives and performance**

### What we said we would do...

### • Implement the regular production of reports on the use of the waste collected separately and disseminate them more widely.

- Deliver the "rifiutologo" ("wasteologist"), i.e. an information guide on the separate collection of municipal waste, and a folder on equipped drop-off points and the collection of oversize waste to all citizens.
- Give continuity to environmental education activities in schools.
- Improve the sections of the website dedicated to the quality of drinking water and separate waste collection.
- Extend the CiboAmico (donation of unused food to charitable associations within the local areas) initiative to the Ferrara and Ravenna canteens.
- Extend the "VolontariHeraper" initiative to promote company volunteers to all areas.
- Start construction of a renewable energy laboratory in Forli.

#### What we have done...

- In October 2011, the 2nd edition of "Tracking waste" was published. The contents of the report were extended and checked by an outside body. The report was released to all the families in the local area served (see page 251).
- The "wasteologist" was distributed to all the citizens in the local area served together with an informative brochure on the drop-off points and the "Tracking waste" report. (see page).
- The students involved in environmental education initiatives rose from 41,306 in 2010 to 52,017 in 2011. (see page 180).
- In 2011, a new section of the website was created with information on drinking water and the management of the water service. The section dedicated to separate waste collection was improved with the publication of the on-line wasteologist. (see page 184).
- During 2011, CiboAmico was extended to the Ferrara company canteen: more than 9 thousand meals in total were recouped in 5 Hera canteens and donated to 7 non-profit making organisations in the local area. (see page 240).
- In November, the "VolontariHeraPer" initiative was extended to all the local areas: 70 workers took part in the National Food Collection Day. (see page 83).
- In November 2011, work started on the creation of the renewable energies laboratory. (see page 173).

### We shall...

- Implement the regular production of reports on the use of the waste collected separately and make the contents more extensive along with the sphere of the external audit.
- Give continuity to environmental education activities in schools.
- Promote additional corporate voluntary ventures throughout the local area via the "VolontariHeraPer" project.

- Complete construction of the renewable energies laboratory in Forlì.
- Complete the tour of the Rimini waste-to-energy plant and create the tour of the Ravenna sludge dehydration plant.

### **Breakdown**

In Hera's service area, there are over 3 million inhabitants. The provinces in which the company is operational host approximately 14,000 non-profit organisations.

Every year, Hera works together with about 750 schools (involving over 52,000 students in environmental education activities). Hera develops projects with many associations.

### **Communication**

### Social and environmental communication

During 2011, Hera decided to invest resources and ideas in environmental communication, providing service information which effectively qualifies the company's commitment in favour of sustainability and protection of the local area.

The promotion of the network water was focused on specifically. On 22 March, during the world water day, Hera gazebos appeared in all the squares of the main towns and cities served by the multi-utility company to raise citizens' awareness of the good practices associated with the use of tap water and the controls which ensure its quality. In Autumn, Hera launched a campaign to inform the public of the economic and environmental advantages deriving from the use of tap water. The campaign's slogan, "Vi diamo acqua pura e semplice. Non bottiglie." (We give you pure and simple water. Not bottles), wished to further the use of tap water as an alternative to the bottled kind, which is more expensive and polluting, and therefore confirmed the spirit of the communication and awareness raising initiatives already undertaken by Hera.

With the "Missione Recupero" (Recovery Mission) campaign, Hera waste collection vehicles were decorated with two clear and effective messages: "Dei rifuti non si butta via niente" and "Insieme facciamo la differenza" (No waste with waste and Together we make a difference). This form of itinerant communication encounters people during their daily lives so as to reveal to them that waste collection is much more successful when it becomes an asset, a prerogative and commitment of everyone, thus creating a principle of citizenship whose bases lie in the effective commitment of those who live in the area.

### Hera knocked on the doors of three million people

In June 2011, Hera delivered informative material on separate waste collection to millions of households in the area where it manages the waste collection service. The envelope left directly on the doorknob of every household contained a kit comprising:

- the "Wasteologist", a practical handbook which answers all the doubts on separate waste collection associating the various types of waste produced in the domestic sphere with the correct type of disposal;

- "Your drop-off points", with information on this service, addresses, opening hours and illustration of the functioning of the free collection services;
- "Tracking waste", the leaflet which transparently explains how much and where the waste which Hera collects every day is recovered.

In conclusion, together with the last bill for the year, the Hera Group decided to send its customers a list of practical advice so as to maximise the efficiency of home heating systems and cut gas consumption. By inviting its customers to consume less, Hera thus emphasises the possibility of combining the defence of the environment and the defence of households economies.

### Taking part in exhibitions and trade fairs

During 2011, the Hera Group once again renewed its presence at "Ravenna 2011. Rifiuti, acqua, energia. Economia ambientale" ("Ravenna 2010. Waste, water, energy. Environmental economics"), presenting workshop activities to the public at its stand, with the aim of spreading awareness of the subject of sustainability with youngsters and students and providing informative material on the service such as the tap water quality report, up-dated in relation to the most recent revelations.

Hera in fact sees the trade and convention sector as an ideal sphere for communicating the results and prospects of its initiatives in favour of sustainability to a selected public: this evidently gave rise to participation in Ecomondo, the prestigious trade fair event in Rimini which Hera did not wish to miss this year as well.

Furthermore, 2011 concluded with participation in the Bologna Motor Show, permitting the Hera Group to present its project supporting electrical mobility to the general public. A high-technology content stand, located within the Electric City pavilion, thus illustrated the features of "Hera and Electric Mobility", a project which aims to create a backbone of recharging stations along Via Emilia which will make suburban electric mobility possible, tapping the working needs of many and thus providing a real contribution to defending the environment and adopting innovative and sustainable forms of transport.

### Hera on the internet

Hera's commitment to ensure timely and updated information on line that is in line with the transparency expectations of the various interlocutors continues. The information style is customised according to the interests and particularities of the respective stakeholders: customers, shareholders, various communities in the local areas and students. The search engine was also enhanced to provide a more effective fruition of the contents. With a view to innovation, during 2011 importance was also given to mobile devices and the study of new Apps, as well as the 2.0 Web world.

### Cervia: the most extensive Wi-Fi beach in Italy

As from June 2011, 212 beach resorts in the Municipality of Cervia were on the net making it possible for around 650,000 tourists on the beach in Cervia and the neighbouring resorts of Milano Marittima, Tagliata and Pinarella to surf the web. Thanks to the "Galileo" wireless project, the result of a partnership between Cooperativa Bagnini Cervia, Hera, Acantho and the Municipal Authority of Cervia, it is

possible to use internet free of charge, under the beach umbrella using portable PCs and smartphones: 9 km of uninterrupted coastline which represent the most extensive wireless coverage of an Italian beach resort.

In 2011, the water channel was created (average of 600 hits a month), full of information on drinking water, management of the water service, quality of the water and containing the "In Buone Acque" report, the map of the plants and the "Urban Springs" presented in the local area (network water distributors available to the general public, contained in special wooden kiosks). It is also possible to ask Hera experts specific questions pertaining to the water cycle and the checks on the chemical-physical parameters.

In the customers section, the waste management service has been enhanced and in particular separate waste collection with the on-line "Wasteologist" via which the user can select the type of waste so as to know which container to place it in or discover the nearest drop-off point. If they cannot find the information they are looking for, customers can report this to Hera via the web; Hera will then take this report into account when updating the information.

### Wasteologist for iPhones, iPads and smartphones

Around 9,000 people have downloaded the Wasteologist App available for iPhones, iPads and Android phones. The Wasteologist provides detailed information on how to correctly recycle all types of waste and makes it possible to find the nearest separate waste collection point. After the first few weeks, thanks to the 500 plus reports received from customers, a new version was created with new types of materials (rising from the 140 initial items to over 600).

2011 also saw a consistent endeavour with regard to Electric Mobility, where Hera offers energy for electric cars in Modena and Imola with a made-to-measure commercial solution, completing the service with a dedicated website and an App for iPhones (Hera Mobility) which makes it possible to easily locate recharge stations. In conclusion, in December a new channel was made public which develops company training activities and made the creation of HerAcademy, the Hera Group's Corporate University official.

VedoHera continues to meet with appreciation: the quarterly online newsletter on sustainability which in 2011 exceeded 65,000 subscribers and received almost 22,400 visits, involving more than 31,800 pages visited.

The Financial Statements and the Sustainability Report were published in 2011 in real time in an online version.

### Hera's chat debut on the Sustainability Report positive

On 20 April 2011, at the time of presentation of the 2010 Sustainability Report, a new channel of dialogue with the stakeholders was launched: within a specifically dedicated chat facility, representatives of consumers' associations, economic forces and individual citizens posed questions directly for around 2 hours on the Sustainability Report to a pool of company managers and technicians brought together *ad hoc*. 57 questions were

answered directly. The subjects meeting with the most interest concerned separate waste collection, bills and the water service situation.

The effectiveness of the Hera Group's online communication was emphasised in 2011 by the third place achieved in the 2011 Lundquist CSR Online Awards ranking and the third place gained in the Halvarsson&Halvarsson Webranking classification.

#### Website hits

No.	2009	2010	2011
Customers section	51,477	46,417	50,361
Suppliers section	3,512	5,027	5,611
Corporate Social Responsibility Section	1,826	2,854	2,836
Investor Relations Section	2,247	2,019	1,838
Other sections	34,986	54,148	48,523
Total average monthly visits	92,222	110,465	117,690
Total page views (monthly)	472,534	484,216	471,050
<b>Total unique visits (monthly)</b>	64,662	78,937	86,112

### What is Hera's reputation on the web?

Online word-of-mouth is constantly growing and evolving. Online applications that allow for an increased level of interaction between the site and the users are becoming available in many areas, in relation to the contents, procedures and objectives for use by the users. Hera's analysis of the web is focused on blogs, forums, social networks and Youtube, virtual places where it is easy to collect spontaneous views, as most of the content is placed there by users themselves.

In 2011, 2,535 posts that referred to Hera were analyzed. The posts were mainly concentrated on the blogs, 57% of the total. The presence of references to the Group on social networks was very significant and clearly up (33%). Presence on forums (9%) was very significant, albeit more contained and down with respect to 2010 (14%). Analysis of Youtube was introduced as from 1 January 2011 (0.4% of the total).

Hera's presence in the 2.0 web is very positive and creates a well-defined image profile. Reference to environmental sensitivity was visible and very positive in blogs and social networks (in particular with regard to sustainable mobility), along with that to educational projects furthered in schools, the satisfactory economic results and the measures of opinion leaders in development strategies and growth objectives. Hera emerges on the web as a company particularly sensitive to environmental issues and deeply-rooted in the local area. Attention to customers and innovation was also evident, thanks to the creation of new services such as the Wasteologist and Hera Mobility and the disclosure of useful information to customers. Negative aspects concerned the disputes regarding the incinerators, in particular in relation to the dioxin alarm, the debate on biomasses, the tariff increases and, on a more general notes, the wide debate in view of the renewal of the Shareholders' Agreement.

Financial matters are mainly discussed in the forums: the consolidation of economic growth, the distribution of dividends and the positive opinions expressed by financial analysts and the interest of the investors which animate online discussions.

### Hera' supports "ecological basketball"

The thirteenth edition of the "ecological basketball" project which Hera achieves in collaboration with Andrea Costa Imola Basket, in 2011 involved eight school complexes in the area of Imola and Faenza and around 2,000 students. The students met the players who explained basket ball to them and the related rules letting them play, and at the same time Hera conveyed promotional messages on water and electricity saving and on the importance of correct separate waste collection via the "Facciamo bene quel che è meglio" campaign.

### **Environmental education**

The Hera Group has promoted for several years, in the various provinces where it operates, numerous environmental education projects, in order to raise awareness in schools on issues related to services and to take part in the educational process, making its business experience available.

Over the years, collaboration with schools has created a rich store of experience and has made it possible to reach significant goals in this direction. This long-term experience has given rise to "La Grande Macchina del Mondo", an environmental education project which the Group wished to achieve as from the school year 2010-11, unique and consistent for the entire area in which it operates: a single common thread, to develop the various experience achieved over the years locally and bring it together taking the best of the same.

### **Environmental education projects**

No.	2009	2010	2011
Schools involved	694	688	752
Participating students	39,901	41,306	52,017
Teachers involved	1,803	1,782	2,229

The figures refer to Hera S.p.A.

The 2011 results confirm the success of past editions. Specifically, a considerable increase was seen in the number of total students involved in all the areas. The new environmental education project launched in the last school year, in fact, not only featured greater content and variety of the educational initiatives, but also an offer extended to all schools from kindergarten to high school, in all local areas.

### A, B, C, Differenziamo!

In November 2011, a new project was launched in all the first and second level secondary schools, "A, B, C, Differenziamo", which involved over 80 schools and a total of 25,000 students. The project was created with the aim of raising the awareness of youngsters in relation to respect for the environment and carrying out separate waste collection at school, separating the waste produced in class, in offices and school laboratories using small bins. In order to make students, teaching staff and guests aware, informative posters and leaflets were handed out on the correct collection methods.

Training offered to schools in the area served by Hera for the two-year period 2010 and 2011 was particularly lavish: 24 projects, differentiated for all the school levels (infant, primary and secondary - first and second level), 1,500 laboratories, visits to plants and classroom activities for a total of 5,500 training hours. The varied programme of the "La Grande Macchina del mondo" project permitted the classes taking part to choose the aspects they wished to look more closely at: from water, to energy, the environment.

Via "Le avventure di Skizzo", "A tutta forza", "Il viaggio di Buccia" and many other projects and with the support of extensive and in-depth educational material, youngsters were able to form an informed culture of sustainable development.

All the educational initiatives availed of the collaboration of environmental education Cooperatives and Centres and Foundations which work with regard to scientific culture and education.

Again within the sphere of the new school project, Hera promoted and organized the fifth edition of the "Science Well". This event was dedicated to the dissemination of a scientific culture and environmental education. For three days, high school boys and girls participated in educational workshops, meetings, and presentations on the environment, energy and water. Approximately 11,265 students and 290 teachers were involved in 46 meetings in 9 major towns and cities of the Emilia-Romagna Region. This success was evident in the quality of the project and the level of the events that included scientific research entities and institutes, scientists and researchers, which explained and expanded on the subjects. The boys and girls had the chance to come closer to scientific knowledge and learn about Hera's activities in an educational, entertaining way. The event was sponsored by the Emilia-Romagna Regional Authority, the Regional Educational Office, the Provinces and the Municipalities served. This initiative is slotted to take place in 2012 as well.

### "Riciclandino" to support schools providing incentive for separate waste collection

Schools also self-finance themselves by means of separate waste collection thanks to "Riciclandino", an initiative in collaboration with the Municipal Authorities in the Ravenna Area and the Area Authority. The project involved around 32,000 students from 250 schools, from infant up to second level secondary schools. The students involve their families in goods environmental practices: on the basis of the disposals they make at the drop-off points in the area, Hera makes a contribution in cash to the various schools.

### Media relations

Hera's presence in the media is monitored though a quarterly analysis of the quantity and the contents about it in the national and local media. The articles are weighted according to several significance criteria such as the circulation of the print medium, the size of the article, the position on the page, the presence or absence of photographs and the positive, neutral or critical tone of the article. The analysis also contains in-depth analyses that delve into the main issues covered and the main criticalities highlighted by the various stakeholders.

Hera news items (national press review)

%	2009	2010	2011
Favourable or highly favourable articles	92.2%	92.8%	91.3%
Neutral articles	6.6%	4.8%	7.8%
Critical or extremely critical articles	1.2%	2.4%	0.9%
Total articles (No.)	268	258	310

The figures do not include Marche Multiservizi.

### Hera news items (local press review)

%	2009	2010	2011
Favourable or highly favourable	70.5%	69.7%	70.1%
articles			
Neutral articles	14.1%	17.6%	18.0%
Critical or extremely critical articles	15.4%	12.7%	11.9%
Total articles (No.)	5,083	5,540	6,296

The figures do not include Marche Multiservizi.

During 2011, the Hera Group confirmed its strong presence in the media. A consistent presence both with regard the number of articles (310, +20% with respect to 2010) in the national press and around 6,300 (+14%) in the local press, and in relation to quality with 91% positivity in national papers and 71% locally. These numbers should be joined b the wide presence in radio and TV services which during 2011 was particularly visible nationally, partly thanks to a number of particularly qualified appearances such as, for example, the service dedicated by the Superquark programme to the integrated water cycle in Bologna.

With regard to national media, both news linked to the company's economic-financial performance and aspects associated with industrial projects such as, for example, electric mobility and renewable sources (geothermics and photovoltaic above all else) received excellent visibility.

In the regional and local press, aspects linked to the performance of the services managed by the Group received the greatest weight, as is natural. However, a decisive contribution to the positivity of the mentions came from the numerous projects carried out by the Group (such as investments in the water sphere or experimentation of innovative forms of waste collection) and from the commitment with regard to sustainability (such as environmental education, activities for preventing accidents in the workplace, presentation of the Sustainability Report).

The Group's presence in the Media was characterised (with mainly "neutral" or "critical" mentions) also by debate and political controversy linked to the determination of tariffs on water and waste management services. The latter service was heavily affected by the delivery associated with the 2011 Spring referendum and its legislative and operational consequences.

### **Sponsorships and donations**

The relations with the local areas, the closeness to residents and respect for the environment are the leading forces behind the sponsorships that Hera Group chooses to make.

Hera supported the Bologna Cinetheque in 2011, becoming one of its main partners. Among the main events are the "The Cinema Rediscovered" and "Under the Stars of the Cinema." The "Bob and Nico. Roberto Benigni and Nicoletta Braschi" exhibition joined these events, staged in Bologna at Palazzo Pepoli hosting testimony, works and reconstructions of the incomparable artistic vicissitudes of Roberto Benigni and Nicoletta Braschi.

In collaboration with Arte Fiera, Hera supported the Art White Night, during which museums and historic palazzos in Bologna stayed open until midnight to as to permit tourists and above all else residents to discover or rediscover the most beautiful and significant places in the city.

In order to celebrate the 150 years of the unification of Italy, the Group decided to support the endeavours of the Musica Insieme association at Bologna's Manzoni theatre organised by Maestri D'Italia, a classical music review conceived and staged to celebrate the important occasion on the notes of well-known composers. The Group also renewed its association with the "BilBolBul" international cartoon festival of Bologna, sponsoring its fifth edition and continued its partnership with the "Future Film Festival," which is the main Italian event dedicated to animation and special effects in movies.

Moreover, in 2011 the Hera Group renewed its commitments in favour of the Bologna Jazz Festival, which brought some of the leading players in the international jazz scene to the stages and clubs of Bologna, Modena and Ferrara, starting off from Pat Metheny.

## "Chi salva un bambino salva il mondo intero" (Who saves a child saves the whole world)

The Imola-Faenza TOS supported the local section of the Italian Red Cross in the purchase of dummies and educational material for courses dealing with the manoeuvres for unblocking airways in the paediatric sphere. One of the training events held by the voluntary Red Cross instructors took place, in 2011, at the "Nido di Cornelia" nursery school, created in Imola thanks to Hera Group's participation.

Hera was determined not to miss the major events of the Romagna artistic season by sponsoring the "Melozzo da Forlì. L'umana bellezza tra Piero della Francesca e Raffaello" exhibition at the Musei di San Domenico in Forlì and the "TAMO". "Tutta l'avventura del mosaico" event, a permanent exhibition housed in Ravenna at the San Nicolò complex and dedicated to the art form which has made Ravenna famous worldwide. Particular care was dedicated to theatrical activities, supported by the Hera Group throughout the area where it performs its services.

Furthermore, Hera sponsored the Ferrara Buskers Festival, an international street music review, and the Modena musical show "Suoniamo," which many important Italian and international artists participated in. The Group's support for Rimini's "Notte Rosa" (Pink Night) was also confirmed.

The multiutility company also supported the Philosophy Festival, held in Modena and dedicated to nature this year.

From the viewpoint of sporting events, thanks to collaboration with GS Emilia, Hera continued to support the great classic competitions of Italian bicycling: the "Coppi-Bartali" and the "Giro dell'Emilia" races. These were joined by sponsorship of the Coppa Placci, an important cycling competition in the Imola area.

**Sponsorship** 

(thousands of €)	2009	2010	2011
Recreational activities	90	28	74
Culture	882	1,004	1,137
Sport	301	386	437
Social	184	23	36
Environmental	123	90	170
Other	287	16	6
Total	1,867	1,547	1,859
of which to local communities	1,779	1,537	1,770
of which to areas not served by Hera	88	10	89

### **Donations**

(thousands of €)	2009	2010	2011
Recreational activities	4	2	1
Culture	29	33	40
Sport	4	1	0
Social	144	106	98
Environmental	13	63	3
Other	17	10	10
Total	211	215	152
of which to local communities	183	195	142
of which to areas not served by Hera	28	20	10

Once again in 2011, the Hera Group wished to confirm its support for the Associazione Amici di Luca, with particular reference to the initiatives concerning Epiphany. The company renewed its collaboration with the ANT Foundation (National Association for the Study and Therapy of solid Tumours) and to AIL (Italian Association for the fight against Leukaemia). During world water day, an international solidarity project of the European Committee for Training and Agriculture (CEFA) was furthered, with the aim of creating water supply points in Sudan: glass bottles for water were thus handed to visitors in exchange for a donation supporting the project.

The partnership with the Libero Cinema in Libera Terra project has been added this year, organised by the Cinemovel Foundation so as to take important films to locations confiscated from organised crime. In the Ravenna area, Hera took part in the MGG Italia (Mobilità Garantita Gratuitamente - Mobility Guaranteed Free-of-charge) project, in order to guarantee mobility services free-of-charge for individuals affected by sclerosis.

In the Cesena area, Hera decided to support the Amici di Casa Insieme association, a voluntary organisation involved with regard to a very serious illness, Alzheimer. In the Modena area, the multiutility company's support went to the deserving solidarity initiatives organised by Atletic Città dei Ragazzi. Hera also sponsored the Modena

Terzo Mondo Onlus Association for the Sixth Festival of international solidarity and the Angela Serra Cancer Research Association. The medical and treatment sphere is without doubt one of the main lines for Hera Group donations: in 2011, the Group wished to support IOR (Romagna Cancer Institute) as well, referring to the Rimini area. In Ferrara, the company entered into a partnership agreement with the Architects Foundation for the Social Housing project and gave its support to ADO (Assistenza Domiciliare Oncologica) for the 10 years of the Solidarity home. Further funds were set aside to support Avedev (Anti-vivisection association for the rights of living beings) and the Parish of Berra centenary of the nursery school.

In 2011, Hera, in compliance with its own Code of Ethics, did not make contributions of any kind to any party or politician.

### **Environmental provisions and compensations relating to new Hera plants**

#### Expansion of the waste-to-energy plant in Ferrara

Memorandum of Understanding between the Province of Ferrara, Municipality of Ferrara, North-West District, Hera (then Agea) of 25 June 2003

Integrated Environmental Authorization of the Ferrara Province of 11 March 2008, Ref. 21823

- Commissioning of only two new lines and decommissioning of Line 1.
- Monitoring of the environmental impact of the waste-to-energy plant through specific analyses of the air and ground and bio monitoring. In particular, heavy metals, dioxins and furans, IPA, PCB and fine dust will be searched for in the points that are most influenced by the emissions of the plant (defined through a model on the basis of the meteorological conditions of the site).
- Continuous mercury monitoring system
- Continuous emissions sampling system for analysis, over the long term (up to 30 days) of micro pollutants emitted (dioxins and furans)
- Establishment of an RAB to facilitate communication between the company and the citizens residing in the area surrounding the plant.
- Building of a 6 hectare wooded area
- Extension of district heating to the outlying areas of Cassana, Mezzana, Porotto and Arginone, with a discount of 25% on the connection price

- Line 1 was decommissioned in January 2009 and only the 2 new lines are operational.
- Three new measuring sets were installed; air quality monitoring was started in September 2010. Studies pertaining to soil analysis and mutagenesis were also started: surveys into humid depositions and biomonitoring launched. The details of the activities were defined by ARPA, Ausl and the Ferrara Province in a specific Environmental and Health Monitoring Protocol, based on a technical procedure proposed by the CNR (National Research Council) of Rome, which handles the scientific coordination of the activities.
- Completed
- Completed
- Completed
- Completed
- Completed the 2 connections that were being activated at the end of 2009. In 2010, 4 more connections to private users were completed with an additional connection in 2011; since 2008, a total of 21 connections have been made.

#### Construction of the new waste-to-energy plant in Forlì

Assessment of the Environmental Impact of the Forlì-Cesena Province no. 323 of 2 September 2004.

Authorisation by the Province of Forlì-Cesena no. 339 of 27 September 2005.

Integrated Environmental Authorization of the Forlì-Cesena Province no. 237 of 29 April 2008 as amended.

DGP screening procedure no. 326 of 21 July 2009

- Construction of an 8 hectare wooded area, possibly along the Ronco river.
- Gradual replacement over time of the type of fuel used for the waste collection vehicles in Forli, with diesel or gas with a gasoil/biodiesel or methane mixture.
- Realization of a noise-reducing barrier for a dwelling near the biological purification plant managed by the Forli-Cesena TOS.
- Planning and implementation of a district heating network for the use of the thermal energy generated by the combustion of waste.
- Decommissioning of lines 1 and 2 and operation of line 3 only.
- Construction of a monitoring detection device for the quality of the air around the waste-to-energy plant in the area defined by ARPA. The device must be transferred to ARPA in the form of a free of charge loan for use agreement once it is tested.
- Realization of two information points with the data of the atmospheric emissions, one at the URP of the Province of Forlì-Cesena and the other at the URP of the Municipality of Forlì.
- Installation of a waste conveyor belt from the preselection plant to the waste-to-energy plant
- Construction of an auxiliary aspiration and treatment system for polluted air aspirated from the new waste pit.

- Completed all landscaping work for the 8 wooded hectares, one of which was completed in 2010 and destined to be used as a public park (compliance notice to the Province of Forlì-Cesena on 27 January 2011).
- A fuel mixed with bio fuel is used on the entire Hera fleet, in compliance with the law that requires producers to use a minimum amount of bio fuel which for 2011 is 4%. There were 67 methane/electric vehicles used by the Forli-Cesena TOS as at 31 December 2011 (61 methane and 6 LPG) which correspond to 27% of the total (there were 63 in 2010, 57 in 2009, 53 in 2008).
- The procedure of rectifying the administrative acts (EIA) was concluded with the confirmation that the construction of the sound absorbing barrier is not necessary.
- The first phase of construction of the TLR network feeding plant was completed and the transfer of heat to the networks (2,894 MWh transferred in 2011) was carried out.
- Completed
- Active since 2009, with continuously monitored parameters (meteorological data, PM<sub>10</sub> and PM<sub>2.5</sub>, NO<sub>2</sub>, CO and gaseous mercury) and with periodic sampling (heavy metals and micro pollutants on the PM<sub>10</sub>, ammonia, HF and HCl as gaseous pollutants). In April 2009, a gratuitous loan for use agreement was signed with Arpa. Since July 2009, continuous monitoring data has been published on the Arpa website, which then annually prepares a report with the results of the monitoring work performed. Information on the first report pertains mainly to the efficiency of the instruments.
- Completed
- In 2010, the authorisation procedures were completed (DGP 77/2010) and the project was developed. Work was started in October 2011, envisaged to finished in 2012.
- Completed

### Construction of new cogeneration plant in Imola

Ministry for the Environment, Protection of Land and Sea, "Environmental Compatibility" Decree no. 142 of 15 February 2006

Agreement between the Municipality of Imola, Hera S.p.A. and Hera Imola-Faenza of 21 December 2006 Integrated Environmental Authorization of the Bologna Province of 11 April 2007, Gen. Ref. 124043

- Introduction of TSP (Total Suspended Particles) and PM10 limits of 1 mg/Nmc, sole turbogas plant in Italy.
- Pre-operational environmental monitoring with two new detection devices meeting ARPA specifications.
- Acoustic monitoring: pre-operational, during construction and with the plant in operation.
- Planning and development of a sustainable mobility pilot system for the city of Imola.
- Building of a wooded area to function as a barrier between the plant and the Zolino neighbourhood
- Creating a green area of one hectare in zones to be identified by the Municipality.
- Introduction of emission limits for nitrogen oxide and carbon monoxide of 15 mg/Nmc and 10 mg/Nmc, equal to 1/4 the legal limit.
- Introduction of summer and winter water consumption limits.
- Providing incentives for the development of district heating and cooling through discounts.

- Average value of emissions in 2011: TSP: 0.010 mg/Nmc; PM<sub>10</sub>: 0.15 mg/Nmc.
- The two new measuring sets have been operational since May 2007; comparison of 2011 data does not show any effect of the operation of the plant on the measured data.
- Monitoring before commissioning and during construction was completed; in 2011, three monitoring cycles were conducted with the plant in operation; the measured noise parameters were within the legal limits.
- The 20 planned recharging stations were installed and the planned electric vehicles were delivered
- Completed.
- The area is currently being acquired by the Municipality; landscaping will now be carried out by Hera
- The installed abatement systems guarantee emission levels below the limits. The 2011 average data are 7.701 mg/Nmc of nitrogen oxides and 2.005 mg/Nmc of carbon monoxide.
- Water consumption was lower than prescribed: 299,154 mc vs. 300,000 authorised.
- Contracts for over 5,700 kW were activated in 2011, in view of discounts for over Euro 230,000.

### **Expansion of the waste-to-energy plant in Rimini**

Assessment of the Environmental Impact of the Rimini Province no. 259 of 28 December 2006
Province of Rimini screening no. 200 of 23 October 2007
Rimini Province construction authorisation no. 105 of 13 May 2008
Integrated Environmental Authorisation of the Rimini Province no. 13 of 28 January 2009

- Decommissioning of the older Lines 1 and 2 and operation of only Line 3 and the new Line 4.
- Lines 3 and 4 with a catalytic system for reduction of nitrogen oxides, with an on-going monitoring system for detecting mercury in the emissions.
- Environmental monitoring of air, soil, and groundwater components and biomonitoring.
- Planning and implementation of a district heating network for the use of the thermal energy generated by the combustion of waste.
- Establishment of an information point with the data on the emissions into the atmosphere at the Municipality of Coriano by 30 June 2009.

- Lines 1 and 2 were decommissioned in July 2008. In June 2010, the new line 4 was started; in September 2010, line 3 was decommissioned.
- Line 4 is equipped with the systems prescribed in the design and in the authorisation.
- Active since 1997 through a research contract with University of Bologna, Industrial Chemistry Department. Arpa carried out monitoring before construction of the new line 4. The results of precommissioning and post-commissioning studies will make it possible to define a plan for permanently monitoring the area.
- The executive project was presented to the Province of Rimini on 21 December 2009. In 2011, no new activities were carried out, since the development to be served by district heating has been stopped.
- Completed. Relocalisation taking place upon the request of the Municipal Authority of Coriano.

### Expansion of the waste-to-energy plant in Modena

Assessment of the Environmental Impact of the Modena Province no. 429 of 26 October 2004 Integrated Environmental Authorization of the Modena Province no. 311 of 29 June 2009

- Decommissioning of the older Lines 1 and 2 and operation of only Line 3 and the new Line 4.
- Lines 3 and 4 with a catalytic system for the reduction of nitric oxide, continual monitoring system for mercury, continuous sampling system for analysis over the long term (up to 30 days) of the micro pollutants emitted (dioxins and furans)).
- Environmental monitoring.
- Planning and implementation of a district heating network for the use of the thermal energy generated by the combustion of waste.

- Activities for the final decomissioning of lines 1 and 2 were started in 2011 along with the dismantling of line 3 in view of its revamping. The screening procedures for the amendment of the project for line 3 (introduction of a double-stage fume purification system) concluded positively and the related IEA amendment resolution was issued.
- Systems active on the new line 4 and scheduled for line
- Active since 2004. It prescribes analysis campaigns for TSP, PM<sub>10</sub>, micro-polluting metals in air, soil testing and analysis of atmospheric depositions and biomonitoring. Every six months, summary and comment reports are prepared on the data obtained from the monitoring work performed.
- Works are nearing completion at the former Cattle
  Market, an urban recovery area where remote heating
  will initially be powered with a methane-fuelled
  thermal plant, to be connected to the waste-to-energy
  plant at a later time: realisation of the distribution
  network finished, first connections activated. In
  November 2011, the co-generation plant for the 3rd
  PEEP district was opened.

### **Associations and Hera membership**

The Hera Group is present at the highest levels of organisations that are representative of the system of local public services (it appoints the vice-chairmen of Federutility and Federambiente), participates actively in their development and supports their institutional communication through the systematic participation of its members in the different roundtables opened with regulators by the Associations.

The Group is also a member of AIRU (the Italian association for Municipal Heating), CIG (Italian Gas Committee), FIRE (Italian Federation for the Rational use of Energy. It contributes to research activities regarding the public services sector conducted by leading institutions, both as a customer for specific research, and participating in the scientific debate proposed by them with contributions published in the record (AREL-Research and Legislation Agency, AGICI Business Finance) and direct participation in top level bodies (such as the IEFE board, Institute of energy and environment politics and energy at L. Bocconi University). Hera is also a member of the ASPHI (promotion and integration of the disabled via the use of Information Communication Technology) association and Impronta Etica, a business association for the promotion of social responsibility.

### Dialogue with local communities

In article 58 of its Code of Ethics, "Hera commits to giving due regard to the suggestions deriving from the communities in which it operates and to this end sets up consultation, information and participatory initiatives. This is particularly true for communities located near the plants."

The Group's commitment is more significant in the territories in which it builds or expands waste treatment or electricity production plants. In 2011 the activities of the RABs of Ferrara and Imola continued, while the activities of the Raibano (Rimini) RAB were interrupted due to the difficulties associated with the participation of the three Municipalities concerned.

### What is a RAB?

RABs (Residential Advisory Boards) are a way companies and the public at large can get together and exchange information and monitor environmental indicators.

A RAB facilitates communication, the exchange of information and interactions between a company and the citizens residing in the urban areas surrounding the plants belonging to the company, these being areas in which environmental impacts or risk situations can easily develop, with direct repercussions on the urban environment. This mechanism was tested for the first time in 1998 in the Netherlands on the outskirts of Rotterdam, hosting a petrochemical complex managed by Shell.

#### The RAB at Ferrara

The first RAB (Residential Advisory Board) which the Hera Group participated in started up in Ferrara in 2005, in relation to the upgrading of the waste-to-energy plant managed by Hera. Currently, it comprises 4 members elected by citizens of the neighbourhoods in question, the President of the District where the plant is located and two Hera representatives.

The planned model has introduced many innovative elements in the relations between Hera and the local community insofar as the presence and environmental impact of the waste to energy plant. The distinctive features that the RAB of Ferrara has created in its role are as follows:

- RAB members from the citizenry can freely access the Hera plants in Ferrara, in order to personally check on operations and view the main documents (analysis of atmospheric emissions, waste products records etc.);
- intense data collation and documentation activities: in the first five and a half years of its activity (from May 2005 to December 2011), the RAB met approximately 130 times, around twice a month, much more often than the 3 annual meetings envisaged by the Articles of Association;
- the organisation of public meetings, involving technicians and specialists who illustrate and discuss the issues identified. Specific attention was paid to health aspects linked to waste management and separate waste collection, on which the RAB was several times the leading party during meetings in the various areas adjacent to the plant;
- control of compliance with commitments undertaken, such as local offsets, meaning the creation of a new roadway link, the diffusion of district heating

(connected to the recovery of heat from waste-to-energy plants), and the realisation of six hectares of new wooded area in the area between the plant and the nearby inhabited area of Porotto.

In 2011, periodic checks continued on the data pertaining to the operation and atmospheric emissions of the waste-to-energy plant according to the procedure defined by the RAB together with the Hera technical personnel responsible for the plant, with quarterly reporting on the waste disposed of (with indication of the type and origin of the same) and the atmospheric emissions (compared with the legal limits and the IEA). The two reports are first illustrated to the RAB, then made available on the RAB site, www.rab-fe.org, which provides additional documentation such as the RAB newsletter and updated information on planned initiatives.

In 2011, the RAB planned several meetings for in-depth discussions, among the most significant issues it tackled:

- results of the study on the ground surrounding the waste-to-energy plant carried out by Ferrara ARPA technicians appointed by Hera;
- the Ferrara Tumours Register, illustrated by the individual responsible Dr. Stefano Ferretti;
- clarification by the Counsellor for the Environment in the Province of Ferrara on the stage of implementation of the Provincial Plan for the Management of Waste (PPGR) in relation to requests for extension of the landfills in the provincial area;
- separate waste collection in the Municipality of Ferrara: 2010 results and 2011 projects;
- illustration of "Tracking waste", Hera project concerning separate waste collection;
- illustration by Herambiente technicians of the biomass combustion project at the Ferrara waste-to-energy plant.

The activities of the RAB were widely publicised in issues 10 and 11 of the RAB periodical "Vediamoci Chiaro" (Let's see clearly), 5,000 copies of which were distributed to the local community.

As a result of this project that promoted the establishment and development of the Ferrara RAB, in 2006 the Hera Group was awarded the Sodalitas Social Award in the category "Internal Social Responsibility Processes."

### The RAB at Imola

Linked to the Hera cogeneration plant in Imola, the RAB is composed of 12 members: 3 representatives of Hera and 9 residents, 3 of which were appointed by two forums (district boards), one by a Residents Committee, and 6 elected on 12 April 2007 through public elections in which over 2,700 residents voted.

After the initial sharing of the main documents on the new plant, in order to better address the various issues and render the work of the organisation more effective, the RAB has established three internal working groups: technical, environmental/health, communication.

From its inception to the end of 2011, the RAB met publicly 45 times. Inspections of the plant are also envisaged so as to check its functioning. The minutes of the meetings and the onsite inspection reports are all available on the RAB website at

www.rabimola.it. Furthermore, it organises and promotes an annual public meeting for all citizens in order to present its work.

The main objectives of the Board include the supervision of the plant by means of analysis of all the regulations linked to the running of the plant so as to check Hera's accurate observance. It is a point of reference for citizens for the transparency of information about the plant and its impact on the city.

### The Imola RAB studies air quality

The activities for monitoring the plant are flanked by a project whose launch and realisation stage characterised the Rab's activities in 2011, in order to study the air quality and the relative impact on the health of the population of Imola. The project is being worked on by Hera, the Municipal Authority, Arpa and the Local Health Authorities in order to quantify the role of the major elements causing pollution (traffic, industry, heating, etc.) and to define an updatable assessment model based on the emissions report, which can also be used to assist in urban planning.

Arpa has worked on the mapping of the different sources of emissions, analysing traffic data, that of the air quality monitoring units located in Imola, gas consumption and the environmental authorisations issued to the various industrial facilities operating in Imola. With regard to the part of the project which involves the Local Health Authority, which intends to seek correlations between air pollution and illnesses affecting citizens, meeting have been held with health professionals and a chart recording the data has been put together. 11 health professionals are involved and around 600 charts have been distributed.

In 2010, the Municipal Authority of Imola obtained the Pimby Prize, in the energy category, for the Hera co-generation plant: this is an acknowledgement which rewards the local authorities which complete work in their areas, coupling compliance with the rules and citizens' consensus.

### **Pending legal proceedings**

In addition to the lawsuits involving customers, suppliers and public administration which are discussed in the relative sections of this report, at the end of 2011 there were another 160 pending legal proceedings involving various issues concerning claims for compensation connected to the management of the services provided by Hera.

At the close of 2011, 88 criminal proceedings were pending; of these, 28 were initiated in 2011. Most of these proceedings regard non-compliance with environmental requirements or regulations, without significant damage to the environment. In 2011, 48 criminal proceedings were closed, mostly with dismissal of the charges or not-guilty verdicts.

With regard to the explosion caused by a gas leak from an underground pipe laid in the roadway, which occurred on 23 December 2006, in San Benedetto del Querceto, a village in the Apennines near Bologna, which caused the collapse of a building and the death of five people, the preliminary investigation phase was concluded in August 2009, and the Prosecutor submitted the request to commit to trial 6 employees and 5 former

employees of the Hera Group. At the end of 2011, one Hera employee was committed to trial. The examination of the witnesses has started and hearings have been fixed for the whole of 2012.

With regard to the Forlì plant, criminal proceedings are pending against a number of Herambiente managers.

This trial initially concerned the alleged personal injuries from the atmospheric emissions of the waste-to-energy plant. Environmental and medical associations and citizen committees stood as plaintiffs together with the family of a child who passed away during the proceedings, who was alleged to have contracted a disease on account of the plant emissions.

The appraisal submitted by the Court-appointed Expert Witness had concluded that no causal link was identifiable between the illness that affected the child and the environmental exposure to pollutants issued by the waste-to-energy plant. With the decision handed down on 24 November 2010, the Judge of the Court of Forlì had ordered the dismissal, as request by the Prosecutor, of the charges pertaining to negligence-related injuries.

Within the sphere of the proceedings, the Prosecutor had presented a petition for prior attachment of the Forlì waste-to-energy plant as it is deemed hazardous, a petition rejected by the Forlì Court, appealed against by the Prosecutor and rejected by the court of review. The subsequent appeal for Cassation presented by the Prosecutor on 7 January 2011 concluded with the sentence of the Supreme Court of Cassation rejecting the appeal adopted on 13 July 2011 which justifies stating that the connotation of danger put forward by the accused has not been demonstrated effectively and currently, but emerges as "essentially based on presumptive elements which do not indicate a real possibility of compromise of the interests pertaining to the protection of health and the environment".

Now the proceedings are still pending against some Herambiente managers with regard to "technical issues" pertaining to the incineration plant, i.e. aspects of potential pollution and suspected administrative violations.

### The environment and future generations

The area in which Hera is operational is not merely a geographic entity. Above all else, it is a primary source of social and environmental wealth, to be respected and protected for the future.

Accordingly, Hera is committed to responsibly managing natural resources, improving its results and adopting increasingly efficient technologies with low environmental impact.

### **Objectives and performance**

#### What we said we would do...

- Further reduce the use of landfills as a means of disposal for urban waste, while increasing separate waste collection and waste-to-energy treatment. The objective is to reduce the share of urban waste disposed of via landfills downstream of pretreatment to 22% in 2011.
- Further increase separate waste collection, reaching 50% in 2011.
- Further increase the amount of energy generated from renewable and similar sources: +40% in 2011 compared to 2010.
- Successfully pass the validation inspection by the external certifying agency for EMAS registration of 3 additional plant sites in 2011: Stradelli Guelfi (Bologna) transfer station, "Area 2" plant site (Modena), and the landfill for nonhazardous waste in Zocca (Modena).
- Extend district heating via the full use of energy deriving from waste-to-energy as well as other renewable energies and similar: increase the volume served by 7% in 2011, compared to 2010.
- Continue the process of upgrading and modernising the wastewater treatment plants: finish work at 8 wastewater treatment plants in 2011 with a potential 1,082,000 inhabitant equivalents, and continue work in 5 other wastewater treatment plants with a potential 541,000 inhabitant equivalents.
- Make the investments foreseen for 2011 for the drainage of the sewage network without purified sewage into the wastewater treatment plants for a total of 10,000 inhabitant equivalents.
- Continue the "Biomass" project: more specifically, complete the planning of 4 plants

#### What we have done...

- In 2011, municipal waste treated via landfills, including that which had been pre-treated, amounted to 23.1%, compared to 25.0% in 2010. The quantity of waste-to-energy plant urban waste was stable compared to 2010 (29%) (see page).
- In 2011, separate waste collection came to 50.5% compared with the 2010 figure of 47.8% (see page).
- The level of energy generated from renewable and similar sources increased by 21% compared to 2010 because of the lower than expected contribution of cogeneration (see page 206).
- In 2011, the external certifying agency positively verified that all 3 plant engineering sites under examination complied with EMAS certification criteria (see page 32).
- In 2011, the volume served increased 6% compared to 2010.(see page 210).
- Work was concluded at 7 wastewater treatment plants with a potential 1,071,000 inhabitant equivalents, and work continued in 6 wastewater treatment plants with a potential 561,000 inhabitant equivalents. (see page 223).
- The investments foreseen for the drainage of the sewage network without purified sewage into the wastewater treatment plants for a total of 6,100 inhabitant equivalents were concluded while the work for a further 1,900 inhabitant equivalents is ongoing. (see page 222).
- The definitive plans for two dry anaerobic

aimed at recovering the organic component of waste both as an agricultural fertiliser as well as a raw material in energy production.

• Complete the energy class certification of all Group buildings.

digestion plants, which are currently being developed and which will be functional by the end of 2012, were completed. Another plant is in the planning phase. (see page).

• Energy class certification was obtained for all main buildings not used for production purposes: 18 buildings owned and 14 rented properties (see page 215).

#### We shall...

- Further reduce the use of landfills as a means of disposal for urban waste, while increasing separate waste collection. The objective is to reduce the share of urban waste disposed of via landfills, including pre-treated waste, to 21% in 2012.
- Further increase separate waste collection, reaching 52.6% in 2012.
- Develop new initiatives in the areas of industrial co-generation, photovoltaic energy and anaerobic digestion, reaching a quantity of energy deriving from renewable and similar sources in 2012 that is equal to 74% of the electricity and thermal energy generated.
- Begin the ISO 14001 certification process for the activities carried out by the Large Plant Engineering Department and the company Romagna Compost.
- Extend district heating via the full use of energy deriving from waste-to-energy as well as the use of other renewable sources and similar: increase the volume served by 5% in 2012 compared to 2011, and continue the Renewable Energies Hub project in Ferrara, aimed at further exploiting geothermal sources.
- Continue the process of upgrading and modernising the wastewater treatment plants: finish the work at 9 wastewater treatment plants in 2012 with a potential of 748,000 inhabitant equivalents. Start adjustment works in 3 other wastewater treatment plants with a potential of 460,000 inhabitant equivalents.
- The "Biodigester" project: develop and launch 2 dry anaerobic digestion plants and complete the planning of an additional plant by 2012.
- "Mi muovo elettrico" ("Driving electric") project: promoting electric mobility through the activation of additional recharge points.

### Environmental aspects of the activities managed by Hera

The main environmental issues related to our operations are described in this section, along with the results achieved thanks to the development of the environmental management system.

For the energy services, the main environmental issues are:

- the efficiency of the gas, electricity and district heating distribution networks;
- the production of electricity and thermal energy from renewable sources (photovoltaic energy, use of landfill biogas, wastewater treatment and digestion of organic waste), from similar sources (cogeneration plants and turboexpanders) and from waste-to-energy transformation.

For the water services, the main environmental issues are:

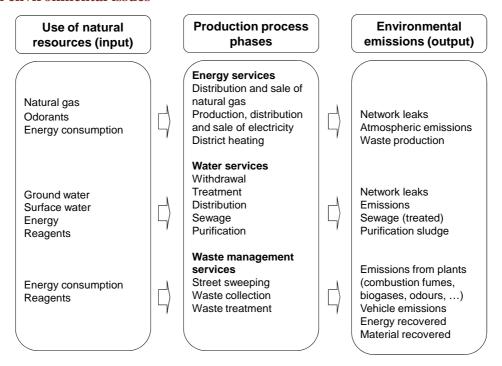
- limiting subsidence;
- the efficiency of the water network and of drinking water purification plants;
- the reintroduction of water into the environment following collection by sewage systems and required purification.

With regard to subsidence, Hera applies the water supply policy defined by local authorities, and works toward reducing groundwater collection by using plants fed by surface water as frequently as possible.

To limit the environmental impact of wastewater, the sewage network in coastal areas is equipped with mechanisms regulating discharge into the sea in the event of heavy rainfall. Tanks are also being built to collect runoff water to be transferred to treatment plants.

The main purification plants are equipped with odour treatment systems using bio filters. All plants are equipped with 24-hour a day staffing, supported by a remote-control system, and inspections on a daily basis or 2-3 times per week, depending on the plant size. Wastewater is controlled before being reintroduced into the environment according to a plan specifying the number, frequency and type of analysis.

#### Main environmental issues



With regard to waste management services, the main issues concern:

- promoting and applying initiatives for waste prevention and the reuse of products;
- increasing separate waste collection and the consequent recovery of materials;
- reducing waste sent to landfills, consistent with European and Italian regulations;
- recovering energy from waste (via waste-to-energy transformation processes and biogas recovery).

The prevention of waste limits the waste of resources and reduces the quantity of waste to be managed. Increased separate waste collection enhances the efficiency of downstream waste treatment and the recovery of material and energy, as well as reducing landfill volumes.

The applicable environmental regulations, continuously evolving, require that all equipment containing substances damaging to the ozone layer or greenhouse gases undergoes review and frequent checks in order to detect any leaks. A specific instruction which the Hera Group has implemented identifies in detail the activities

required and the frequency of checks which are mandatory in order to guarantee full compliance.

### **Energy production**

In 2011, the Group continued to pursue its commitment to meeting its growth target in terms of the use of renewable and similar energy sources. More specifically, the new waste-to-energy treatment line in Rimini, the biomass plant in Faenza managed by Enomondo, the cogeneration plant for district heating in the Giardino district of Modena, and five industrial cogeneration plants all enjoyed their first full years of operation. During the year a cogeneration plant for district heating in the 3rd PEEP district of Modena, a plant for recovering biogas from the landfill in Ravenna, the fourth photovoltaic plant at Bologna freight village and two industrial cogeneration plants became operational.

The following table outlines the net electricity production of the Group's plants. Also considered are the production plants managed in service by Hera Group companies, even if they are not owned by Hera, as well as the plants managed by third parties and fuelled by biogas produced at the Group's landfills. The electricity net of additional production plant consumption may not match that introduced into the grid, as part of the energy produced may be used for other company production processes.

Net electricity produced

MWh	2009	2010	2011
Waste-to-energy plants (51% renewable)	196,928	212,040	229,218
Combustion of landfill biogas	27,422	39,290	39,921
Combustion of landfill biogas in third party plants	48,992	41,593	52,806
Combustion of digester biogas	1,867	7,141	6,959
Combustion of wastewater purification biogas	6,718	4,230	5,431
Biomass plant			36,600
Photovoltaic energy	473	1,702	3,513
Hydroelectricity	271	361	508
Total renewable sources	282,671	306,357	374,956
Cogeneration	311,993	406,874	408,955
Cogeneration in service	42,084	55,996	105,082
Turboexpanders	10,281	5,971	5,854
Total similar sources	364,358	468,841	519,891
Combustion of methane in purification plants	13	0	0
Waste-to-energy plants (49% non-renewable)	208,786	224,823	237,076
Total traditional sources	208,799	224,823	237,076
Total	855,828	1,000,021	1,131,923
	•		

The energy produced by the biomass plant was considered to be 50%, equal to Herambiente's shareholding in the company that manages the plant.

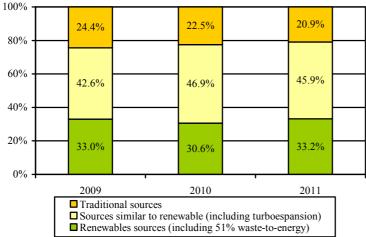
The net electricity produced by the Group's plants has increased by 13% overall. The production of energy from renewable sources came to 375 GWh (+22%), and increased in the following areas:

• production of energy from biomasses: because of the 50% consolidation of Enomondo, the company that manages a biomass plant in Faenza, operational as of May 2010;

- waste-to-energy: because the fourth line of the Rimini waste-to-energy plant (opened in October 2010) became fully operational;
- combustion of landfill biogas: because of the start-up in February 2011 of the new landfill plant for non-hazardous waste in Ravenna;
- photovoltaic: because of the plant development at Bologna freight village (first year that the two 2 MW plants were fully operational and start-up of new 1 MW plant in October 2011).

The production of electricity from similar sources went from 469 to 520 GWh mainly thanks to the cogeneration plants in service.

# Net total electricity produced



Thanks to the increase in absolute terms in the electricity produced from renewable sources, its weight on total production went from 31% to 32%; the production of electricity from similar sources fell slightly from 47% to 46%. The amount of electricity produced from renewable and similar sources rose to 79%; the remaining electricity produced has a high level of environmental sustainability, as it is energy recovered from waste-to-energy transformation for the share exceeding 51%.

In 2011 incentives for the production of electricity from renewable sources through Green Certificates are awarded to plants fuelled by renewable sources, for which IAFR (plants fuelled by renewable energies) qualification is planned, and to cogeneration plants which fuel the district heating networks. In both cases, the quantity of incentivised electricity is not exactly equal to the amount of electricity produced. In the first case, for plants brought onto stream after 2007, multiplication coefficients were introduced which take into account the technology of the IAFR plant. For example, if landfill biogas is used, the recognition awarded is calculated by multiplying the energy generated by 0.8. In the case of non-agricultural biomass with a short supply chain, meanwhile, the energy is multiplied by 1.3.

For cogeneration plants, Italian Ministerial Decree of 4 August 2011 updates Legislative Decree no. 20/2007, redefining the cogeneration technologies, the calculation of cogeneration production and the performance of the cogeneration process in order to qualify cogeneration. The subsequent decree of the Ministry of Economic Development of 5 September 2011 determined a new support regime for cogeneration:

this incentive is based on white certificates and is recognised by the Energy Services Manager, following recognition of the qualification of cogeneration, according to the actual primary energy savings made.

In the case of waste-derived electricity, the energy recognised for the purpose of the incentives, and to which the above-mentioned multiplication coefficients are applied, is limited to the biodegradable portion, as it is considered biomass according to European and Italian regulations. In anticipation of the definition of the most precise methods for calculating the biodegradable part, current regulations indicate 51% as the part of waste to be considered in the case of waste-to-energy plants using urban waste downstream from separate waste collection. Therefore, 51% of both electricity and thermal energy produced from waste-to-energy transformation was considered in the calculation of the share of energy produced from renewable sources. This percentage was applied to all waste disposed in waste-to-energy plants (urban and special waste) and for all three years considered, in order to have consistent terms of comparison defined in accordance with the regulations in force. The one exception is Ravenna's waste-to-energy plant for special waste, whose production, with a coefficient of biodegradability of nearly zero for treated special waste because of their origins in industrial processes, is considered 100% non-renewable.

**Net electricity produced in the Group's plants** 

MWh	2009	2010	2011
Coriano - Ravenna	23,640	32,975	57,562
Frullo Granarolo - Bologna (Frullo Energia Ambiente)	147,724	145,922	149,347
Canal Bianco, Ferrara	69,386	56,893	60,519
Grigioni Forlì	67,027	55,090	49,533
Strada Romea km 2.6 Ravenna	30,583	29,417	27,455
Comparto Area 2 Cavazza Modena	47,773	95,467	105,032
Special Waste Ravenna	19,581	21,099	16,846
Total waste-to-energy plants	405,714	436,863	466,294
Alfonsine landfill (Ravenna)	36	35	~
Caruso 1C landfill Modena	125	125	~
Galliera landfill (Bologna)	10,599	10,776	11,695
S. Agata Bolognese landfill - Bologna (Nuova Geovis)	11,600	10,024	10,780
Marche Multiservizi landfills	5,062	18,330	17,446
Third party plants at Hera landfills	48,992	41,593	52,806
Digestion of livestock waste and wastewater,	1,747	1,752	799
Spilamberto (Modena)			
Anaerobic digestion, Cesena - FC (Romagna Compost)	120	5,389	6,160
Bologna wastewater treatment plant	3,820	1,486	2,167
Forli wastewater treatment plant	384	975	1,161
Savignano sul Rubicone wastewater treatment plant	935	774	972
(Forlì-Cesena)			
Cesena wastewater treatment plant	1,579	995	1,131
Total biogas from landfills, anaerobic digestion and	84,999	92,254	105,117
wastewater treatment plants			
Faenza - Ravenna (Enomondo)			36,600
Total biomass plant			36,600
Bologna Freight Village 1 (Hera Energie Rinnovabili)	245	226	264
Bologna Freight Village 2 (Hera Energie Rinnovabili)		594	1,294
Bologna Freight Village 3 (Hera Energie Rinnovabili)		623	1,259
Bologna Freight Village 4 (Hera Energie Rinnovabili)			450
Ravenna Site	130	122	141
Photovoltaic with peak capacity below 50 kW	98	137	105

MWh	2009	2010	2011
Total photovoltaic	473	1,702	3,513
Cavaticcio Bologna	0	0	303
Para 1 Verghereto - Forlì-Cesena (Hera Energie	271	361	205
Rinnovabili)			
Total hydroelectric	271	361	508
Montericco TG1 Imola (Bologna)	10,455	0	0
Casalegno Imola (Bologna)	239,751	338,284	333,534
Castelbolognese (Ravenna)	651	896	863
Ecocity Casalecchio di Reno (Bologna)	9,022	10,711	9,926
Fossolo Bologna	3,593	572	927
Acer Barca Bologna	19,975	24,214	22,206
Bologna Site	16,111	14,993	16,679
Monterenzio (Bologna)	355	238	192
S. Biagio Casalecchio di Reno (Bologna)	251	762	1,327
Ipermercato Fiera Forlì cogeneration plant (Forlì-	893	661	733
Cesena)			
Ippodromo Cesena (Forlì-Cesena)	6,072	5,960	2,518
Aranova Ferrara	2,787	748	397
Giardino (Modena)		8,234	16,079
3rd PEEP Modena			2,764
Razzaboni Modena	1,204	0	0
Molino Rosso Imola (Bologna)	873	601	810
Cogeneration in service	42,084	55,996	105,082
Total Cogeneration	354,077	462,870	514,037
Bologna	3,505	3,785	3,301
Ferrara	1,893	0	0
Forlì	2,838	2,186	499
Ravenna	2,045	0	2,054
Total turboexpanders	10,281	5,971	5,854
Forlì (Forlì-Cesena)	3	0	0
Savignano sul Rubicone (Forlì-Cesena)	10	0	0
Total methane gas in purification plants	13	0	0
Total	855,828	1,000,021	1,131,923

The energy produced by the biomass plant was considered to be 50%, equal to Herambiente's shareholding in the company that manages the plant.

The average efficiency of the electricity and thermal energy production plants (meaning the ratio of incoming energy and net outgoing energy of the plant) is 30% for the waste-to-energy plants that power district heating networks and 20-24% for new waste-to-energy plants, and between 57% and 84% for the cogeneration plants. As regards the latter, the best performances are recorded where there is a greater annual heat load. The total installed capacity of the Group's plants is equal to 294 MW.

The electricity produced in 2011 by companies in which the Group holds investments pertaining to Hera, came to around 1,461 GWh (share acquired by Hera). The companies involved are SET, Tirreno Power and Calenia Energia, in which Hera has an equity investment. SET and Calenia Energia run two power stations in Teverola (Caserta) and Sparanise (Caserta), respectively; these are two combined-cycle plants (CCGT) which guarantee higher performance and improved environmental compatibility with respect to the traditional oil or coal-fuelled power stations. In 2011 carbon dioxide emissions from the two plants came to 390 g/kWh (Teverola) and 380 g/kWh (Sparanise); nitric oxide emissions came to 71 g/MWh and 75 g/MWh. The

Tirreno Power plant pool comprises combined-cycle plants (70%), coal-fuelled plants (19%), traditional power stations (9%) and hydroelectric plants (2%).

Thermal energy produced

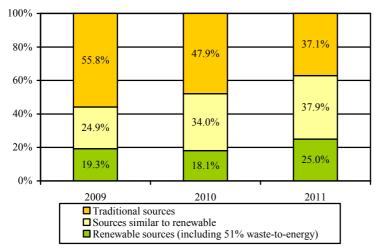
inermar energy produced			
MWh	2009	2010	2011
Waste-to-energy plants (51% renewable)	35,927	45,265	60,356
Geothermics	74,369	66,203	74,724
Biomass plant			42,341
Total renewable sources	110,296	111,468	177,421
Cogeneration	116,793	175,717	173,844
Cogeneration in service	25,006	33,484	95,260
Total similar sources	141,799	209,201	269,104
Thermoelectric power stations	283,340	251,420	205,556
Waste-to-energy plants (49% non-renewable)	34,519	43,490	57,989
Total traditional sources	317,859	294,910	263,545
Total	569,954	615,579	710,070

The energy produced by the biomass plant was considered to be 50%, equal to Herambiente's shareholding in the company that manages the plant.

There was a 15% increase in the amount of thermal energy produced in the last year following the development of district heating and the Faenza biomass plant becoming part of the Group's scope of consolidation. There was a 39% increase in the production of thermal energy from renewable and similar sources in 2011 compared to 2010. The heat produced from renewable sources increased by 59% compared to 2010 (biomass plant in Faenza, greater use of geothermal source - in 2010 there was a fault at the Casaglia wells - and of the heat deriving from waste-to-energy treatment); meanwhile there was a 29% increase in similar sources, mainly due to the industrial cogeneration plants (two new plants opened in 2011 and the first full year of operations for five plants). 2011 saw the launch of the start-up and testing phase of the Bufalini cogenerator in Cesena, designed to serve the hospital site, which will have effects on production as of 2012. The use of the thermoelectric power stations fell even further: -18% compared to 2010.

As a result of the above, the amount of thermal energy produced by renewable and similar sources grew from 52% in 2010 to 63% in 2011.

### Total thermal energy produced

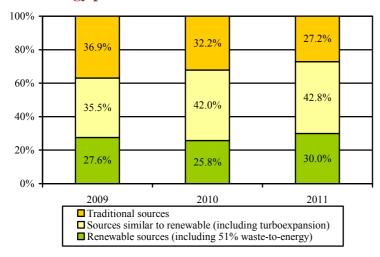


Thermal energy produced in the Group's plants

MWh	2009	2010	2011
Bologna waste-to-energy plant (Frullo Energia	43,657	36,148	42,241
Ambiente)			
Ferrara waste-to-energy plant	26,789	52,607	73,210
Forlì			2,894
Total waste-to-energy plants	70,446	88,755	118,345
Faenza - Ravenna (Enomondo)			42,341
Total biomass plant			42,341
Ferrara geothermics	74,369	66,203	74,724
Total geothermics	74,369	66,203	74,724
Montericco (Imola (BO)	14,426	-	-
Casalegno Imola (Bologna)	37,099	106,990	99,607
Castelbolognese (Ravenna)	855	1,190	1,062
Ecocity Casalecchio di Reno (Bologna)	7,944	10,653	9,399
Fossolo Bologna	4,985	655	1,400
Acer Barca Bologna	26,994	28,938	30,653
Bologna Site	9,546	8,832	8,748
Monterenzio (Bologna)	598	468	300
S. Biagio Casalecchio di Reno (Bologna)	187	613	1,347
Ipermercato Fiera Forlì (FC)	1,113	932	895
Ippodromo Cesena (Forlì-Cesena)	6940	7,577	3,178
Aranova Ferrara	3,762	1,094	495
Giardino (Modena)	-	6,925	14,103
3rd PEEP Modena	-	-	1,584
Razzaboni Modena	1,411	-	-
Molino Rosso Imola (Bologna)	933	850	1,073
Cogeneration in service	25,006	33,484	95,260
Total cogeneration	141,799	209,201	269,104
Thermoelectric powers stations Bologna	99,806	122,584	106,287
Thermoelectric power stations Ferrara	70,988	69,581	31,231
Thermoelectric power stations Forlì-Cesena	19,489	16,444	20,294
Thermoelectric power stations Imola-Faenza	46,523	6,761	20,769
Thermoelectric power stations Modena	37,554	31,491	22,584
Thermoelectric power stations Ravenna	8,980	4,559	4,391
Total thermoelectric power stations	283,340	251,420	205,556
Total	569,954	615,579	710,070

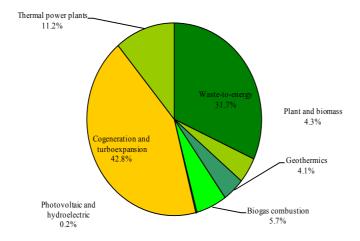
The energy produced by the biomass plant was considered to be 50%, equal to Herambiente's shareholding in the company that manages the plant.

### Total energy produced



The share of total energy produced from renewable and similar sources grew in the last year, from 67.8% to 72.8%. An additional 16% of the total energy produced in any case has a high level of environmental sustainability as it is energy recovered from waste-to-energy transformation for the share exceeding 51%.

### Total energy produced (2011)



#### Hera and renewable sources

In 2011 the Hera Group confirmed its commitment to the production of energy from renewable sources and with low environmental impact, which once again this represented over 70% of the Group's total production.

This focus and commitment to the environment can be seen in all of the Group's business segments, beginning with Hera Energie Rinnovabili, the company launched in 2008 with a specific focus on so-called "pure renewables". Then there is Herambiente, the Group company active in waste disposal and energy exploitation, and Hera S.p.A.,

which applies the same principles of maximising energy efficiency and seeking to reduce environmental impact to activities connected with the water sector, gas distribution, district heating and cogeneration.

As regards new developments, in 2011 Hera Energie Rinnovabili completed the fourth photovoltaic plant at Bentivoglio freight village (Bologna), which took the site's installed photovoltaic capacity to 3.2 MW. This capacity is joined by the photovoltaic plants installed at the Ravenna and Cesena sites of a total capacity of 120 kW. Still in the photovoltaic sector, Hera Energie Rinnovabili has a 33% shareholding in the company

Ghirlandina Solare, owner of a 1 MW photovoltaic plant in Marzaglia (Modena) on land belonging to the Municipality of Modena. As well as its photovoltaic plants, Hera Energie Rinnovabili owns a 143 kW hydroelectric plant in the Municipality of Verghereto (Forlì-Cesena).

As regards Herambiente, 2011 was the first full year of operations for the biomass plant developed in partnership with leading Italian wine producer Caviro. This plant, with a capacity of 12 MW, is mainly powered by prunings, grape processing waste and other combustible organic matrix materials. The plant is managed by Enomondo, with Herambiente holding a 50% shareholding, and in 2011 treated 105,000 metric tons of waste and produced 73.2 GWh of electricity and 84.7 GWh of thermal energy.

In addition, the biogas exploitation plants at 11 landfills are still active, as are the two anaerobic digestion plants powered by biomasses and bioliquids in Cesena and Spilamberto (Modena).

Parent company Hera SpA manages the plant that collects hot water from a geothermal source to power the district heating network of Ferrara, and three turboexpanders, in Bologna, Forlì, and Ravenna, that produce electricity by exploiting gas pressure differentials. Also connected to the integrated water system are the plants for recovering energy from purification sludge in Bologna, Cesena, Forlì and Savignano sul Rubicone (Forlì-Cesena).

Of the plants that generate low environmental impact energy, i.e. those with performance coefficients of 80-90%, we highlight the 80 MW cogeneration plant in Imola, which is joined by various other smaller cogeneration and trigeneration plants, for an additional total installed capacity of 27 MW.

### 27,200 square metres of photovoltaic in the new Marzaglia solar park

The new Marzaglia photovoltaic park, in the municipality of Modena, was opened in May 2011. It was developed by design company Ghirlandina Solare, founded by CPL Concordia, Hera Energie Rinnovabili and Mr. Ferrari. The solar park covers 27,200 square metres (bigger than three football pitches) and has a total capacity of around 1 MW. It comprises 5,508 panels in 180 watt monocrystalline silicon. It is expected to produce over 1.2 million kWh of electricity a year, the consumption level of around 440 families

#### **District heating**

District heating is a service involving the sale of heat for customer home heating and domestic hot water. It is an alternative system to traditional autonomous or condominium-based boilers which makes it possible to concentrate the production of

heat in central installations, which are more efficient and better controlled than home boilers. From these installations, the heat, in the form of hot water, is brought to customer homes through a distribution network comprised of insulated piping. The heat then fuels the domestic heating system via non-polluting heat exchangers.

Customers have the advantage of increased safety and lower running and maintenance costs (no domestic boiler), while maintaining the freedom to independently regulate the temperature of the home.

For cities, district heating provides a solution to air pollution problems by replacing home boilers, which are sometimes still fuelled with gas-oil or fuel oil, and allowing heat generation from high-efficiency production methods, renewable energies, or energy recovered from other production processes.

Continuing in our policy of substituting fossil fuels with renewable energies or fuels from recovery, it was possible to obtain significant energy-environmental improvements in the Group's district heating plants.

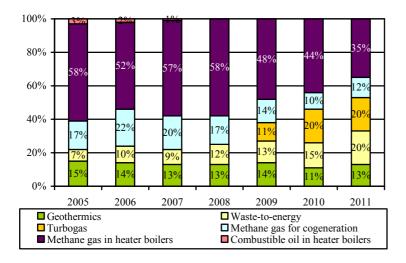
**Environmental advantages of district heating** 

	2009	2010	2011
Primary energy saved (toe)	20,491	29,464	29,352
Nitric oxide avoided (t)	254.9	333.5	336.4
Carbon dioxide avoided (t)	117,794	156,341	154,023
Sulphur oxide avoided (t)	261.1	317.7	307.4

Calculated as the difference between a traditional system (existing boiler parks comprising 65% methane-powered boilers and 35% diesel boilers with an average seasonal yield of 75% (source: Comitato Termotecnico Italiano, 2009), and the national electricity grid) and Hera's district heating systems for the same quantity of energy (thermal and electric).

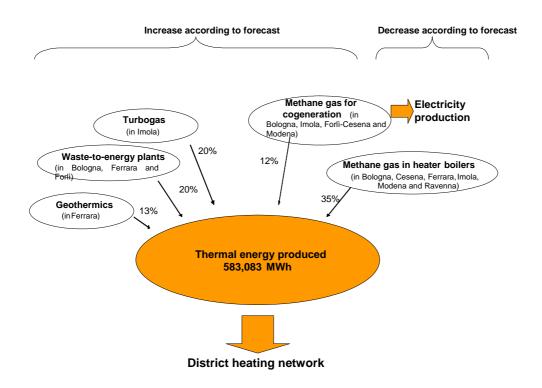
In 2011 the plants managed by Hera recorded primary energy savings of 29,352 tonnes of oil equivalent, a fall of 0.4% compared to the savings in 2010, with a differential of 112 toe in absolute terms.

### Sources used for district heating (2005-2011)



As for the sources used for district heating, the percentage of thermal energy produced with gas boilers has fallen from 61% in 2005 to 35% in 2011.

### Sources used for district heating (2011)



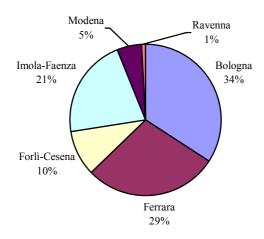
### District heating data

	2009	2010	2011
Thermal energy sold (MWh)	475,026	534,808	499,350
Volumes served (thousand of m <sup>3</sup> )	17,154	17,775	18,803
Housing unit equivalents served (No.)	71,475	74,064	78,347

Housing unit equivalents served were calculated on the basis of an average apartment volume of 240 m<sup>3</sup>.

Because of the specific climate trend in 2011, partly compensated for by the new volumes served, there was a 7% fall in sales of thermal energy. There was a 6% increase in the amount of volumes served in 2011; the most significant increases took place in Modena, Forlì-Cesena and Imola. In 2012 the company will continue to strive for improvements, facilitating the development of district heating with increasing quantities of renewable sources, with specific reference to the general development projects in Forlì and Modena, and the authorisation of the Renewable Energies Hub project in Ferrara.

### Housing unit equivalents served per territory (2011)



### **Cogeneration for district heating**

The term cogeneration indicates the combined production of electricity and thermal energy starting from a single source, whether fossil fuel or renewable, implemented in a single integrated system. This takes place in special thermoelectric plants which recover the heat from the exhaust fumes produced by an engine fuelled by any type of fuel. Significant energy savings are therefore achieved (approximately 40%) compared with the separate generation of electricity and thermal energy.

The Hera Group cogeneration plants, thanks to the connection with district heating networks, also contribute to improving the quality of air in the urban centres in which they are located: their construction resulted in the closing of numerous obsolete boilers, and allowed the local authorities to develop new residential developments featuring a modern, efficient heating system and the supply of hot water to buildings. Through district heating, the production of heat is centralised in plants which are more efficient and better controlled than home boilers. Controls are continuous, both in terms of the combustion processes and atmospheric emissions.

The most recent district heating projects, and the new projects which cities are increasingly interested in, increasingly fine-tune plant and commercial analysis to optimise the choice of heat production sources, the identification of the area in which to locate the plant and, therefore, the network for distributing heat to the enterprises and homes which will use it.

The Group manages 14 co-generation plants, for a total installed capacity of 113 MW.

**Cogeneration plants for district heating** 

Plant	Location	power (MW)		Thermal energy produced per plant in 2011 (MWh)	
Casalegno	Imola (Bologna)	84.5	333,534	99,607	
Cogen Barca	Bologna	6.4	22,206	30,653	
Site	Bologna	4.8	16,679	8,748	
Ecocity	Casalecchio di Reno (Bologna)	4.0	9,926	9,399	
Quartiere Giardino	Modena	3.6	16,079	14,103	
Fossolo	Bologna	2.2	927	1,400	
Bufalini	Cesena	1.9	-	_	
Ippodromo	Cesena	1.7	2,518	3,178	
3rd PEEP	Modena	1.1	2,764	1,584	
5 other minor plants	Bologna and Forlì-Cesena	2.8	3,925	4,677	
Total		113	408,558	173,349	

### All the advantages of cogeneration in Modena

November 2011 saw the opening in Modena of the new cogeneration plant for the district heating of the III Peep district. The high-efficiency energy plant will make it possible to save 330 toe and to avoid the production of 780 metric tons of CO<sub>2</sub>. The Hera Group has invested over 1.6 million euro in the project. The families connected to the service will enjoy significant economic benefits with their bills reduced by 11%. On average, this benefit will translate into savings of over 100 euro a year.

### **Industrial cogeneration**

The Hera Group operates in the industrial cogeneration sector proposing multi-year energy supply contracts through the development and management of electricity and thermal energy production plants dedicated to meeting all the energy needs of top customers.

The main product sectors in which the energy service is particularly effective are plastics, food, pharmaceuticals, ceramics and large-scale tertiary services such as museums, shopping centres, spas and condominiums.

With cogeneration and trigeneration (production of electricity and thermal energy at the same plant plus cooling services) primary energy is saved with respect to the traditional consumption, emissions are reduced, energy efficiency is increased and supply costs are reduced.

The Group's "Energy Service" sees Hera Comm supply all energy carriers, reducing the financial and operational burden on the customer. In terms of the customer's energy requirements, Hera Comm identifies the characteristics of the technology plant, manages the preparation of all authorisation documents, and manages and directs the plant.

### **Orogel and Hera Group together for cogeneration**

In June 2011 Orogel and Hera Comm signed an agreement for the development of a methane gas cogeneration plant at the Orogel site in Cesena. According to the agreement a cogeneration system capable of producing electricity, heat and cold, by

burning methane gas, will be developed by the end of 2012. As well cost savings, the plant will provide major benefits above all in terms of reducing CO<sub>2</sub> emissions - around 1,600 metric tons a year (a saving of 670 metric tons of toe a year). The cogeneration plant will guarantee 70% of the electricity requirements of the Orogel plant, for a total of 26,550 MWh, and 92% of its thermal energy needs, a total of 13,536 MWh.

At the end of 2011, 14 plants were operational, 2 of which activated in 2011 (Granarolo and Ceramiche CCV), and another two were in the process of development. The environmental benefits produced in 2011 can be quantified as lower emissions of CO<sub>2</sub> (to the tune of 17,000 metric tons) and primary energy savings (7,200 toe).

Through "Energy Service" contracts, Hera Comm has guaranteed total savings to its end customers of more than euro 3.5 million, corresponding to a saving of 7-13% that depends on the energy balance and the simultaneous use of energy carriers by customers.

Cogeneration plants managed in service

Plant	Location	Nominal installed electric power (MW)	Net electricity produced per plant in 2011 (MWh)	Thermal energy produced per plant in 2011 (MWh)
Safta	Piacenza	7.3	30,831	16,518
Ceramiche CCV	Castelvetro (Modena)	4.3	17,495	39,408
Cerindustries	Castelbolognese (Ravenna)	3.6	13,887	7,159
Granarolo	Granarolo (Bologna)	2.4	13,365	7,457
Magema	S.Zaccaria (Ravenna)	2.0	9,553	7,773
Covalpa	Celano (L'Aquila)	1.6	7,073	5,283
Centroplast	Meldola (Forlì-Cesena)	1.2	3,716	2,199
Cafar	Gatteo (Forlì-Cesena)	0.8	4,621	3,141
Fox Bompani	Ostellato (Ferrara)	0.7	2,033	1,213
Aldini	Bologna	0.6	951	3,450
Palazzo Pepoli	Bologna	0.4	130	145
Le fonti di Matilde	Reggio Emilia	0.2	117	128
Filomarket	Imola (Bologna)	0.2	528	617
Terme di Riolo	Riolo Terme (Ravenna)	0.1	782	769
Total	,	25.4	105,082	95,260

### **Energy consumption**

Hera's energy consumption reflects the multi-business nature of the Group (energy, water, environment, and other services such as and public lighting and telecommunications). The balanced portfolio of activities creates synergies that increase productivity in multiple sectors while limiting energy consumption. For example, Hera manages cogeneration plants that contribute to electricity needs and at the same time fuel district heating networks, waste-to-energy plants that meet waste disposal needs while achieving significant energy recovery, and turboexpanders that evaluate pressure differentials in the natural gas distribution stations in the local managed networks. By implementing measures on its own production systems and at end customers in the area

of operations as much as possible, Hera pursues a policy aimed at increasing energy efficiency in all activities carried out.

Primary energy consumption by type

thousands of GJ	2009	2010	2011
Methane for production	5,619	6,644	6,116
Waste-to-energy treatment	7,718	8,411	8,601
Total energy consumed in electricity or thermal energy production plants	13,337	15,055	14,717
Electricity excluding public lighting	1,681	1,570	1,626
Electricity for public lighting	600	589	540
Methane for heating of premises	134	133	105
Fuel for vehicles	363	383	366
Total energy consumed for uses other than the production of electricity or thermal energy	2,778	2,675	2,637
Total	16,115	17,730	17,354

Data have been calculated using the conversion standards defined by the GRI G3 guidelines. The data refer to energy consumption by Hera SpA, Uniflotte, Herambiente, FEA, Hera Luce and Marche Multiservizi.

In 2011 there was a reduction in consumption both in the areas of energy production, including the waste-to-energy component (-2%), and in the remaining areas of consumption (-1%). Excluding energy spending for production reasons, other types of consumption fell by 1% overall compared to 2010 and by 5% compared with 2009. These results underline the effects of a policy of streamlining the use of energy resources. In particular, electricity for public lighting fell by 8% because of the reduction in the number of light points managed following the termination of the service in the municipality of Bologna and the energy saving initiatives activated.

White certificate objectives

3			
Toe	2009	2010	2011
Gas distribution	106,359	147,896	161,640
Electricity distribution	14,959	19,946	27,209
Total	121,318	167,842	188,849

The Italian Ministerial Decrees dated 20 July 2004 set, for the five-year period 2005-2009, annual national objectives for energy efficiency relating to the end uses of energy by electricity and gas distributors with more than 100,000 end customers connected to their networks at 31 December 2001. Italian Ministerial Decree of 21 December 2007 extended the obligations sanctioned by the White Certificates mechanism until 2012, broadening the panorama of entities obliged to comply to include distributors of electricity and gas with at least 50,000 end customers connected to their networks at 31 December two years before the year of obligation. Hera S.p.A. is an obligee as both a gas distributor and distributor of electricity.

The Group's production of White Certificates has pursued, in the last three years, preestablished objectives through operations for residential customers and on proprietary plants, or through operations commissioned by industrial customers and carried out at their premises. The Group also promotes operations carried out by third parties with agreements that involve the splitting of the economic contribution deriving from the certificates and, finally, procures the unavailable quota of certificates from the market.

### **Energy saving initiatives**

The energy savings initiatives promoted by the Group continue and gain strength, in two main areas:

- the development of collaborations with various partners to whom Hera has made its know-how available to identify and plan energy optimisation measures specifically concerning the industrial sector. These are aimed at obtaining incentives (White Certificates) through the recovery of significant portions of thermal energy from processes or the use of renewable sources. This activity has seen an increase in the number of projects approved by the Electricity and Gas Authority. The projects approved in 2011 alone will be able to generate additional savings of over 25,000 toe in their useful lifetimes (5 years);
- development of new interventions on the Group's buildings and plants aimed at rationalising the end use of energy.

2011 stood out for the consolidation of the initiatives identified the previous year, particularly in the water cycle and in the waste-to-energy sector.

The main measures implemented in 2011 were:

- in terms of district heating, the entry into operation of the new Bufalini cogeneration plant in Cesena and the plant that serves the 3rd PEEP district of Modena, which will make it possible to produce high efficiency thermal energy in place of gas boilers. In the meantime, the extension of the Imola network continues in order to increase the amount of thermal energy recovery at the combined cycle plant;
- the improved efficiency of public lighting systems through the replacement of incandescent traffic lights with LED technology, and above all the use of remote management and the introduction of sodium vapour lamps and high efficiency power supplies;
- the efficiency upgrading of the electric motor controls with inverters and the installation of new electric motors with class 1 efficiency.

The various project carried out include a number of interventions by industrial partners, aimed mainly at improving energy efficiency in order to recover thermal energy and improve the efficiency of the apparatus. The development of the industrial cogeneration promoted by Hera Comm via energy service contracts continues, despite the regulatory uncertainty that characterised 2011.

In 2011 energy class certification was also obtained for all main buildings not used for production purposes: 18 buildings owned and 14 rented properties.

### **Public lighting system**

Hera Luce is the number two operator in Italy in this area. It manages 296,165 light points (-12% compared to 2010, following the termination of the service in 5 municipalities, including the Municipality of Bologna, partially offset by the acquisition of the service by 3 municipalities) and ensures the efficiency of the public lighting service in 59 municipalities in the provinces of Bologna, Ferrara, Florence, Forli-Cesena, Modena, Pesaro and Urbino, Ravenna, Perugia, Piacenza, Milan and Rimini; for 26 of these municipalities, it also manages traffic light installations.

Hera's management of public lighting focuses on improving the service by reducing consumption levels by using new remotely controlled, electronic lighting fixtures. These systems reduce energy consumption, control lighting strength based on needs and

guarantee timely maintenance. The time required to replace burnt-out lamps was, on average, three days in 2011.

### Hera Luce energy efficiency initiatives

For the local communities, public lighting is an important opportunity to make economic savings, improve energy efficiency and reduce environmental impact. To support the local councils that are most attentive to these goals Hera Luce has undertaken three initiatives:

- it has defined an energy certification system for lighting fixtures and public lighting systems that producers can use and that buyers can take advantage of to enhance the environmental aspects of their purchases;
- it has signed a protocol, the first of its type in Italy, aimed at the light pollution abatement and energy optimisation of the lighting solutions adopted, signed with the Unione Astrofili Italiana and the Italian section of the International Dark Sky Association;
- it has evaluated technological solutions that make it possible to optimise the management and maintenance of lighting fixtures.

Hera Luce manages around 6,700 traffic lights. The replacement of incandescent traffic lights with LED technology continues; after Modena (2,250 traffic lights), the replacement of the 750 traffic lights in Ferrara is almost complete. Compared to traditional light bulbs, LED bulbs consume up to 75% less electricity and last 25 times longer (50,000 hours compared to 2,000), they require less maintenance and guarantee better visibility under critical conditions. The modernisation of the traffic light installations in Modena in 2009 involved 131 plants, for a total of approximately 2,250 traffic lights. The saving of 286 toe/year will allow for the avoidance of emissions of 874.5 metric tons of CO<sub>2</sub> into the environment. The modernisation of the traffic light system in Ferrara will result in savings of 95 toe/year and will prevent the emission of 291 metric tons of CO<sub>2</sub> into the environment. Experiments are currently taking place with new apparatus that also uses LED technology for public lighting.

### **Production and distribution of water**

The Hera Group's water supply sources comprise underground water, surface water and, to a lesser extent, springs. In the Romagna area almost all distributed water has been purchased wholesale from Romagna Acque – Società delle Fonti, which manages the main water production plants and the adduction networks in the provinces of Forlì-Cesena, Ravenna and Rimini.

The purification processes vary in complexity depending on the quality of the source water: process steps include chemical and physical water drive, usually adopted for surface water, as well as simpler treatments of filtration and disinfection (in some cases, only disinfection) applied to water coming from deep wells and springs that already have good characteristics.

The treatments carried out guarantee that the distributed product has suitable chemical physical and microbiological features for human consumption, in constant observance of the limits laid down by current legislation.

Water introduced onto the network (breakdown by source)

	2009		2010		2011	
	thousands of m <sup>3</sup>	%	thousands of m <sup>3</sup>	%	thousands of m <sup>3</sup>	%
Groundwater	152,946	44.4%	135,806	39.8%	147,917	42.9%
Surface water	165,171	47.9%	178,414	52.2%	171,487	49.8%
Springs and minor sources	26,474	7.7%	27,259	8.0%	25,069	7.3%
Total	344,591	100.0%	341,479	100.0%	344,473	100.0%

Figures include both the civil and industrial aqueducts (the latter being part of the Territorial Operating Structures of Forlì-Cesena, Imola-Faenza, Modena and Ravenna and comprising around 5% of the total).

The data show a slight increase in the total volume of water introduced into the network (just under 1% compared to 2010), mainly in the Romagna area as a result of the climatic conditions. The climatic conditions, characterised by very scarce rainfall, led to a reduction in the availability of surface water, which had to be offset with the use of groundwater.

The 2009 figure above is influenced by the installation of new metres at supply sources belonging to Marche Multiservizi, with a significant reduction in estimated volumes compared to the previous year.

In particular, the provinces of Forlì-Cesena, Ravenna and Rimini had to deal with a genuine water emergency (as declared by Decree of the President of the Region of Emilia-Romagna 214/2011, which announced a state of emergency), which led to a notable reduction in the volumes supplied by the Aqueduct of Romagna (Ridracoli reservoir). The high number of network requests necessitated a significant exploitation of underground water reserves, and the aquifiers of Rimini in particular.

In Bologna, the construction of the Reno-Setta water connection led to a 21% reduction in the amount of groundwater collected in 2010 (approx. 10 million m3) as more surface water was collected. This variation is also reflected in the overall Group figures reported in the table.

### Further water quality guarantees in Pontelagoscuro

In December 2011 the new clariflocculator was opened at the purification plant in Pontelagoscuro (an investment of approx. 0.9 million euro). This is designed to improve the quality and safety of the purification process for the 11 municipalities served.

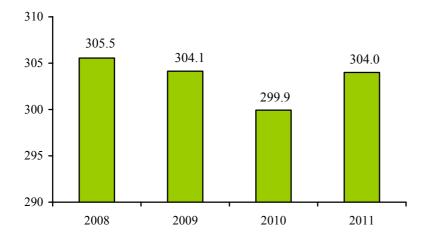
Water introduced into the network by source and area (2011)

thousands of m <sup>3</sup>	Bologna TOS area	Ferrara TOS area	Forli- Cesena TOS area	Imola- Faenza TOS area	Modena TOS area	Ravenna TOS area	Rimini TOS area	Marche Multiservizi Area
Groundwater	40,380	7,280	11,530	8,654	43,708	125	28,301	7,939
of which purchased	0	0	11,530	0	0	125	28,075	0
Surface water	47,387	22,040	21,603	14,919	490	33,501	11,722	19,826
of which purchased	0	0	21,284	12,163	0	33,501	11,283	346
Springs and minor sources	4,328	16	2,620	1,106	8,160	0	1,971	6,868
of which _purchased	~	16	2,620	0	613	0	147	0
Total	92,094	29,336	35,753	24,679	52,359	33,626	41,994	34,633

Figures include both the civil and industrial aqueducts (the latter being part of the Territorial Operating Structures of Forlì-Cesena, Imola-Faenza, and Ravenna and comprising around 5% of the total).

Considering just the civil aqueduct, the water introduced onto the network in the civil aqueducts in the seven TOS (excluding Marche Multiservizi), went from 305.5 million m3 in 2008 to 304.0 in 2011 (-0.5%). In 2008 (on a like-for-like basis) there was a 1.5% reduction compared with the previous year (equivalent to around 4 million m3).

### Water introduced onto the network in the civil aqueduct (millions of cubic metres)



Data do not include Marche Multiservizi.

The distribution network (including Marche Multiservizi) extends for over 31,000 kilometres and, where possible, is interconnected and linked in order to guarantee supply continuity also in cases of temporary service interruptions regarding one or more pipes.

Water network components

%	2009	2010	2011
Plastic	52.9%	53.5%	53.8%
Asbestos cement	22.2%	21.6%	21.3%
Steel	17.7%	17.3%	17.1%
Cast iron	6.0%	6.6%	6.6%
Other materials	1.1%	1.1%	1.1%
Total	100.0%	100.0%	100.0%

The composition of the water network in terms of material components shows a slight decrease in asbestos cement because of the use of different materials in the networks subject to extraordinary maintenance and in the new networks.

### What is meant by non-invoiced water

The percentage of non-invoiced water compared to water introduced onto the network is related to physical or real losses (due to breakage of pipes or hydraulic equipment, etc.) or procedural or apparent losses (meter errors, errors in estimated presumed consumption as at 31 December, unrecorded internal consumption, illicit consumption). The latter losses result in water which is effectively delivered to the final customer but is not recorded or billed.

Until 2006, network losses were calculated as the difference between water introduced into the water system during the year and the water accounted for as supplied to customers during the same period The latter figure was estimated at 31 December of each year based on customers' historical consumption, as it is not possible to carry out a single reading of all metres as at 31 December. This estimate was then supplemented so as to take into account the correct charge of the water sold to customers as at 31 December in the previous year calculated after the reading of all the meters.

On the one hand, this calculation method permitted perfect consistency with the revenues recorded in the statutory financial statements for each year, but on the other hand it was the result of a misalignment between the figure relating to the billed water and that introduced into the system each year.

Since 2007 the figure of the networks losses has been calculated in a more accurate manner allocating the adjustments deriving from the meter reading in the pertinent year and thereby guaranteeing perfect comparability between water sold and the related amounts introduced into the system each year. It goes without saying that it is possible to calculate the final figure for the year using this new approach only around 4-6 months after the close of the financial statements, or after all the meters have been read. For this reason the table below does not include the provisional figures for 2011.

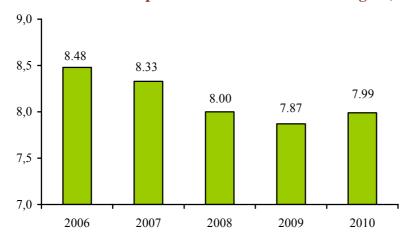
Non-invoiced water (physical and administrative losses from the domestic water system)

%	2006	2007	2008	2009	2010
Percentage of non-invoiced water (Hera Group)	25.4%	25.3%	25.0%	25.8%	26.7%
Percentage of non-invoiced water (Hera Group excluding Marche Multiservizi)	25.4%	25.3%	25.0%	24.8%	25.8%

The figures show that the network losses for 2010 were 26.7% compared with the national average that same year of 33.7% (Blue Book published by Utilitatis in 2011). One of the reasons for the slight increase in the figures between 2009 and 2010 was the extraordinary losses caused by the exceptional period of cold weather between late 2009 and early 2010: in the Bologna area, for example, in which the greatest increase in non-invoiced water is concentrated, over 50% of the approx. 7,500 meters were broken by the big freeze.

The figure of non-invoiced water per kilometre of network is also reported, as it is better representative of the effectiveness and efficiency of the distribution system, as well as more easily useable to make comparisons with other companies. In 2010 in the seven TOS where Hera manages the water service, non-invoiced water came to 7.99 cubic metres per kilometre a day (including Marche Multiservizi this figure rises to 7.93), with a reduction of 5.7% between 2010 and 2006.

### Non-invoiced water per kilometre of network managed (m3/km/day)



Data do not include Marche Multiservizi.

In 2010, further progress was made in dividing the network into districts: the Riccione district was activated and works in the Rimini district were completed. In the Bologna TOS activities were finalised to equip 20 points with a magnetic flow meter and two pressure transducers (upstream and downstream of the reduction station).

At the TOS of Ferrara and Modena, the process of dividing the network into districts continues, as well as detailed pressure reduction and the use of mathematical models

and technological tools for loss detection. In 2011 the Ferrara TOS completed the planned district metering operations, which cover 80% of the entire network.

The progress in the process of dividing the network into districts, as well as detailed pressure reduction and the use of the most advanced mathematical models and cutting-edge technical tools for loss detection, in addition to the careful monitoring of the night-time flow rates from the collection containers, will enable all of the territories managed by the Hera Group to reduce the amount of non-invoiced water. The installation of magnetic flow gauges on the points not yet monitored and replacement of old gauges with new magnetic flow gauges is continuing, in order to guarantee water balances which are increasingly precise and detailed.

The Hera Group continues to work diligently to reduce and monitor water leaks, with the most advanced technologies and methodologies from the world's foremost authority on leaks: International Water Association (IWA).

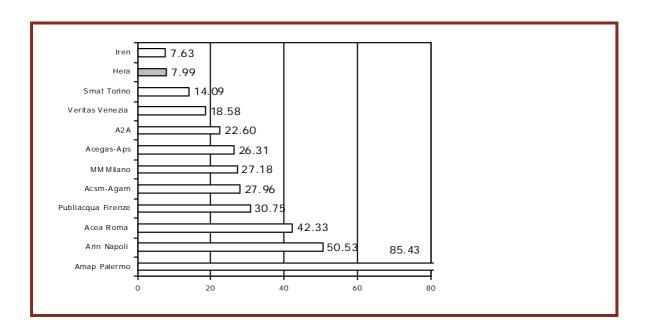
In 2011 an applied research project was launched with the aim of fine-tuning the water leak measurement and appraisal systems in the water service networks managed by Hera and testing the application of the methodologies for the evaluation and control of water leaks proposed by the International Water Association (IWA).

This activity is carried out with the support of the Interdepartmental Centre for Industrial Building Research and Constructions (Fluid Dynamics for Energy and Environmental Applications department) of the University of Bologna. In 2011 the evaluation and appraisal criteria used to account for water service leaks was defined pursuant to MD 99/97, criteria that will be applied for the first time in 2012 during the reporting of the 2011 figures.

2012 will see the conclusion of the evaluations related to the possibility, on the basis of available network topological and hydraulic data, of applying the IWA methodology, with particular reference to the calculation of concise leakage indicators, to a series of water network infrastructures, interconnected in various ways and provincial in size, highlighting their potential, limits and critical features. If the conclusions are positive, the possibility of practically applying this methodology, at least for the principal water systems managed by the Group, will be evaluated.

#### Non-invoiced water in the main Italian utility companies

This table compares the main Italian utility companies in terms of non-invoiced water by kilometre of network in 2010. The longer the network managed, the more difficult it is to control physical losses. Therefore, to compare different companies, the network length should be taken into consideration. Thanks to the contained losses and the vast network it manages, Hera came second among the twelve companies in the study (7.9 cubic metres per kilometre per day).



#### Water consumption

In 2011, 3 million cubic metres of water was consumed at Hera plants and sites. Consumption was mainly attributed to the waste disposal plants (2.4 million cubic metres, of which 1.2 million in waste-to-energy plants) and cogeneration plants (459,000 cubic metres, of which 367,000 at the Imola plant). 154,000 cubic metres was consumed in the offices.

In EMAS-certified plants, water consumption came to 1.7 million cubic metres. In some plants, part of this water is reused within the production cycle. During 2011, reused water accounted for around 28% of total water consumed.

Dry fume purification has been adopted in the Group's new waste-to-energy plants, which reduces water consumption as compared to plants using moist fume purification systems. For the Modena plant, for example, with the start up of the fourth line, water consumption dropped from 176,000 to 28,000 cubic metres. In the new waste-to-energy plants, water consumption is mainly due to diluting ammonia solution used in the nitric oxide abatement plants, the boiler drains, cooling samplers and putting out burning waste. Wastewater is treated in chemical-physical plants located, in almost all cases, in the vicinity of the waste-to-energy plant.

In the cogeneration plant in Imola, water consumption for the evaporative cooling tower came to 299,000 cubic metres compared with the 300,000 cubic metres authorised in 2011 for this purpose.

# Wastewater purification quality

In 2011, Hera managed sewage and wastewater purification services in 227 municipalities (of which 55 via Marche Multiservizi).

The sewage system managed by the company (excluding Marche Multiservizi) is approximately 14,135 kilometres long and is mixed (about 59% of the total). The length of the sewage system has increased by 2% following the drainage operations carried out (in 2011, 6,100 inhabitant equivalents were connected to the sewage system while work

to connect another 1,900 inhabitant equivalents is ongoing). In 2012 another 17,000 inhabitant equivalents are expected to be connected. It is worth noting that while the sewage system has been extended, the length of the mixed network has been reduced (by 33 kilometres) because of the separation operations carried out in some areas.

Once again excluding Marche Multiservizi and considering only areas with over 2,000 inhabitant equivalents, in 2011 the sewage system covered 99% of the requirements in the territories (expressed as inhabitant equivalents, meaning the sum of resident inhabitants, production users transformed into inhabitant equivalents and presence due to tourism).

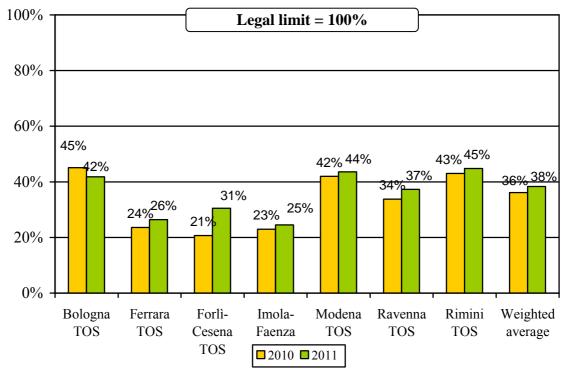
# The Technical Round Table for the separation of the network and the Seawater Protection Plan

Hera participated in the Technical Round table of the Municipality of Rimini for the separation of the city's sewage systems. The related Plan was presented in early 2011: the operation complies with the European Directive that, by 2016, plans to reduce the pollutant load produced by waste water floodways in the networks by 70%. In December 2011 the local council approved the Seawater Protection Plan presented by Hera which, in the mid-term, would make it possible to completely close 70% of the pipes that discharge sewage into the sea, significantly reducing the frequency with which the others are opened.

Wastewater purification is carried out through 848 wastewater treatment plants, of which 15 have a capacity of over 100,000 inhabitant equivalents and 53 have a capacity of over 10,000 inhabitant equivalents. Considering areas with a nominal capacity of over 2,000 inhabitant equivalents, the purification service covers, excluding Marche Multiservizi, 99% of inhabitant equivalents in the area.

The Hera Group treated a total of approximately 293 million cubic metres of wastewater in 2011 compared to 341 million in 2010, a decrease of 14% caused by the reduction in the flow of rainwater.





The indicator relates to the plants with more than 10,000 inhabitant equivalents (the volumes treated in these plants equate to 81% of the total wastewater treated) and is calculated on the basis of the ratio between the concentration gauged for BOD5, COD, TSS, ammoniac nitrogen, phosphorus and total nitrogen and the related maximum concentrations permitted by Legislative Decree no. 152/2006 as amended. Bologna's plant limits are different from the regulation: ammonia nitrogen 25 mg/l; BOD5 40 mg/l; COD 160 mg/l; TSS 80 mg/l. For the Imola plant, where there is a final lagoon, the TSS limit is 150 mg/l.

The efficiency in removing pollutants in compliance with the legal limits, as expressed by the indicator in the graphic, is related to the purification capacity of the plant and the technologies adopted. The graphic shows that there was a slight reduction in quality in 2011 as a result of the ongoing adjustment works in some of the principal plants (mainly regarding the denitrification phase, which represents the most delicate phase of the biological purification process).

In 2011 the modernisation works at the Bologna, Bondeno (Ferrara), Cona (Ferrara), Formellino Faenza, Castel Guelfo (Bologna), Castelnuovo Rangone (Modena) and Savignano plants was concluded, the work at the Argenta (Ferrara), Forlì, Lugo (Ravenna), Granarolo (Bologna), San Giorgio di Piano (Bologna) and San Matteo della Decima (Bologna) plants continued, and modernisation work began at the Riccione plant.

Below are details on some of the work carried out in 2011.

- At the Bologna treatment plant (900,000 IE) the works regarding the denitrification section, aimed mainly at improving the removal of nitrogen, were concluded. The work was concluded at the end of 2011 and its effects will be fully in evidence in 2012.
- The work at the Bondeno (Ferrara) plant (10,000 IE) concluded in December 2011 while the Cona (Ferrara) plant was activated in June 2011 with an increase in capacity from 1,000 IE to 4,000 IE.

- A disinfection sector was set up at the Formellino Faenza plant (99,000 IE). Comparing the performances of the plant before and after the operation (October-December 2011 and 2010), the quality of outgoing water has improved by 19% in terms of COD and 5% in terms of BOD5.
- In the second half of 2011 the Castel Guelfo plant (Bologna) went from 3,500 to 6,000 inhabitant equivalents and vastly improved its treatment performances: particular emphasis should be placed on the improvement of the quality of sewage in terms of the removal of organic substances, ammonia nitrogen and suspended solids. Comparing the figures for the period October-December 2011 with those of 2010, we can see that COD went from 52.8 to 15.5 mg/l (-71%), BOD5 went from 24.2 to 7.1 mg/l (-71%), total suspended solids went from 31.5 to 8.7 mg/l (-72%) and ammonia nitrogen went from 14 to 1 mg/l (-92%).
- In the Castelnuovo Rangone (Modena) (44,000 IE) and Savignano (Modena) plants (8,000 IE) the ventilation systems were replaced with the installation of microporous plates driven by compressors: as a result of these operations energy consumption fell by 18% and 38% respectively.
- At the Forli treatment plant (250,000 IE), important structural adjustment works regarding the denitrification sector and other key sites were completed; the metal structural and electromechanic works are still to be carried out.
- Important structural adjustment work has been carried out at the Lugo plant (270,000 IE): in 2011 an entire oxidative sector was excluded from the process for worksite reasons. At the Riccione plant (180,000 IE) significant structural adjustment work began in 2011.

## For "organic" and odourless purification

On 16 April 2011 the Bacciolino di Mercato Saraceno (Forlì-Cesena) plant was opened, one of the most avant-garde in Italy. The treatment plant serves 15,000 inhabitant equivalents but can be further powered to serve 30,000. The plant organically purifies the water by passing the water flow through a bed of polystyrene foam marbles which, thanks to their highly elevated surface, notably increase the purification performance.

The following is scheduled for 2012:

- the completion of modernisation works in the treatment plants of Argenta (Ferrara), Forlì, Lugo (Ravenna), Granarolo (Bologna), Riccione (Rimini), San Giorgio di Piano (Bologna) and San Matteo della Decima (Bologna) with an overall capacity of 754,000 inhabitant equivalents;
- the start-up of work in the Cattolica (Rimini), Cesenatico (Forlì-Cesena) and Rimini S. Giustina (Rimini) treatment plants with an overall capacity of 460,000 inhabitant equivalents;
- the investments foreseen for the drainage of the sewage network without purified sewage into the wastewater treatment plants for a total of 17,000 inhabitant equivalents.

This work will see 32 urban areas, corresponding to approx. 1.4 million inhabitant equivalents, brought into line with legislation.

Average annual concentrations at the main plants (2011)

			_		Average amusi concentrations at the main plants (2011)							
mg/l	Body of water receiving the	COD	BOD5	TSS (limit:	Ammoniac	Volumes						
	purified wastewater	(limit:	(limit:	35 mg/l)	nitrogen	treated						
		125	25 mg/l)		(limit: 15	(thousand						
		mg/l)			mg/l)	s of m <sup>3</sup> )						
IDAR (Bologna)	Navile canal	41.8	15.7	16.3	6.0	40,951						
Anzola (Bologna)	Scolo Sanguinettola Bassa or Scolo Lavinello	23.6	5.6	8.2	1.0	1,355						
Caldarara (Dalagna)	Scolo Dosolo	38.3	9.3	10.4	7.8	1 207						
Calderara (Bologna)						1,397						
Ozzano (Bologna)	Rio Marzano	30.1	7.2	9.2	1.5	531						
S. S. Giovanni (Bologna)	River Reno	26.7	6.5	10.5	3.2	1,050						
Gramicia (Ferrara)	Po di Volano	39.1	7.2	12.8	1.8	19,930						
Cesena (Forlì-Cesena)	Rio Granarolo	17.8	5.1	6.8	0.6	6,654						
Cesenatico (Forlì-Cesena)	Scolo Madonnina	56.7	5.0	22.9	4.3	3,425						
Forlì (Forlì-Cesena)	Scolo Cerchia	24.7	5.1	10.5	1.7	13,684						
Savignano (Forlì-Cesena)	River Rubicone	25.5	5.1	9.9	4.4	6,063						
Faenza Formellino	River Lamone	36.2	5.6	11.2	1.4	6,713						
(Ravenna)						The state of the s						
Imola Santerno (Bologna)	River Santerno	24.4	5.0	40.4	1.1	7043						
Modena	Naviglio Canal	27.0	6.1	14.5	0.8	36,419						
Ravenna	Cupa and Scolo Fagiolo Consortium canal	22.0	2.8	7.2	1.3	15,832						
Alfonsine (Ravenna)	Scolo Sabbioni	27.8	3.0	8.8	1.3	1,571						
Bagnacavallo (Ravenna)	Scolo Cappuccine	22.6	2.6	7.4	0.6	1,185						
Cervia (Ravenna)	Cupa Consortium canal	16.0	2.7	4.6	0.7	5,194						
Lido di Classe (Ravenna)	Pergami Canal	11.5	2.7	5.6	0.9	905						
Lugo (Ravenna)	Scolo Arginello	39.8	5.7	10.1	3.8	7,065						
Marina di Ravenna	Scolo Piombone	14.9	2.5	5.4	0.5	1,447						
(Ravenna)												
Russi (Ravenna)	Scolo Pisinello	16.2	2.6	4.0	0.3	1,104						
Rimini Marecchiese	River Marecchia	21.1	4.7	8.8	3.6	12,977						
Rimini S. Giustina	River Marecchia	28.4	5.0	9.7	1.9	15,200						
Riccione (Rimini)	Rio Marano	29.7	5.6	10.0	2.6	6,811						
Cattolica (Rimini)	Torrente Ventina	27.4	4.9	13.2	2.6	6,379						
Bellaria Igea Marina (Rimini)	River Uso	21.7	4.8	8.2	1.7	2,812						
Pesaro Borgheria (Pesaro	River Foglia	34.1	6.8	13.6	0.4	6,435						
Urbino)		J⊤.1	0.0	15.0	0.7	0,433						
Total volume treated						230,130						

The volume treated in the 27 plants indicated in the table equates to 78% of the total wastewater treated. Bologna's plant limits are different from the regulation: ammonia nitrogen 25 mg/l; BOD5 40 mg/l; COD 160 mg/l; TSS 80 mg/l. For the Imola plant, where there is a final lagoon, the TSS limit is 150 mg/l. For the Forlì-Cesena TOS the calculation does not include total nitrogen.

For the Group's 27 main purification plants (selected from those with a nominal capacity exceeding 10,000 inhabitant equivalents) the table sets forth the average outflowing concentrations of the most representative parameters, expressed in terms of COD, BOD5, TSS and ammoniac nitrogen.

The concentrations of the sewage parameters are in line with those of the previous years, with the exception of the ammonia nitrogen identified in the plants of Calderara (Bologna), Cesenatico (Forlì-Cesena), Formellino (Ravenna) and Lugo (Ravenna), where extraordinary events took place, and Riccione, where structural adjustment works are taking place.

Purification treatment sludge is considered special waste and must be managed according to Legislative Decree no. 152/2006. As regards the possibility of recovering part of the agricultural sludge, the reference regulation is Legislative Decree no. 99/1992; specific regulations for the Region of Emilia-Romagna are contained in resolution no. 2773/2004.

In 2011, the purification process produced about 42 kg of sludge per inhabitant equivalent served (the figure refers to the quantity of sludge disposed with an average dryness grade on the order of 18-28% and refers to areas with over 2,000 inhabitant equivalents).

The sludge reused directly in agriculture was almost 2% of the total, in line with 2010, with characteristics and management methods that complied with relevant national and regional legislation. The remaining sludge produced was managed through dedicated incineration (approx. 30,000 metric tons), transfer to landfills (approx. 65,000 metric tons) and indirect agronomic reuse, following composting (60,000 metric tons).

#### **Constructed wetlands**

Hera manages eight constructed wetlands plants of small or medium-small capacity in the provinces of Bologna, Ferrara, Florence, Forlì-Cesena, Rimini and Ravenna: some are secondary biological treatment plants downstream of primary sedimentation, others are third party treatments used for final refinement. The constructed wetlands process is a natural process for the treatment of polluted waters based on the exploitation of the soil-vegetation system as a natural filter for the purification of water, and is made up of a system of biological ponds and of macrophytic vegetation. This kind of treatment also contributes to the reclamation of borderline areas, creating natural environments and landscapes that are pleasing to the eye, and often chosen as refuges for various species of bird, amphibian and reptile. In these areas, it is therefore also possible to organise educational tours to observe specific animal and vegetable species typical of wetlands.

# **Atmospheric emissions**

# Atmospheric emissions generated by waste-to-energy plants

Every Hera Group waste-to-energy plant is equipped with fume purification and process and emission control systems, designed and produced in order to attain:

- elevated fume purification performances in all process conditions;
- elevated management versatility;
- elevated reliability of emission control systems.

In order to meet these goals, new plants and plants undergoing renovation are equipped with the following systems:

- double reaction and filtration system to lower the concentrations of particulates, hydrochloric acid, hydrofluoric acid, sulphurous dioxide, heavy metals, dioxins and furans and aromatic polycyclic hydrocarbons (the Modena plant has a bag filter and an electrostatic precipitator);
- double reaction system (catalytic and non-catalytic) to reduce concentrations of nitric oxides;
- double fume monitoring system for process control (SMP): the two systems measure the concentrations of the main pollutants emanating from the oven and downstream of the first reaction and filtration phase, on the basis of which a calculation is made of the volume of reactants required to ensure purification levels that guarantee respect for legal emission limits and which are, on average, 80-90% inferior to these;
- continuous double monitoring system for chimney emissions: one as a reserve for the other in order to guarantee the continuity of the analysis of concentrations in atmospheric emissions.

The possibility of using double purification and monitoring systems in series (in parallel as regards chimney monitoring) allows the above objectives to be successfully pursued. In addition to the aforementioned activities, as regards the monitoring of emissions and environmental impact, the following operations are carried out on an annual basis:

- timely controls of the chimneys, at a frequency fixed by the Integrated Environmental Authorisation, for those parameters which cannot be continuously monitored, resorting to certified workshops;
- controls on soil fallout of the pollutants: through external monitoring programmes in collaboration with the University and research agencies, deposition analyses are performed on soil, ground and vegetation etc., in order to ascertain that the emissions, in addition to being within the legally established limits, does not have any significant impact on the surrounding environment.

#### Verification of Ferrara waste-to-energy plant emissions

As established by the Integrated Environmental Authorisation for the Ferrara waste-toenergy plant, Hera is enacting, with the scientific coordination of the CNR of Rome, the environmental and health monitoring protocol defined by Arpa, Ausl and the Province of Ferrara

The studies on soils, mutagenesis and air quality were transmitted to the relevant bodies and examined at a technical table promoted by Hera in January 2012: the meeting was attended by the Province, Arpa, Ausl, CNR and Università La Sapienza.

The studies on mutagenesis did not highlight significant differences between the mutagenicity induced in the location close to the plant and that of the town property. In the soil a slight correlation between the concentration of micropollutants and the distance from the emitting source was discovered, albeit with minimal concentrations, far below the limits indicated in the laws in force. The correlation between the concentration of metals and the distance from the plant chimney has not been verified: the presence of metals in the earth therefore seems to be related to the structure of the soil, which is typical of the natural make-up of the river sediments of the Po.

From the reports on the monitoring of air quality it emerges that the concentrations of pollutants are consistent with those expected for a sub-urban type area in a climatically unfavourable zone such as the Po Valley where there is typically poor atmospheric mixing, a phenomenon that tends to make the pollutants emitted uniform in terms of space.

Atmospheric emissions generated by waste-to-energy plants

t	2009	2010	2011
Particulates	3.3	4.7	5.8
Hydrochloric acid	3.6	2.9	3.5
Nitric oxides	413.8	310.7	283.7
Sulphur oxides	5.0	3.0	4.1
Carbon monoxide	57.0	53.2	52.1
Hydrofluoric acid	0.2	0.1	0.2
Total Organic Carbon	7.0	6.1	4.1
Waste treated in plants (t)	734,492	800,576	819,341
Net electricity produced (MWh)	405,714	436,863	466,294
Thermal energy produced (MWh)	70,446	88,755	118,345

The data are calculated using continuous measurement systems which are subject to the approval of the supervisory bodies at the moment of authorisation for operation of the plant. The procedures used by the

single plant systems for collecting and calculating the volume of substances emitted are not completely standardised.

The analysis of mass flows shows the substantial stability of the quantities of pollutants emitted by Hera Group waste-to-energy plants. One apparent exception is the Modena plant where there was an increase in the quantities of pollutants emitted into the atmosphere which, in reality, is not determined by a downturn in the performance of the fume purification system but rather the increase in the hours of functioning as a result of the greater regularity acquired by the new line 4 and therefore the amount of waste treated. For almost all of the plants there was an increase in the amount of electricity produced and sold to the national grid. For Bologna, Ferrara and Forlì, in 2011 the plants connected to the district heating network recorded an increase in the amount of thermal energy produced.

In the three years under consideration, there has been a continuing downward trend in total emissions of hydrochloric acid (-4%), sulphur oxides (-19%), nitric oxides (-31%) and Total Organic Carbon (-42%), and this despite the 12% increase in treated waste. For hydrofluoric acid the increase (+9%) is exclusively linked with the increase in treated waste. For the particulates, the worsening was partly due to the particle abatement system in the new line of the Modena plant (very high yields and a system foreseen by the BAT, the Best Available Techniques at European level) and partly down to the increase in waste treated there: average concentrations recorded in 2011 were 72% below the legal limits. In addition, in 2011 there were problems with a particulate measuring instrument at the Ravenna plant, resolved with major maintenance work.

With regard to pollutants not monitored continuously, total emissions can be estimated on the basis of the results of analysis performed during the year. Compared to 2009, in 2011 there was a 69% reduction in dioxins, a 59% reduction in aromatic polycyclic hydrocarbons and a 21% reduction in metals. In 2011, 121 kilograms of metals (155 in 2009) were emitted, along with 0.1 kilograms of aromatic polycyclic hydrocarbons (0.3 in 2009) and 16.3 milligrams of dioxins and furans (52.1 in 2009).

# Atmospheric emissions generated by waste-to-energy plants in relation to disposed waste

g/t	2009	2010	2011
Particulates	4.5	5.9	7.1
Hydrochloric acid	4.9	3.6	4.2
Nitric oxides	563	388	346
Sulphur oxides	6.8	3.7	5.0
Carbon monoxide	77.6	66.5	63.6
Hydrofluoric acid	0.3	0.1	0.2
Total Organic Carbon	9.5	7.7	4.9

The data are calculated using continuous measurement systems which are subject to the approval of the supervisory bodies at the moment of authorisation for operation of the plant. The procedures used by the single plant systems for collecting and calculating the volume of substances emitted are not completely standardised.

Comparing quantities of substances emitted into the atmosphere with quantities of disposed waste results in specific emissions for various pollutants. This indicator measures the efficiency of the exhaust abatement systems used in the plants, and highlights the technical improvements obtained with the new plants. For some

pollutants (sulphur oxides and total organic carbon), there has been a definite improvement.

On average, for the pollutants indicated in the table, the reduction compared with 2009 is 13%: The figures go from a -3% for hydrofluoric acid to a -39% for sulphur oxides. The particulate emission trend is influenced by the phenomena previously illustrated for the Modena and Ravenna plants.

Concentrations of atmospheric emissions from waste-to-energy plants (2011)

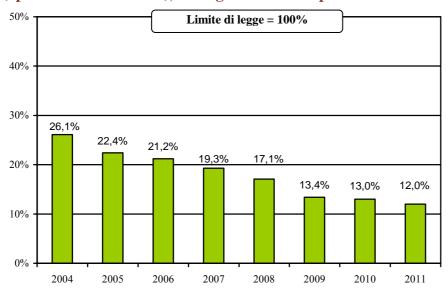
mg/Nm <sup>3</sup>	Legal limits Leg. Decree 133/2005	Bologna (lines 1 and 2)	Ferrara (lines 2 and 3)	Forlì (line 3)	Modena (line 4)	Ravenna (WDF)	Ravenna (special waste integrated platform)	Rimini (line 4)
Particulates	10	0.7	0.5	0.6	2.8	3.7	0.2	0.5
Hydrochloric acid	10	0.2	0.2	0.6	2.1	0.0	0.1	1.3
Nitric oxides	200	89.4	44.6	35.9	54.6	132.7	68.0	22.8
Sulphur oxides	50	1.1	0.1	0.3	0.8	0.2	3.2	0.7
Carbon monoxide	50	13.8	5.3	7.0	13.7	8.1	2.6	9.2
Hydrofluoric acid	1	0.0	0.1	0.1	0.1	0.2	0.1	0.0
Total Organic Carbon	10	1.0	0.6	0.5	0.2	2.0	0.4	0.5
Total metals	0.5	0,067	0,006	0.003	0,007	0.003	0.002	0.005
Aromatic polycyclic hydrocarbons	0.01	0.00002	0.00003	0.00001	0.00005	0.00001	0.00001	0.00002
Dioxins and furans (ng <sub>FTE</sub> /Nm <sup>3</sup> )	0.1	0.00221	0.00154	0.00201	0.00696	0.01630	0.00247	0.00222
Cadmium and Thallium	0.05	0.00170	0.00035	0.00053	0.00039	0.00038	0.00027	0.00039
Mercury	0.05	0.001	0.001	0.001	0.001	0.000	0.000	0.001

The legal limits refer to Legislative Decree no. 133/2005. For particulates, hydrochloric acid, nitric oxides, sulphur oxides, carbon monoxide, hydrofluoric acid, and total organic carbon, the values correspond to the average values measured in continuation and the limits correspond to daily averages. For all other components, the values correspond to the average of periodic measurements and limits refer to each individual measurement. In the new lines at Ferrara, Forlì, Rimini and Modena mercury levels are continuously measured.

The results of the emission measurements at the Hera Group waste-to-energy plants confirm that, being equipped with the best technologies available and run in the most efficient manner, these plant emit far lower levels of particulates, dioxins and furans, IPA and metals than permitted by emission limits. For dioxins and furans, the values recorded show that the concentrations emitted are a few hundredths of the regulatory limit. For the IPA the concentrations are just a few thousandths of the permitted limit. The measurements made to identify the metals shows concentrations well below the limits. Compared with the other parameters, subject to continuous monitoring, at plants equipped with the sulphur oxide catalytic abatement system (Bologna, Ferrara, Forlì, Modena and Rimini) the concentrations were not only well below the legal limits, but

also the limits established by local authorities, which are much more stringent than national regulations. There was a general improvement in the performance of the Modena and Rimini plants, opened more recently, where in 2011 there was a clear improvement in the combustion and fume purification processes.

Compliance of atmospheric waste-to-energy emissions with legally established limits in Legislative Decree no. 133/2005 – continuously monitored parameters (optimal values < 100%), average of the seven plants



The plant renovation process has resulted in a significant improvement in the abatement percentages of pollutant emissions: in January 2008 the two new waste-to-energy plant lines in Ferrara became fully operational, since early 2009 the new Forlì plant has been operational, in April 2010 the new line 4 of the Modena waste-to-energy plant became operational, and since October 2010 the new line 4 of the Rimini waste-to-energy plant has been operational. The chart above shows the trend in the parameters continuously monitored for the period 2004-2011. In 2011, the concentrations of the atmospheric emissions of waste-to-energy plants were, on average, 12% of the limit set by the law, compared to 26% in 2004. This means that in 2011, emissions were 88% lower than the allowed level while in 2004 this percentage was 74%.

#### **Operation transparency for the Hera Group waste-to-energy plants**

There has been no stop to Hera's initiatives to guarantee citizens maximum transparency and accessibility to their waste-to-energy plants.

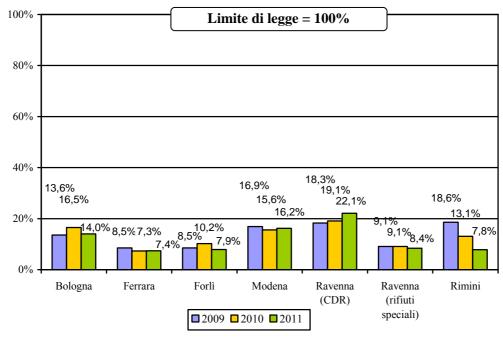
As already described in the chapter on the local community, since January 2011 the web channel dedicated to the waste-to-energy plants has included a calendar showing when guided tours of the plants are available and offering the chance to make bookings online. Special visitor routes are being completed which, through explanatory signs at the heart of the plants, illustrate how the various sections operate and enable even those without technical knowledge to understand how the plant works and how our operators manage their equipment. By the end of 2011 there were active visitor routes at the Bologna, Ferrara, Forlì and Modena plants: in 2012 a visitor route in Rimini will be constructed.

In 2011, 150 visits to the Group's waste-to-energy plants were made available online: the requests received were managed into 120 visits, 31 of which for school pupils and university students, for a total of almost 2,000 people.

In association with the local council and Circoscrizione 2, since the end of 2009 an information desk has been available at the Modena plant, upon appointment, every Tuesday afternoon from 4 pm to 7 pm. By heading to this desk, citizens can request and obtain information on the functioning of the waste-to-energy plant directly from technicians that work there every day. To book an appointment at the info desk all you need do is phone or send an email to the URP of Circoscrizione 2.

Furthermore, since 2006 a 'Comitato Consultivo della Comunità Locale' (Residential Advisory Board - RAB), comprising of citizens that live near the plant, has been active, meeting periodically with Hera representatives to gather information on the environmental impact of the waste-to-energy plant.

Compliance of atmospheric waste-to-energy emissions with legally established limits in Legislative Decree no. 133/2005 – continuously monitored parameters (optimal values < 100%), details per plant



Significant improvements in the results were obtained with the completion of new plants: in fact, the Ferrara and Forlì plants, started up in 2008, and the Rimini plant in October 2011 following the definitive shutdown of the old lines, recorded the best results. In the case of Modena the improvement is less evident mainly because of the different system for monitoring particulates. With the improvement of combustion, at this plant in 2011 there were improvements in nitric oxide and carbon monoxide emissions while other pollutants were contained with the improvement of the doses of reagents achieved following various analyses and experimentation with new types of activated carbon in order to find the best mixture for this type of plant.

# Atmospheric emissions from waste-to-energy treatment plants compared to authorisation limits – continuously monitored parameters (optimal values < 100%)

%	2009	2010	2011
Bologna (FEA) waste-to-energy plant	18.7%	22.0%	19.5%
Ferrara waste-to-energy plant	9.6%	8.2%	8.4%
Forlì waste-to-energy plant	16.2%	19.9%	16.4%
Modena waste-to-energy plant	24.3%	17.8%	17.7%
Ravenna waste-to-energy plant (special waste)	10.9%	10.9%	10.0%
Arithmetical average	16.0%	15.8%	14.4%

The Integrated Environmental Authorisations relating to the plants in Ferrara, Forlì, Rimini and Modena also provide for the continuous monitoring of mercury.

The same indicator was calculated for the five plants with authorisation limits that are more stringent than Italian regulations for 2011 (for the eight parameters monitored in continuation on average the limits established by the authorisations correspond to 77% of the limits laid down in Legislative Decree no. 133/2005); the data is displayed in the table above. The results are also excellent in this case: the concentrations are, on average, around 85% lower than the most restrictive limits. It is notable that the limits established by the individual authorisations are different depending on the plant, meaning that it is not possible to compare the performances of the single plants.

As such, the Hera Group plants continued to perform to an excellent level also in 2011. The Integrated Environmental Authorisations issued by the provinces authorise the functioning of the plants, imposing significant restrictions compared with the limits established by national legislation. From the reported figures it is clear that, overall, the status of emissions of all group plants is highly positive.

Relative to the parameters for which Legislative Decree 133/2005 does not require continual monitoring (total metals, aromatic polycyclic hydrocarbons, dioxins and furans, cadmium and thallium, and mercury), on all incinerators managed the Hera Group has carried out a total of 547 samples, in full compliance with the individual plant authorisations, a considerably higher number than the 105 provided for in national regulations, the 335 established by the IEA and the 432 carried out in 2010.

In 2011, as in previous years, Hera plants complied with the authorisation limits relative to amounts of waste treated, their type and, where present, their derivation. As regards the Modena plant, in 2011 the quantitative limit of special waste rose from 45,000 metric tons to 50,400 metric tons (until the new line 3 became operational).

#### Plant thermal power saturation percentage

%	2011
Bologna (FEA) waste-to-energy plant	100%
Ferrara waste-to-energy plant	83%
Forlì waste-to-energy plant	78%
Modena waste-to-energy plant	94%
Ravenna waste-to-energy plant	100%
Rimini waste-to-energy plant	100%
Average	93%

Given that in 2011 the Hera Group waste-to-energy plants treated quantities of waste substantially in line with the authorised quantities, and given the calorific value of this

waste, the saturation percentage of the thermal power was equal to 93%. This means that in 2011 the plants were used to 93% of their potential.

At the waste-to-energy plants methane is used in the start-up and shutdown phases and to support combustion if the calorific value of the treated waste is low: overall consumption in 2011 came to around 9 million m3. Containing methane consumption is one of the improvement goals of the Group's plants, a goal to pursue by reducing the number of unscheduled shutdowns and improving combustion processes through the standardisation of waste sent for treatment and the improvement of processes to regulate combustion air.

#### From the remote control of waste-to-energy plants to the plant supervision system

Since 2007, a station to supervise Hera's waste-to-energy treatment plants has been operating in Coriano (Ravenna); this is an eminent national innovation that transmits all operating information deriving from the various plants.

Since 2009 an innovative system for organising and using technical and managerial data has been developed. The system, created as a support tool for the operational management of the waste-to-energy plants, is now also operational at the plants of the "Landfill Supply Chain", making the main operational and management data available to Group technical and administrative staff. Through this system it is possible to guarantee the uniform and standardised management of the various treatment plants, enable the spread of managerial best practices in terms of energy production, optimising the treatment process and reducing environmental impact.

For the waste-to-energy plants the system acquires the main operating data in the field, puts them in historical order and makes them available to Herambiente technical staff using special tools, enabling the detailed technical analysis of the functioning of the plants, the real time monitoring of the various parts of the plant and the prevention of malfunctions and breakages.

# Atmospheric emissions generated by district heating

#### Atmospheric emissions generated by district heating

	•		
t	2009	2010	2011
Nitric oxides	128.0	125.1	106.4
Carbon dioxide	101,966	98,031	83,920

The data refer to the thermoelectric power and cogeneration stations that power district heating.

In 2011 emissions of nitric oxides and carbon dioxide fell by 14.9% and 14.5% respectively compared to 2010. This was a result of the temperatures recorded - on average 2011 was warmer than 2010 - and because of the greater use of heat produced from renewable and similar sources (geothermics, recovery of heat from waste-to-energy plants and cogeneration): the need for thermoelectric power stations fell, going from 44% in 2010 to 35% in 2011 (it was 61% in 2005).

In 2011, the district heating plants produced a total of 638 GWh of electricity and thermal energy. The ratio between emissions and the energy produced provides a measure of specific emissions. In 2011, 167 grams of nitric oxides were emitted for

each megawatt-hour of energy produced and 131 grams of carbon dioxide for every kilowatt-hour (11% less than in 2010 for both pollutants).

Making a positive contribution to the 2011 results was the entry into operation of the Modena cogeneration plants, whose heat production replaces that produced by boilers. In addition, the increases in heat drawn from the waste-to-energy plants of Ferrara and Bologna and Ferrara geothermics, in line with the expected production plans, resulted in an increase in the use of renewable and similar sources within the district heating systems.

# Atmospheric emissions generated by district heating (2011)

T	Nitric	Carbon
	oxides	dioxide
Bologna	74.3	59,186
Ferrara	9.4	7,471
Forlì-Cesena	12.1	8,886
Imola-Faenza	3.0	2,177
Modena	6.5	5,144
Ravenna	1.2	956
Total	106.4	83,820

#### Increasingly green district heating in Ferrara

Make the Ferrara district heating system one of the greenest on the planet thanks mainly to geothermics, i.e. the exploitation of the hot water naturally present in the subsoil. This is one of the main goals of the "Renewable Energies Hub" project launched by Hera, which in 2012 will undergo an authorisation process.

The project involves the development of district heating networks to the east of Ferrara, increasing the number of apartment equivalents served from the current 22,000 to 37,500, around 40% of homes in the city. The heart of the new system structure will be the "Renewable Energies Hub", with two new geothermal abstraction wells that will produce a capacity of 14 thermal megawatts.

Now with an integrated energy system that is at the cutting-edge in Europe, Ferrara will therefore take another step forward in the use of renewable sources for heating. The current geothermal network, which can introduce 179 GWht to the energy grid, is fuelled for over 80% by renewable sources. With the new hub 289 GWht of energy would be produced, of which 91% from renewable and recovery sources (163 GWht from geothermics, 99 GWht from waste-to-energy and 1 GWht from solar thermal).

## **Emissions of the Imola cogeneration plant**

In 2011 the climate was milder than in 2010 with less heat recovery as a result. This, in turn, meant a greater consumption of water. There was a partial functioning of the production units in the plant.

Atmospheric emissions from the Imola cogeneration plant

mg/Nm <sup>3</sup>	National limit	Authorised limit	2009	2010	2011
Nitric oxide (NO <sub>x</sub> )	60	15	8.7	7.7	7.7
Carbon monoxide (CO)	50	10	2.1	2.2	2.0
Ammonia slip (NH <sub>3</sub> )	not envisaged	2.5	0.2	0.1	0.1
Total Particulate Matter (TPM)	not envisaged	5	0.004	0.004	0.010
$PM_{10}$	not envisaged	3.5 (1 being quality objective)	0.07	0.15	0.15

The limits of authorised emissions refer to the decree of environmental compatibility issued by the Ministry for the Environment and Protection of Local Areas DEC/DAS/2006/00142 of 15/02/06 (only NO<sub>x</sub>, CO and NH<sub>3</sub>) and the Integrated Environmental Authorisation of the Province of Bologna of 11/04/07, reference no. 124043 as amended. The values correspond to the average values measured in continuation (for PM<sub>10</sub> the values correspond to the average of the 6 analyses carried out). The limits correspond to the hourly average (with the exception of PM<sub>10</sub>).

Specific emissions remain very low, nitric oxides, the most prevalent element in fumes, remain below 50% of the authorised concentration while carbon monoxide is at around 20% and particulates and ammonia are practically absent.

Water consumption came close to the authorised limits because of the particularly mild climate that generated less heat recovery for district heating: following recovery in the cooling tower, 299,154 cubic metres of water were consumed compared with 283,000 in 2010, while the IEA limit is 300,000 (in 2011, while in 2010 it was 350,000).

The two lines operated for 3,899 and 5,335 hours respectively.

#### New recognition for the Imola plant

At the 2011 European Emas Awards the Imola cogeneration plant, which underwent Emas registration in 2011, was a nominee in the large private organisations category, the only Italian representative among the 6 major European companies The Commission explained that their choice of Hera stemmed from the company's positive approach to involving its stakeholders and employees, with specific reference to the Residential Advisory Boards (RAB). National recognition came during the national Emas-Ecolabel EU forum in Rome on 12 December where the Ecolabel-Ecoaudit Committee awarded Hera a special prize for the "special commitment demonstrated towards involving stakeholders", again in reference to the Residential Advisory Boards (RAB).

# **Corporate vehicle fleet**

#### Fleet (No. of vehicles)

no.	2009	2010	2011
Diesel	1,869	1,884	1,904
Petrol	844	777	698
Methane	496	538	539
LPG	36	17	41
Electric powered	46	44	40
Total	3,291	3,260	3,222

Non-circulating vehicles being disposed of were not included.

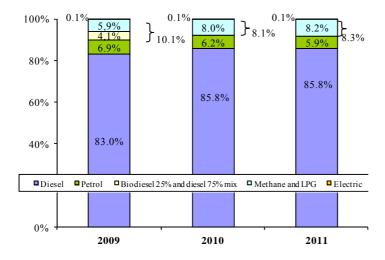
The Group confirmed its established strategy of streamlining the use of the vehicles, beginning with the purchase of technologically advanced vehicles powered with fuels with less environmental impact, to replace obsolete vehicles. Excluding Marche Multiservizi, in 2011, 195 vehicles were sold and 86 diesel vehicles, 23 LGP vehicles and 8 methane vehicles were registered, all of which compliant with the most recent legislation as regards emissions.

The technologies that have been adopted make the biodiesel used voluntarily by the Group up until 2009, unusable. Furthermore, the application of regulations that contain obligations for producers of diesel for the automotive industry to mix a minimum quantity of biodiesel into diesel has caused significant problems in terms of the market availability of biodiesel, forcing the Group to abandon its voluntary decision and adopt the standard mix pursuant to law. The Ministry of Economic Development Decree dated 25 January 2010 set the minimum quota for 2010 at 3.5%, for 2011 at 4% and for 2012 at 4.5%. A sanction system is also in force for producers, as provided for the by Ministry of Economic Development Decree no. 100 of 23 April 2008.

In 2011 a study was carried out with the University of Modena to identify the environmental impact of the various fuels available for the types of vehicles used by the Hera Group. The findings confirmed the suitability of the company's strategy.

In the next few years, as well as the replacement of diesel/petrol vehicles with vehicles that run on methane/LPG, next generation electric vehicles will be purchased in order to stimulate the target market, producing environmental benefits in the process.

#### Fuel consumed by vehicles



A comparison between the various types of fuel was made considering the primary energy present in the single fuels calculated using the GRI method.

In 2011 there was a fall in fuel consumption, -6.8% compared to 2010. The positive trend was also accentuated in 2011, compared to 2010, by the maintaining of the same amount of consumption stemming from methane-powered vehicles, as opposed to other vehicles that use fuels with a greater environmental impact. As detailed above with regard to biofuel, the amount of low environmental impact fuel consumption (calculated in terms of primary energy contained in the fuel expressed in GJ) fell in 2010 compared

with 2009, but increased slightly in 2011, coming to 8.2% of the total. Currently, the Hera Group uses 14 methane automatic waste compactors out of an overall total of 179. Excluding Marche Multiservizi, the average age of Hera S.p.A.'s fleet is 8.5 years.

## 

23%

2010

■2011 ■2006 - 2010 ■2001 - 2005 ■1996 - 2000 ■1993 - 1995 ■ Prima del 1993

# Breakdown of the vehicles by year of registration

Data do not include Marche Multiservizi. The classes into which the vehicles have been divided up refer to the year of registration and the European Directives (Euro 1, Euro 2, Euro 3, Euro 4, Euro 5).

25%

2011

## Cars fill up on energy with Hera

At the end of 2011, Hera installed the first 20 charge points for electric vehicles in Imola and Modena as part of the "Mi Muovo elettrico" ("Driving electric") project of the Region of Emilia-Romagna which, in accordance with Hera, Enel and the interested municipalities, involves the installation of around 100 charge points for electric vehicles between Reggio Emilia and Rimini. It will be possible to charge vehicles using an access card linked to an energy supply contract, or through the integration of this contract in the regional "Mi Muovo elettrico" card. At the "Hera Mobility" Motor Show, Hera also presented the iPhone app which enables users to find their nearest public recharge station anywhere in Italy.

# **Mobility management**

20%

0%

19%

2009

2011 saw the continuation of actions to reduce the environmental impact (traffic, atmospheric emissions, noise, energy consumption, etc.) of Group employee commutes. There was further expansion of the section of the company intranet containing information on the concessions introduced by the group, in close connection with the local authorities, aimed at encouraging the reduced use of private vehicles.

Actions to support public transport and the use of bicycles, targeted at those who live near the Viale Berti Pichat and Via del Frullo sites in Bologna, and the Via Casalegno site in Imola, also continued with success. In 2011, 193 staff members took advantage of special 50% discounts on the price of yearly bus and train tickets (+70% compared to 2004). Since early 2011, thanks to a specific agreement between the Hera Group and the

Emilbanca Group reached after sharing the new route that also serves the Business Park, the Stazione Centrale (Central Station) - Berti Pichat - Frullo corporate shuttle bus has become 'inter-company' and can therefore be used by the employees of all companies belonging to the two Groups: thanks to the agreement the free bus for workers now runs six times a day rather than four. On average the shuttle bus was used by thirteen individuals a day for commuting purposes, and is also available for work-related trips between the two premises: as a result of the exceptional bad weather that saw over 90 cm of snow fall in Bologna at the start of February 2012, the shuttle bus recorded a peak of forty users a day. For the use of bicycles, 14 special conditions were offered (up to a maximum payment of Euro 50 per person for the purchase of a bicycle and accessories or for maintenance). The yearly monitoring data recorded at the Hera headquarters in Viale Berti Pichat reveals that, between 2003 and 2011, the number of cars used for commuting per 100 employees has fallen from 74 to 63.2, a reduction of 15%, and a decrease estimated at around 570,000 km travelled per year.

In the offices in via Casalegno in Imola, a maximum contribution of Euro 50 per year was proposed to reimburse expenses for purchasing or maintaining a bicycle, for employees that make at least 80 bicycle commutes a year. In 2011 thirteen workers, who made more than 80 bicycle commutes each, participated in the scheme.

In order to further reduce the use of private cars by Group employees when commuting, in 2011 an analysis was launched on commuting to and from the main Group sites in Ferrara, Modena and Ravenna: on the basis of this analysis, in 2012 benefits will be examined for those that adopt sustainable mobility practices.

## **Increasing usage of telepresence**

With its extension to multiple Group sites, experimentation has been completed on the telepresence service launched in August 2010 that makes it possible to connect up all of the main company premises with video and audio technology via a highly reliable network infrastructure. Thanks to this service, which respects all safety and reliability standards, meetings between people at different sites have been optimised. A saving in time, energy, stress and the cost of transfers deriving from such journeys.

The increase compared to 2010 is highly significant, almost an order of magnitude. The number of rooms equipped for telepresence went from 13 to 17, and these rooms were used 1,076 times for a total of 1,632 hours (in 2010 they were used 166 times for a total of 199 hours).

# Greenhouse gas emissions

#### Greenhouse gas emissions of plants subject to the Emissions Trading scheme

The primary and most common gas responsible for the greenhouse effect is carbon dioxide, which is produced during combustion processes. Starting with the Kyoto Protocol, over the last 25 years, numerous international agreements have been signed for the purpose of regulating and controlling greenhouse gas emissions.

The 2008-2012 period is the "first commitment period" to the Kyoto Protocol objectives of reducing greenhouse gas emissions, to be achieved in Europe with the EU-ETS (European Union Emission Trading System), a cap & trade type mechanism used to define the maximum greenhouse gas atmospheric emissions permitted in Member

States, even if, for now, only carbon dioxide (CO<sub>2</sub>) has been considered. Member States have assigned the maximum emission quotas to operators with plants that fall within the field of application. The Hera Group plants involved are combustion plants with a maximum overall thermal furnace power of 20 MWt: waste to energy plants fuelled by waste are excluded from the mechanism. The Ministry for the Environment assigns maximum annual quotas for carbon dioxide emissions, expressed in metric tons of CO<sub>2</sub>, to each of the plants. Every year it is then necessary to quantify and submit the emissions produced to inspection, comparing them to the assigned quotas. If the emissions are below the authorised levels, the excess quotas constitute an asset with an economic value that can be realised in a special dedicated market; vice versa, if emissions are too high, the missing quotas must be purchased from the market. As a result all operators have an incentive to contain the greenhouse gas emissions of their plants as far as possible and through a mechanism that gradually reduces the annual overall cap it is possible to comply with the Kyoto Protocol global policy and targets in order to contain environmental impact.

**Kyoto Protocol compliance ratings** 

Kyoto i rotocor com	phance rath	ugo			
Plant	Power (MW)	Type	2009	2010	2011
ACER Barca (Bologna)	28.8	Thermal power	153%	208%	130%
ACER Pilastro (Bologna)	32.8	Thermal power	276%	906%	449%
Berti Pichat plant (Bologna)	25.7	Cogeneration plant	49%	49%	53%
COGEN (Bologna)	26.9	Thermoelectricity cogeneration and thermal power	75%	87%	91%
Ecocity (Bologna)	33.8	Thermoelectricity cogeneration and thermal power	176%	186%	178%
San Giacomo (Bologna)	21.7	Thermal power	163%	176%	171%
Canal Bianco (Ferrara)	92.3	Thermal power	88%	91%	35%
Casalegno (Imola)	222.7	Cogeneration plant	174%	59%	61%
Montericco (Imola)	20.2	Thermoelectricity cogeneration and thermal power	24%	0%	1%
Giardino (Modena)	33.4	Cogeneration plant	-	58%	59%
SAFTA (Piacenza)	41.3	Cogeneration plant	43%	48%	50%
Weighted average			89%	57%	56%

The Kyoto protocol compliance rating (%) indicates real emissions divided by assigned quantities. A value over 100% indicates that the level of authorised emissions has been exceeded. The quotas referring to the Casalegno Imola has been recognized as "new entrant" plant. The quotas referring to the Giardino di Modena plant are estimates, as these are still to be assigned.

There are 11 Hera Group plants authorised to emit greenhouse gases on the basis of Emissions Trading legislation, involving total installed furnace power of 579.6 MW; there are no variations with respect to the previous year. The carbon dioxide emissions recorded in 2011, which came to 240,359 metric tons, are also in line with the 2010 figure. The exceeding of authorised quotas at some plants is a consequence of a level of quotas authorised on the basis of historic consumption patterns pre-2005, a year in which district heating was less developed. Furthermore, we note that the cogeneration plant in Imola Montericco was decommissioned in 2010.

#### Overall greenhouse gas emissions

The Group plants produced total greenhouse gas emissions of 655,866 metric tons of CO<sub>2</sub> equivalent. The 7% increase in emissions in the 3 years in question is due to the

start-up of new plants and is nonetheless lower than the increase in energy produced by these plants in the same period (+24%).

Total greenhouse gas emissions of plants

t	2009	2010	2011
Waste-to-Energy plants	415,046	378,575	415,552
Plants authorised according to	200,121	240,855	240,314
Emissions Trading directive			
Total	615,167	619,430	655,866

In addition to these emissions, there are also the emissions deriving from landfills, losses in the gas network and motor vehicles, which are estimated at 793,393 metric tons. Indirect emissions from electricity consumption were 231,577 metric tons. The following components were considered:

- landfills: methane from biogas which is given off by the landfill matter, plus carbon dioxide from the combustion of tapped biogas;
- waste-to-energy plants: carbon dioxide from the combustion of waste, from which the portion corresponding to biodegradable substances was removed;
- district heating: carbon dioxide from the combustion of methane;
- losses in the gas network: estimated as the difference between the methane input into Hera stations and the methane invoiced to customers; thus, this calculation includes real losses (due to breakage of pipes) and administrative or apparent losses (errors in meter measurement, errors in estimates of consumption at 31 December);
- motor vehicles: carbon dioxide from the use of fuels.

Landfill emissions were estimated using a mathematical model based on the amount of waste disposed in eleven landfills in each year, type, composition and biodegradability of waste and amount of tapped biogas.

Waste-to-energy plant emissions were based on direct chimney measurements. For district heating, the heating of sites and electricity consumption, the calculations are made using coefficients provided in the Emissions Trading regulation, while emissions for motor vehicles and gas network leaks are calculated using coefficients from readings.

#### Waste collection

The Hera Group is a major player in the field of urban waste management. Hera manages an integrated service in 6 provinces of Emilia-Romagna, for a total of 142 municipalities; in addition, through Marche Multiservizi, it also serves 39 municipalities in the province of Pesaro-Urbino. In total, Hera served 181 municipalities in 2011, for a total population of 2.78 million inhabitants.

#### CiboAmico brings solidarity to canteens and helps the environment

In 2011, CiboAmico, the initiative launched in 2009 aimed at recovering unused foodstuffs in the Group canteens and distributing them to local associations that assist people in difficulty, was extended to a fifth canteen, that of Ferrara.

In 2011, 9,000 full meals were donated to the 5 non-profit associations involved (Opera di Padre Marella, Papa Giovanni XXIII, Arcobaleno, Il Piccolo Principe and Viale K), which host around 170 people.

The project was launched and is now continuously monitored with the support of Last Minute Market, a University of Bologna spin-off that encourages actions to prevent waste.

3,670 kg of cooked and raw products were recovered in 2011, 35 full meals a day, the equivalent of 3% of the meals prepared each day in the five canteens - an extremely low level of waste.

Hera has developed an organisational model for the separate and non-separate collection of urban waste which is based on the management experience of one of its local founding companies: the study and analysis of best management practices made it possible to base the new organisational model on the consolidated wealth of knowledge and experience we have acquired over the decades.

#### The Hera integrated waste management system (WMS)

Hera's Waste Management System (WMS) is characterised by three main systems:

- local collection: for domestic and small non-domestic users, carried out according to methods that fit best with the context served (mainly basic drop-off points with the IEB model also with closure systems, domestic systems);
- "target user" residential collection: aimed at non-domestic users that produce specific waste similar to urban waste (cardboard in shops, glass or tins in bars, organic waste in canteens or restaurants, etc.);
- Separated waste collection centres: also known as Equipped Drop-Off Points, these are infrastructures that complete the range of services offered to residents for dropping off all types of separated urban waste, including dangerous waste.

The system is also integrated with the domestic collection of bulky waste (free of charge, by phone call or by appointment), the collection of green waste, and the collection of other types of dangerous waste at specific businesses (e.g. batteries at pharmacies).

#### Electronic key for bins in San Mauro (Forlì-Cesena)

In November 2011 a national roadside rubbish collection pilot project was launched in San Mauro Pascoli which consisted of the installation of an electronic device on every bin, meaning they can only be used via a personalised electronic key. Involving around 4,100 residents, among other things the project guarantees the traceability and transparency of waste management processes and offers the possibility of introducing a special rate for those who separate their waste most accurately.

As regards local collection, the IEB (Basic Drop-Off Points) model involves the distribution of the various bins at a single collection point where it is possible to drop off the main types of materials: non-separated waste, paper, plastic, glass, tins, organic waste, clippings (several materials can also be dropped off in combined form); the aim is to increase separated waste performance and improve its urban impact. The IEB

model reduces the number of bins for non-separated waste, in favour of those for separated waste collection.

With the aim of providing the most effective possible service in accordance with the features of the community, the collection services are differentiated according to standardised area types (historic centres, residential areas, tourist areas, extra-urban areas, industrial zones). For each local community a collection system is chosen that fits best with the urban (population density, configuration of roads, availability of space..), environmental (noise limits, street furniture..) and territorial features of the area (tourist presence, historic centre...) in a bid to maximise the percentage of separate waste and its quality through a service that is technically and economically sustainable.

The methods of local rubbish collection envisaged in the Hera Group Waste Management System are the following:

- roadside collection, i.e. carried out using bins that are permanently located on public land (Basic Drop-Off Point model);
- roadside collection, with special disposal control mechanisms (lids): the bins are distributed across the local area according to the Basic Drop-Off Point model with a bin closure mechanism for the collection of non-separated waste and disposal only permitted to residents with a special electronic card;
- door to door: domestic collection system for all main waste supply chains using bags/bins.

Local waste collection in the various municipalities usually takes one of these forms, even if it is more correct to talk about the prevalent form, given that in most cases there are different types of collection methods in the same community.

#### Main forms of waste collection used in the community

number municipalities served	2010	2011
Roadside collection	121	115
Roadside collection with lid	15	20
Door to door	6	7
Total	142	142

Data do not include Marche Multiservizi.

In the 142 municipalities served by Hera in 2011, 115 municipalities, around 85% of the population, were mainly served via roadside collection. With regard to waste collection with electronic control mechanisms (lids), the 15 municipalities served in 2010 became 20 in 2011, extending across the entire province of Rimini. This meant a rise from 3% to 12% of the overall population served by Hera. 7 municipalities (72,000 inhabitants - around 3% of the population served) were served door-to-door in 2011.

In 32 municipalities (with a population of 125,000 inhabitants) served mainly by roadside collection, there are door-to-door collection areas, and in another 18 municipalities domestic collection is carried out for certain fractions. Therefore, all in all, 57 municipalities are served door-to-door.

It should also be noted that 95% of the area (figure refers to population) is served by targeted collection, that is, domestic collections for specific non-residential users.

#### Main forms of waste collection used in the community

% separate waste collection	2010	2011
Roadside collection	47.5%	49.0%
Roadside collection with lid	65.2%	66.8%
Door to door	68.9%	73.4%
Total	48.5%	51.0%

Data do not include Marche Multiservizi.

In terms of the separate waste collection results achieved with the various systems, an average of 49% was recorded with roadside collection; roadside collection with controlled disposal produced, in 2010, a score of 66.8% while the door to door system produced an average result of 73.4% in the 7 municipalities in which it was launched. Please note that the figure relating to roadside collection with "lid" as reported in the table relates to the 15 municipalities in which the system was already present in 2010. In the five other municipalities in which the system became prevalent in June 2011, an increase of over 7 percentage points (from 50% to 57%) was recorded: it must be highlighted, however, that these were five coastal municipalities with strong seasonal tourism, including the administrative capital, and that in the most touristy areas rather than the lid-system there will be a combination of roadside collection and door to door collection, already present today, with the latter system introduced increasingly frequently.

#### Rimini number one in Emilia-Romagna for waste paper collection

Rimini is the number one province in Emilia-Romagna for the collection of paper and cardboard, and Emilia-Romagna is the leading region in Italy. Comieco, with its 16th Report on the collection, recycling and recovery of paper and cardboard, highlights that, compared with a national paper and cardboard collection rate of 52.2 kg/inhabitant, and the region of Emilia-Romagna which now tops the rankings with 87.7 kg/inhabitant per year, the province of Rimini, with over 131 kg/inhabitant, is the leading province in Emilia-Romagna in terms of waste collected per capita.

#### **Collection of urban waste**

In 2011 there was a reduction in the amount of urban waste directly managed by Hera (-3.0%) compared with the previous year. In per capita terms, this reduction is even more evident (-3.8%) when you consider that the population grew by 0.8%. This reduction is due to the unfavourable economic climate, both for families and business activities, but also to partial de-assimilation phenomena and greater environmental awareness: as regards this issue Hera has promoted or encouraged actions and campaigns aimed at preventing waste production, top of the list of waste management priorities requested by European Directives.

Excluding the waste deriving from the cleaning of shorelines, the reduction recorded in 2011 was 3.1%, which is also reflected by the fall in per capita production (-3.4% compared with 2010).

It is important to highlight that the quantity of separate waste increased in 2011 (+3.2%), whilst there was a decrease in that of non-separated waste (-7.6%): the combined effect of the two trends made it possible to go beyond the separate waste target for 2011 of 50% to record a figure of 50.5%.

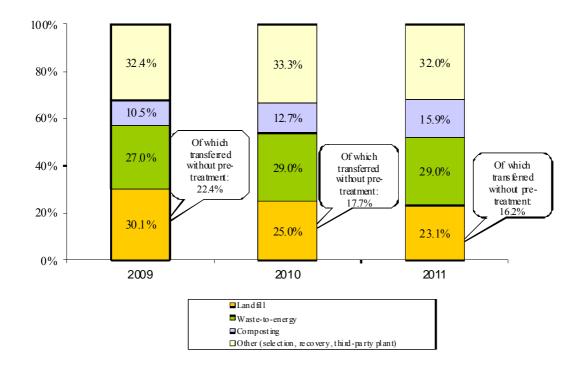
**Urban waste collection by Territorial Operating Structure** 

thousands of t	2009	2010	2011
Bologna TOS	359.2	365.0	349.3
Ferrara TOS	90.5	93.1	87.0
Forlì-Cesena TOS	274.4	290.9	279.0
Imola-Faenza TOS	137.8	142.0	141.4
Modena TOS	306.2	315.2	307.2
Ravenna TOS	237.1	244.2	234.3
Rimini TOS	257.0	271.1	259.4
Marche Multiservizi	133.3	144.1	151.0
Total	1,795.5	1,865.6	1,808.7
Kg per inhabitant*	657	667	642

<sup>\*</sup>Excluding waste from shorelines.

The area served by Hera is characterised by higher assimilation and thereby has the highest annual per capita urban waste production rates in Italy: 642 kg was collected per person in 2011 compared with the Italian average of 532 kg in 2009 (source 2011 Ispra Urban Waste Report).

# Urban waste collected by destination



In light of the fall in urban waste as detailed above, the percentage of waste-to-energy plant waste in 2011 was in line with the 2010 figure, whilst there was a reduction in the amount of waste disposed of in landfills (-1.9 percentage points). These trends are consistent with national and international objectives. The increase in separate waste collection has generated an increase in waste treated at selection and recovery plants. As

regards the humid fraction, this increase was managed by the Hera Group thanks to the entry into full effect of the Romagna Compost digester and the further improvement in the efficiency of existing plants (+3.2 points overall).

In 2011, the portion of urban waste disposed of in landfills following pre-treatment came to 23.1% (including Marche Multiservizi, which disposed 59.1% of urban waste in landfills) compared with an Italian average of 48% in 2009 (2011 Ispra Urban Waste Report). If Marche Multiservizi is excluded, the portion declines to 19.8%.

The percentage of waste disposed of in landfills without pre-treatment came to 16.2%; excluding Marche Multiservizi this figure falls to 13.9%.

## Disposal of urban waste in Europe

National and EU regulations define principles and priorities for waste management, from minimising waste at source to material recovery, energy recovery and, only as last resort, disposal in landfills.

However, landfills are still the main way of treating waste in Italy (source: Eurostat): 51% of disposed urban waste in 2010 was transferred to landfills compared to 15% sent for waste-to-energy treatment. In 2011, Hera's customer base used landfills to dispose of 23% of urban waste collected.

At European level the tendency to reduce the use of landfills for disposing of urban waste continues: in the EU-16 the figure dropped to 31% in 2010 while in the EU-27 it was 38% in 2010 (Eurostat data).

In Europe, the countries which use waste-to-energy treatment the most are Denmark, Switzerland and Sweden with percentages around 50%. In these countries, the percentage of waste destined for recovery is close to 50%, proof of the possible coexistence of waste-to-energy treatment and substantial separated waste collection. In Belgium, France, Germany, Luxembourg, Norway and the Netherlands, the percentage of waste destined for waste-to-energy treatment is between 32% and 41%.

In Austria, Germany, the Netherlands, Sweden and Switzerland, the use of landfills is almost nil, with percentages of under 2%.

#### Waste prevention initiatives

European Directive 2008/98/EC on waste, acknowledged in Italian legislation with Legislative Decree no. 205/2010, defines the following hierarchy in terms of the prevention and management of waste:

- prevention;
- preparation for reuse;
- recycling;
- other types of recovery, such as energy recovery;
- disposal.

Hera, while operating as waste management manager, and therefore in full respect of the prerogatives of those responsible for waste planning, has developed and participated in numerous initiatives aimed at encouraging waste prevention: in 2011 it was involved in around 20 active waste reduction initiatives, three of which launched during the year.

## "Still of Use" project awarded 2011 "Oscar for Health"

"Still of Use" was awarded the 2011 "Oscar for Health" by the Rete Italiana Città Sane association, promoted by the World Health Organisation. The goal of the project, launched in Ferrara in 2010, is to collect and re-use medicines donated by the general public, clinics and hospitals, which have not yet expired, by giving them to non-profit associations that work in developing countries. In 2010 around 6,500 boxes of medicines were collected, and this rose to over 9,000 in 2011. Hera contributed to the project by collaborating with the Municipality of Ferrara, Farmacie Comunali di Ferrara, University of Ferrara, Farmacia senza Frontiere, the Local Health Authority, the Province of Ferrara and Last Minute Market S.r.l..

The initiatives launched in 2011 include:

- "Trashware Cesena", operational since early 2011 thanks to a partnership between the Municipality of Cesena, the Polo Scientifico-Didattico of Cesena and student association Sprite, and the economic and operational support of Hera. The project consists of recovering PCs destined for disposal because they are old or don't work, making them functional again, and then donating them to schools, associations, or members of the public that cannot buy new equipment. Up until September 2011, 138 PCs had been collected, fixed and donated to schools and associations.
- Life "Lowaste", coordinated by the Municipality of Ferrara, on waste prevention and reuse initiatives for the development of at least four waste management cycles that make it possible to reuse the materials and reintroduce them to the market, acting on both the supply and demand side;
- "Second Life", the new reuse area launched in September 2011 together with the Municipality of Bologna, in the immediate vicinity of a new Hera Separate Waste Collection Centre.

Among these initiatives, Hera<sub>2</sub>O (promotion of tap water at Hera sites) and CiboAmico (donation of unused food in Hera canteens to associations within the local areas) stand out because they are targeted at employees and contribute towards reducing plastic packaging, in the former case, and organic waste in the second case. Both projects have been closely pursued together with numerous municipalities (with the Acqua del Sindaco campaign for example) and major local businesses (Last Minute Market, associations such as Padre Marella in Bologna and Giovanni XXIII in Rimini). Also worthy of mention are:

- "Domestic composting", free supply of small containers for the domestic composting of organic waste. By the end of 2011, 26,350 composters had been distributed for an estimated 6,000 metric tons of organic waste treated in this way in 2011; some ATOs, or individual municipalities, offer discounts on rates or taxes to citizens that use the domestic composter;
- Toner and mobile phone Eco-boxes, containers for sending used toner cartridges and mobile phones for recycling, mainly distributed in schools. Since the start of 2009 the Eco-boxes for phones have been offered to around 1,730 schools with over 510 schools participating and around 2,000 phones collected by the end of 2011;

• Still of Use, the project launched in 2010 in Ferrara to collect and donate unexpired medicines to non-profit organisations.

Finally, there are also initiatives aimed at families, children and schools, such as Campi d'Arte in Bologna, Rifiuto con affetto in Ravenna, and Tric e trac in Modena.

## "Reuse" and art at the new drop-off point in Bologna

Since September 2011 Bologna has had its third drop-off point, this one close to a large superstore. The same area is also home to "Second Life", the first public space dedicated to the reuse of objects where citizens can freely exchange any item in a decent state: from plates and lights to books, toys, small domestic appliances and knick-knacks. Outside the area is an art installation by the two young winners of a competition held by the Municipality of Bologna: the work, E-chokhor, takes its name from a Tibetan prayer wheel and evokes a kind of prayer for sustainable living.

# Separate waste collection

Separate waste collection, performed by the Hera Group mainly with the single materials system, regards an extremely wide range of waste. The main materials are paper, cardboard, glass, plastic, tins, organic waste, clippings, and bulky waste, collected mainly through roadside and domestic collections. In addition there is the waste disposed of by citizens in Separate Waste Collection Centres (or Equipped Drop-Off Points) where the range of managed materials is completed, and more specifically: waste from electrical and electronic appliances (WEEE) sorted by categories, mineral or cooking oils, batteries and accumulators, medicines and other dangerous waste. In specific cases, mixed materials collection is envisaged, where different types of materials are collected at the same time, favouring those that are easiest to separate in the selection plants.

#### Number and volume of separated waste collection bins

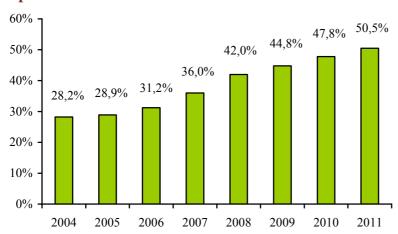
	2009	2010	2011
Number of bins (no.)	147,604	162,511	175,793
Bin volume (m3)	181,941	196,197	210,261

The implementation of the WMS system and its evolution with the IEB (Basic Drop-Off Points) project resulted in a marked increase both in terms of number of skips (bins, "igloo" bins, drums) for separated waste collection available to residents, and in terms of total volumes of the skips, and a concurrent reduction in the number of skips for non-separated waste.

Compared to 2010, there were increases in both the number of bins for separate waste collection (+8%) and their volume (+7%). The increases mainly regarded the areas of Ferrara, Forlì-Cesena, Modena and Pesaro. In order to improve the efficiency of its services, the Group has also reduced the number and volume of bins for non-separate waste collection (the overall volume available to each citizen has fallen by 6% in the last three years).

An additional separate waste collection system was implemented through the Collection Centres, of which there are 138 in the area in which Hera operates. These points, which are also called equipped drop-off points, are dedicated areas with bays and containers, open to the general public, for users to directly drop-off separate waste, which is then sent for suitable recovery or disposal. Many Collection Centres are equipped with weighing and user-recognition systems: in addition to tracking waste drop off, these systems permit the application of tariff discounts.

#### **Separate waste collection**



The percentage of separate waste collection is calculated excluding waste from shorelines and without taking into account Decree of the Regional Government no. 2317/2009.

Over the last few years, the quantity of separate waste collected has risen, maintaining good quality: this favours the recovery of waste as a material in recovery and recycling plants, as well as reducing the quantities being disposed of.

The percentage of separated waste represents the relationship between the quantity of urban waste collected in separate form and the total amount of urban waste.

In 2011, separate waste collection came to 50.5% (51% if you exclude Marche Multiservizi).

It should be underlined that for the calculation of separate waste collection, regional regulations (Decree of the Regional Government no. 2317/2009, which modified Decree of the Regional Government no. 1620/2001) have established new criteria that essentially excludes non-reusable fractions (i.e. the waste downstream of the screening processes) deriving from mixed materials collection from the separate waste collection calculation. With this method, the percentage of separate waste collection in 2011 came to 50.2%. (50.7% if you exclude Marche Multiservizi).

In Italy, separate waste collection in the provincial capital cities in 2010 came to 32%; this figure is higher in capital cities in the North of Italy: 41.5% (source Legambiente, Ecosistema Urbano).

The calculation of separate waste collection also includes similar waste sent for recovery by the manufacturer and separate waste collected from third parties as provided by Decree of the Regional Government no. 2317/2009, implemented in municipal regulations and regulations of the Water and Waste Regulatory Authorities in

force. In 2011, this amount of waste was equal to 126,000 metric tons, or 13% of total separate waste collected, as was the case the previous year.

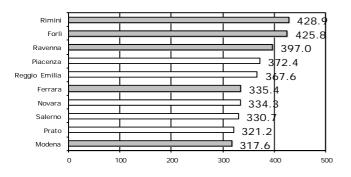
As well as the percentage of separated waste, an equally effective indicator is the separated waste per capita, expressed in kg/inhabitant/year, which makes it possible to make important comparisons regarding the overall quantities of waste sent for recovery and, in particular, by single supply chain. In 2011 per capita separate waste collection came to 347 kg per inhabitant, an increase of 2.2% on 2010. This figure is very important, particularly if compared with the national figure: according to processing of Legambiente, Ecosistema Urbano data, in 2010 separate waste collection came to 186 kg per capita, and in Northern Italy 245 kg per capita.

Of great significance are the per capita quantities related to the area served by Hera and 2011 for the main fractions, presented below with an indication in brackets of the 2009 Northern Italy figure (source 2011 Ispra Urban Waste Report): paper and cardboard 76 kg per inhabitant (63); plastic 22 (15); organic and green waste 116 (93); glass 30 (41).

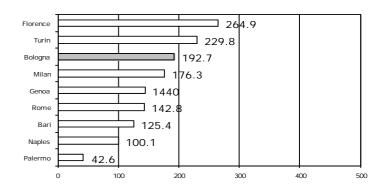
#### Separate waste collection in the main Italian cities

Considering provincial administrative centres with populations of over 100,000 inhabitants, 5 of the top 10 best-performing cities in Italy are managed by Hera. Considering provincial administrative centres with populations of over 300,000 inhabitants, the municipality of Bologna is third in Italy (source: processing of Legambiente, Ecosistema Urbano data).

Per capita separate waste collection, kilograms, municipalities with over 100,000 inhabitants (2010)



Per capita separate waste collection, kilograms, municipalities with over 300,000 inhabitants (2010)



In 2011 separate waste collection came to 958.5 thousand metric tons (+3.2% compared with 2010): this value is highly significant if compared with the quantity of overall urban waste produced in Italy, around 30 million metric tons.

The confirmation of the positive growth trend as regards separate waste collection is a result that can be traced to the reorganisation of the service carried out by Hera in accordance with the municipal authorities and the Waste and Water Regulatory Authorities, and the growing environmental awareness of citizens. Specifically:

• differentiation of collection systems by area and convergence towards highly efficient organisational models such as the Basic Drop-Off Points or domestic collection;

- broadening of usability standards of the Separate Waste Collection Centres and incentivising tariff levies;
- research and innovation in control and waste drop off traceability systems, such as the "lids" in the Province of Rimini, and the electronic traceability of waste collection with bins;
- information and awareness campaigns at corporate level with education in schools, direct information to citizens and actions aimed at preventing waste.

#### Separating waste in Forlì and Cesena

In 2011 Hera strengthened the separate waste collection system in Forlì and Cesena. In Forlì this took place through domestic collection with the use of specific bins dedicated to the various materials (4,100 residents involved). In Cesena, collection took place through a system that involves the domestic collection of organic and unseparated waste, and the roadside collection of other types of rubbish (9,000 residents).

As regards individual communities, Rimini proved to be particularly virtuous, continuing its rapid ascent with a figure around 60%. The growth of Marche Multiservizi was also significant. The three territories that went beyond 50% of separate waste collection in 2010 (Modena, Ravenna and Rimini) were joined in 2011 by Ferrara and Forlì-Cesena; they were followed by Imola-Faenza and Bologna.

# **Separate waste collection by Territorial Operating Structure**

%	2009	2010	2011
Bologna TOS	39.7%	39.0%	39.7%
Ferrara TOS	46.6%	49.0%	51.2%
Forlì-Cesena TOS	45.9%	48.4%	50.1%
Imola-Faenza TOS	43.8%	46.2%	49.2%
Modena TOS	49.7%	51.3%	53.6%
Ravenna TOS	51.7%	56.0%	58.1%
Rimini TOS	43.1%	52.8%	59.2%
Marche Multiservizi	37.2%	39.7%	44.3%

The percentage of separate waste collection is calculated including the quantities of waste deriving from road sweeping, excluding the waste from the shore, and without taking account of Decree of the Regional Government no. 1620/2001. The calculation of separately collected waste also includes similar waste transferred by manufacturers for recovery and separately collected waste from third parties or directly from municipalities. The differing criteria for assimilation laid down by the Water and Waste Regulatory Authorities and municipalities may be responsible for quota differences from one area to the next.

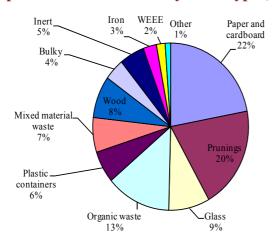
The increase in separated waste recorded in 2011 particularly regarded organic waste (+18%), plastic (+14%), iron (+13%) and glass (+9%). The reduction of mixed materials collection continued (-19%), with single materials collection growing in popularity.

Separate waste collection by waste type (2011)

Thousands of t	2010	2011
Paper and cardboard	206.8	212.5
Green waste	199.1	191.3
Glass	75.8	82.3
Organic waste	109.9	129.9
Plastic containers	52.7	59.8
Mixed materials	79.7	64.7
Wood	75.9	78.6
Bulky	41.7	40.5
Inert materials	43.3	50.1
Iron	23.5	26.6
WEEE	15.2	17.4
Other	13.2	11.0
Total	936.7	964.7

Separate waste collection by waste type is calculated here without taking account of Decree of the Regional Government no. 1620/2001.

# Separate waste collection by waste type (2011)



#### Tracking waste: where does the separated waste collected go?

For the second year in a row, in 2011 Hera published a report on the destination of separately collected waste. The 48 first destination waste plants were identified in 2010 and, by involving the managers of these plants, the percentage of waste transformed into "second raw materials" (replacing raw materials of natural origins) was determined and the production plants that utilise the materials deriving from separate waste collection identified.

The initiative regarded the main materials collected separately: paper, green waste (residues, prunings), organic waste, glass, wood, plastic, iron and metals (steel, aluminium and tinplate packaging).

In 2010 the overall percentage effectively recovered was 92.1%: 90.3% paper, 94.3% organic, 96.6% green, 94.2% glass, 78.4% plastic, 93.3% metal, 89.4% wood and 100% iron.

The results were presented in a leaflet distributed at the main customer branches, at schools and public events. The leaflet was also distributed to all families. The same data

can be viewed on the Group website. The initiative, repeated every year, is one of the tools that the company uses to report on the progress it is making in terms of sustainable development.

As well as the portion of separately collected waste that is effectively recovered, part of the undifferentiated waste collected is sent for recovery via processing at mechanical screening plants. In 2011, around 176,000 metric tons of undifferentiated waste was sent to these plants, equal to 18.2% of all undifferentiated urban waste collected. From these materials ferrous metals (approx. 1,281 metric tons in 2011 sent for recovery) and the humid fraction of waste (92,000 metric tons sent to composting plants for the production of biostabilised compost for landfill capping) are separated.

#### Optical readers to recover increasing quantities of plastic

Further increase the recovery of materials deriving from separate waste collection in terms of quality and quantity, at the same time improving the working conditions of employees involved in the separation process. These are the goals of the new line equipped with optical readers for the separation of plastic opened in October 2011 in Voltana di Lugo (RA) at the Akron plant owned by Herambiente (Hera Group).

At the new line the rubbish undergoes initial separation through a revolving screen with materials sorted into three fractions of different sizes. Suitable materials, in terms of size, then move on to two optical readers equipped with visible light sensors that are able to identify the materials on the basis of their colour characteristics, and short-range infrared sensors, which recognise the materials from the characteristics of their reflected light. At this point automatic separation takes place: the plastic can be selected according to type of polymer (polyethylene, polypropylene, PET, PVC etc.) or colour (blue, transparent etc.), and is separated from any impurities on the belt.

# Waste disposal

The Hera Group, through its subsidiary Herambiente, manages its treatment plant system, through operations to recover and dispose of urban and special waste, with a portfolio that included an impressive 80 plants in 2011. This plant system represents a unique integrated and complete model in Italy that allows the Group to effectively and appropriately respond to EU and Italian legislation regarding waste management. The system involves various types of plants: storage and initial pre-treatment plants, plants for the selection and recovery of dry material (paper, cardboard, glass, plastic and tins), composting and anaerobic digestion with energy recovery, waste-to-energy plants with high energy recovery, landfills, chemical-physical treatment of liquid waste, treatment, pre-treatment and reconditioning of muddy waste and pulverulents. It therefore covers all treatment requirements relating to the urban waste collected by Hera S.p.A. in the target area and a wide range of hazardous and non-hazardous waste from the industrial and service industries sector within the national customer base.

Herambiente carried out the following operations in 2011:

• it completed the new Rimini waste-to-energy plant with the addition of a new energy recovery system

- it extended the size of various existing landfills (Ravenna, Tre Monti, Zocca, Pago) designed for the disposal of mainly special waste. It carried out various operations for the definitive capping of decommissioned landfills and their reintegration into the landscape and environment (Legislative Decree no. 36/2003);
- with regard to special waste plants, the "disidrat" plant that treats muddy waste and pulverulents in the province of Ravenna was completed; the revamping of the Bologna chemical-physical plant was completed and the work to modernise the hazardous and non-hazardous special waste plants at the Via Baiona site in Ravenna continued.

#### Hera "biodigester" project: + energy and - greenhouse gas

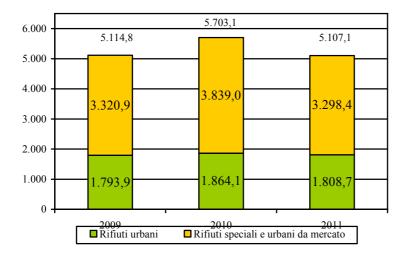
The project involves the recovery of biomass of various types, both as an agricultural fertiliser as well as a raw material in energy production, thereby avoiding its disposal in landfills and the consequent production of greenhouse gases. In 2011 the definitive executive plan for two dry digestion plants was completed as additional sections to the composting plants of Cà Baldacci (Rimini) and Voltana (Ravenna), including a section for the treatment of lignocellulosic fractions for the production of combustible biomass, and authorisation for the construction of the two plants was obtained.

Contracts were also drawn up for the realisation of this work with the worksites opened at the start of 2012 and the aim being to produce energy by the end of 2012.

Finally, the preliminary design of a plant with a dry digestion section and a composting section at the Area 3 site in Modena was completed.

At full pelt, each biodigester will produce 6,500 MWh of electricity (the consumption of 2,400 families) and compost with a positive balance in terms of greenhouse gas emissions.

#### Waste treated by type



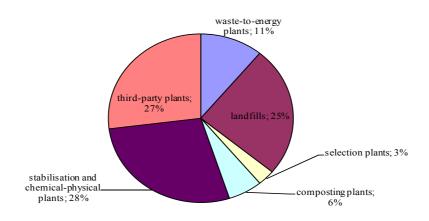
Urban and special waste disposed by plant type

	1 1	• •	
thousands of t	2009	2010	2011
Separation plants	1.3	6.7	4.0
Selection plants	289.3	322.2	299.2
Waste-to-energy plants and	734.5	800.6	923.0
biomass plants			
Compost plants	402.0	463.8	504.7
Landfills	1,400.4	1,429.7	1,268.3
Stabilisation and chemical and	1,084.6	1,227.4	891.6
physical treatment			
Third party plants	1,202.7	1,452.7	1,216.3
Total	5,114.8	5,703.1	5,107.1

The data refer to plant inflow waste. Duplication may therefore be included. Some of the waste treated in selection plants, for example, may be targeted for landfill disposal following selection treatment. The outgoing waste from plants which were counted among the final use plants was subtracted from the quantities treated in the separation plants.

The unfavourable economic climate has led to a general fall in the amount of both urban and special waste treated, with the partial exception of the waste treated by Marche Multiservizi. The Group worked to fill the energy recovery plants as a priority, with these registering an increase of 123,000 metric tons also thanks to the consolidation of Enomondo (whose figure is reported in the table at 100%). On the contrary there is a clear fall in the amount of waste disposed of in landfills, particularly in the Ravenna area and at the Galliera landfill (the latter also following the limit imposed by the new authorisation). The Hera Group plants were able to cope with the increase in separately collected waste. More specifically there was an increase in treatment at composting/digestion plants, particularly thanks to the Romagna Compost digester becoming fully operational and the consolidation of Enomondo. The fall in waste treated at selection plants can be attributed to the reduction in special waste treated. The better weather conditions compared with the previous year led to an evident fall in the number of sub products disposed of at the chemical-physical plants and the Hera S.p.A. treatment plants.

#### Special waste disposed of by plant type (2011)



#### Special waste: assimilated, hazardous and non-hazardous

When you talk about waste you immediately think of domestic rubbish. However, this is only a very blinkered view given that household rubbish does not even represent 20% of all waste produced.

Indeed, in Italy, where over 170 million metric tons of waste is produced a year, around 140 million is special waste, i.e. rubbish generated by production activities, while around 32 million metric tons is made up of urban rubbish. In Emilia-Romagna, the ratio does not change: out of around 13.5 million metric tons of waste produced in total, just 3 million takes the form of urban waste.

As such, despite its predominance, special waste becomes invisible in the collective imagination as it is far removed from daily life and also because of the different kind of treatment reserved for the two types of rubbish by the law. Urban waste must be collected, treated and disposed of in the province in which it is generated at a cost, for the general public, that is pre-established by the authorities. Conversely, special waste must be disposed of by the producer and for this companies use operators that best cater to their needs, also economically speaking.

Special waste is therefore often transported quite far from where it is actually produced: other provinces, other regions or even abroad. Over the years this inferior visibility, often united with an inferior degree of traceability, has been reflected in strategic planning deficiencies with regard to disposal plants, and unfortunately this tends to lead to a slide towards illegal forms of disposal, which for years has swelled the coffers of so-called environmental mafias.

The Legambiente "Ecomafia 2011" report highlights how "the basic problem remains the so-called 'black hole' of special waste, i.e. the lack of transparency over its traceability: a complaint that comes from investigators and operators in the sector". The report shows how 2010 was a record year for investigations into activities organised for the illegal trafficking of waste (art. 260 of Legislative Decree no. 152/2006) with over 2 million metric tons of waste sequestered. This is only a partial figure as it refers to just 12 of the 29 investigations launched by the forces of law and order in 2010.

#### Waste classification

In Italian law the classification of waste is based on the place in which the waste was generated (home or production environment) and not on physical, chemical or product characteristics. Legislative Decree no. 152/2006 classifies waste, on the basis of its origin, as urban or special, and, only downstream of this classification, according to its level of dangerousness, i.e. hazardous or non-hazardous.

Urban waste is domestic waste (also bulky) produced by homes, waste from the cleaning of streets and other public places, vegetable waste from green areas and any type of waste dumped or present in public areas, including beaches and riverbanks, whose production cannot be traced to a specific source. Also classed as urban waste is non-hazardous special waste originating in premises and places not used for dwelling, assimilated to urban waste in terms of quality and quantity by the Municipal Regulations (or supra-municipal authorities) on the basis of the general guidelines dictated by the State; this waste is special in terms of origin but, once assimilated, is managed (collected or disposed of) together with domestic urban waste and subject to levies or taxes.

Special waste is waste from agricultural, construction, artisanal, industrial, sanitary, commercial and services activities, waste deriving from waste recovery and disposal activities, water treatment sludge, mining or decontamination.

Waste is classified as hazardous or non-hazardous depending on the substances it contains. Hazardous urban waste is made up of domestic waste that contains pollutants or toxic substances in such measures that they have to be disposed of in special plants (e.g. medicines and batteries).

Hazardous special waste is generated by production activities and contains the aforementioned pollutants or toxic substances.

**Urban and special waste production by Province (2009)** 

thousands of t	Urban waste	Non- hazardous special waste	Hazardou s special waste	Total special waste	Total waste
Modena	452	1,741	79	1,820	2,272
Bologna	563	1,458	161	1,619	2,182
Ferrara	250	651	57	708	958
Ravenna	309	2,123	200	2,323	2,632
Forlì-Cesena	307	914	65	979	1,286
Rimini	257	763	75	838	1,095
Total provinces in Hera operating area	2,138	7,650	637	8,287	10,425
Piacenza	190	445	147	592	782
Parma	268	646	40	686	954
Reggio Emilia	391	959	71	1,030	1,421
Total Region of Emilia-Romagna	2,987	9,699	896	10,595	13,582

Source: Arpa processing of data from MUD, taken from RER Arpa - The management of waste in Emilia-Romagna - Report 2010 and 2011

The line between urban waste and special waste is therefore established by the assimilation regulations defined by national law and applied at local level. Every municipality can apply the criteria for assimilating waste deriving from production, commercial and tertiary activities in a different way, acting in particular on quantitative thresholds.

The more waste that is assimilated to urban waste, the less special waste is left to be managed by the private sector with the risk of inferior controls and traceability. In the areas managed by the Hera Group and Emilia-Romagna in general, there is a high level of assimilation: it is estimated that the waste managed as part of the public service comprises 50% waste of domestic origin and 50% waste of non-domestic origin, i.e. assimilated special waste. It is also estimated that there is around 1.5 million metric tons of special waste that could be assimilated for its characteristics (i.e. non-hazardous) but which is not assimilated because it is produced by a single production business in quantities above the established limit.

Unlike in Italy, in Europe the classification of waste is more directly related to its level of dangerousness and the type of treatment it undergoes.

	Non-hazardous waste	Hazardous waste
4)	Domestic waste (dry and organic)	Batteries, lead accumulators
Urban waste	Waste from the cleaning of streets and other	Environmentally harmful packaging
MS.	public places	TVs, monitors, fridges, air conditioning units
au	Assimilated urban waste	and lamps
rb		Mineral oils
n		
	Waste from agricultural and agro-industrial	Petrochemical and pharmaceutical production
	activities	waste
ste	Inert materials and bricks (deriving from	Metallic waste
Special waste	construction and demolition businesses)	Sludge from reclamation activities
व	Commercial and industrial packaging	Used oils
eci	Plastics and glass processing waste	Medical and veterinary research waste
$\mathbf{S}_{\mathbf{p}}$	Artisanal and industrial	
	Deriving from waste recovery and disposal	
	operations, also urban	

# Special waste supply chain at Hera

The flow of special waste treatment at Hera is highly structured given the variable nature of this waste that derives from industry, from the purification of wastewater, from construction, from the commercial and services sector, and from the healthcare sector.

Hera has 29 plants exclusively equipped for the disposal of special waste, with over 3 million metric tons managed in 2011 (including sub-products deriving from Group plant activities). There are disposal limits defined, plant by plant, by provincial authorisations or by integrated environmental authorisations.

# Electricity for 2000 families in the municipality of Ravenna from biogas

In February 2011 the Herambiente landfill on the SS Romea road in Ravenna opened a 0.8 MW energy recovery plant fuelled by biogas and made up for the most part by methane and carbon dioxide, produced by the bacterial fermentation of organic residues deriving from waste deprived of oxygen: it is expected to operate for 15 years with an annual average production of around 5.5 million kWh, equivalent to the annual requirement of over 2,000 families.

18,975 metric tons of reagents were consumed in the waste-to-energy plants: this is up by around 20% because all plants became fully operational and also because of an increase in the number of hours of operations compared with 2010. 9,093 metric tons of chemical reagents were consumed in the stabilisation and chemical-physical treatment plants, 37.4% less than in 2010: this fall was down to the optimisation of management and the lower quantity of incoming waste. At the Modena plant this optimisation took place through a change to the process that makes it possible to work at a lower pH and with less use of flocculants (ferric chloride and polyelectrolyte).

Urban and special waste disposal by plant

thousands of t	ISO 14001	EMA S	2009	2010	2011
Coriano - Ravenna	X	X	69.8	109.6	114.4
Frullo Granarolo - Bologna (Frullo Energia Ambiente)	X	X	198.4	206.2	201.0
Canal Bianco, Ferrara	X	X	132.0	130.0	129.8
Grigioni Forlì	X	X	118.3	116.0	115.7
Strada Romea km 2.6 Ravenna	X	X	42.8	42.8	42.1
Comparto Area 2 Cavazza Modena	X	X	137.0	157.8	176.3
Special Waste Ravenna	X	X	36.2	38.2	40.0
Faenza - Ravenna (Enomondo)		Λ	30.2	36.2	103.7
	X		7215	900 6	
Total waste-to-energy plants and biomass plants			734.5	800.6	923.0
Busca – Forlì-Cesena	X	X	85.7	79.6	63.8
Strada Romea km 2.6 (1C) Ravenna	X	X	286.1	297.6	205.0
Lugo – RA	X	X	0.0	0.0	16.2
Galliera – Bologna	X	X	157.8	176.7	81.6
Γremonti Imola - Bologna	X	X	198.7	153.7	199.1
l Pago Firenzuola – Florence	x	x	78.7	86.9	90.2
Strada Romea km 2.6 formerly 2B super Ravenna (Sotris)	X	X	6.3	0.4	0.0
Strada Romea km 2.6, formerly 2B super TN Ravenna	X	X	63.1	97.3	
Sotris)		74	03.1	77.5	90.2
Zocca – Modena	v	v	56.9	59.6	53.1
	X	X		220.4	
Castelmaggiore - Bologna (A.S.A.)	X	X	179.0		193.6
S. Agata Bolognese - Bologna (Nuova Geovis)	X		21.2	20.3	17.1
Tavullia – Pesaro-Urbino (Marche Multiservizi)	X		93.2	81.8	213.0
Montecalvo – Pesaro-Urbino (Marche Multiservizi)	X		39.4	69.6	
Jrbino (Marche Multiservizi)	X		30.3	36.8	
Γhird party landfills			104.1	48.9	45.4
Total landfills			1,400.4	1,429.7	1,268.
Coriano - Ravenna (Akron)	X	X	68.2	80.0	79.9
Modena (Akron)	X		60.0	60.6	55.6
Mordano - Bologna (Akron)	X	X	44.1	48.2	39.3
Lugo-Cotignola - Ravenna (Akron)	X	X	70.6	75.9	72.4
		Α		53.2	
Gerrara (Akron)	X		42.7		48.9
Other external plants			3.8	4.4	3.2
Total selection plants			289.3	322.2	299.2
Busca – Forlì-Cesena (Romagna Compost)			21.9	42.8	46.3
S. Agata Bolognese - Bologna (Nuova Geovis)	X		99.4	111.4	59.6
Stabilisation plant S. Agata Bol.se - Bologna (Nuova	x		0.0	0.0	
Geovis)					49.8
Ozzano - Bologna (Nuova Geovis)	X		21.5	22.0	20.2
Voltana di Lugo – Ravenna	X	X	48.3	52.6	55.9
Cà Baldacci Rimini	X	X	37.4	42.9	47.0
W = W-WW V V		A			
Ostellato - Ferrara	X		87.3	99.6	29.0
Stabilisation plant Ostellato (Ferrara)	X		0.0	0.0	72.7
WDF stabilisation plant - Ravenna	X		17.0	22.9	21.6
Tremonti Imola stabilisation plant - Bologna (Akron)	X	X	65.2	59.5	63.2
Faenza - Ravenna (Enomondo)	X		0.0	0.0	30.0
Stabilisation plant (Marche Multiservizi)	X		3.9	10.1	9.5
Total composting plants			402.0	463.8	504.7
Forli chemical phys. plant	X	X	25.3	38.6	18.8
Ravenna chemical phys. biological plant	X	X	187.3	215.7	138.8
Ravenna sludge treatment plant	Λ	Λ			
			134.8	115.3	113.0
Z.I. chemical phys. plant. Ravenna	X	X	243.2	342.4	259.8
Alfonsine chemical phys. biological plant - Ravenna	X		0.0	0.6	0.0
Russi chemical phys. plant - Ravenna			0.0	0.7	0.0
Lugo chemical-physical-biological plant – Ravenna	X	X	92.0	133.7	77.2
TFI stabilisation and chemical phys. plant Bologna	X	X	130.0	155.9	103.8
Ravenna stabilisation plant (Sotris)	X	X	10.3	15.4	14.2
Chemical-physical plant (with special waste platform)	X	X	8.3	- • •	
Ferrara	**	**	0.5	17.7	18.3
Area 2 Cavazza chemical physical plant Modena	v	X	133.3	66.6	61.8
	X	А			
Area 3 chemical physical plant Modena	X		19.9	22.4	3.1
	X		4.8	2.5	0.0
Soliroc plant Modena			76.3	91.1	69.9
Soliroc plant Modena Anaerobic digester Spilamberto - Modena					
Soliroc plant Modena			3.7		
Soliroc plant Modena Anaerobic digester Spilamberto - Modena			3.7	0.0	6.2
Soliroc plant Modena Anaerobic digester Spilamberto - Modena Leachate treatment plant Forlì-Cesena (Romagna Compost)					
Soliroc plant Modena Anaerobic digester Spilamberto - Modena Leachate treatment plant Forlì-Cesena (Romagna Compost) Experimental sludge treatment plant SOTRIS	v		12.5	8.8	6.7
Soliroc plant Modena Anaerobic digester Spilamberto - Modena Leachate treatment plant Forlì-Cesena (Romagna Compost)	x				

thousands of t	ISO 14001	EMA S	2009	2010	2011
Bologna separation	X		-0.2	0.1	0.2
Separation Tremonti Imola - Bologna (Akron)	X	X	-2.0	0.0	0.0
Forlì separation	X	X	5.2	0.0	0.0
Ostellato separation - Ferrara	X		-	1.4	0.4
Total mechanical separation plants			1.3	6.8	4.0
Third party plants (treatment plants)			1,133.3	1,348.9	1,108.6
Marche Multiservizi third party plants			69.4	103.8	107.6
Total other plants			1,202.7	1,452.7	1,216.2
Total			5,114.8	5,703.1	5,107.1

# Waste produced by Hera

The activities managed by the Hera Group generate various waste types: on the basis of the specific chemical-physical characteristics of the waste, it can subsequently re-enter the recovery (energy or material) or disposal processes managed within the Group.

Main types of waste produced by Hera

thousands of t	2009	2010	2011
Sludge from purification, treatment and distribution	148	129	133
Sand from wastewater treatment plants	19	18	19
Ash from purification sludge incineration	4	3	2
Other sludge produced by the Territorial Operating Structures (sewer cleaning, septic tanks, etc.)	6	4	2
Other waste produced by Territorial Operating Structures	1	2	1
Waste-to-energy plant electrofilter dust	25	28	45
Waste-to-energy plant waste	167	178	188
Solid waste from stabilisation	41	27	38
Sludge produced by chemical-physical-biological plants	69	102	85
Sludge treatment water	97	354	369
Separated oils produced by chemical-physical-biological plants	0	1	0
Surnatant from chemical-physical-biological plants	592	500	251
Leachate from landfills	458	781	491
Scavenging water/sludge from waste-to-energy plant fumes	125	62	66
Non-reusable fractions from plants for selection and for the production of fuel from waste	160	176	155
Other waste from Herambiente storage and plants	24	22	35
Total	1,936	2,387	1,882

Data refer to Hera S.p.A., Herambiente, Akron, FEA, Nuova Geovis, Romagna Compost, Marche Multiservizi from 2010; Enomondo and Feronia from 2011.

In 2011, the Group produced around 1.9 million metric tons of waste. In 2011, the quantities of waste produced by waste-to-energy plants (waste, dust and solid waste from stabilisation) increased due to the increase in quantities of waste sent to waste-to-energy plants. Leachate and waste from chemical-physical-biological plants fell because of the lack of rainfall during the year and, as a result, the fall in the production of by-products. The production of non-reusable fractions fell because of the lower quantities treated by selection plants as a result of the lower quantities of special waste treated.

The following are the disposal methods used for the main types of waste produced by the Group's operations:

- sludge generated by water offtakes, treatment and distribution: dehydration, landfill, reuse in environmental renovation works;
- purification sludge: landfills, conditioning and subsequent reuse in agriculture, thermal treatment, dehydration, transfer directly to agriculture;
- dust from waste-to-energy plants: stabilisation and successive disposal in appropriately controlled landfills;
- waste from waste-to-energy plants: landfills, recovery of iron and metal fractions, production of concrete and bricks;
- surnatant from chemical-physical-biological plants: biological purification treatment in plants;
- leachate from landfills: treatment in chemical-physical-biological plants;
- non-reusable fractions from plants for selection and for the production of fuel from waste: waste-to-energy, landfill.

# Recovery of waste-to-energy treatment plant waste

The growth and plant renovation plan pursued by Herambiente in recent years on its pool of waste-to-energy plants has had a positive impact on the production of combustion waste. The new combustion systems and, above all, the "gondola"-type combustion waste "cooling" (i.e. the operation to cool the waste produced in the oven by soaking it in water baths) and extraction systems make it possible to have waste with a very low quantity of unburned matter and reduced water content. This resulted in a both lower percentage of waste produced and, above all, a waste quality level more suitable for subsequent recovery.

In 2011 the 6 waste-to-energy plants managed by Hera for the disposal of urban waste produced 166,317 metric tons of waste, equal to 21% of the waste treated at these plants. 55% of the waste produced was recovered while the remaining 45% was disposed of at landfills. The recovery takes place in third party plants, thanks to consolidated, long-term commercial agreements in place. The waste is used to produce second raw materials, which are used in the production cycles of concrete and bricks. During the process, ferrous and non-ferrous metals are also recovered and then reused in the metallurgical industry.

# **Biodiversity**

In the last thirty years of the last millennium, with the spread of "environmental culture" and the gradual impoverishment of the planet's natural resources, we realised that we needed to protect the ecosystem in a more effective way. With this in mind the biggest global institutions have signed agreements to reduce the environmental impact deriving from human activities. One of the key issues of these agreements is the concept of biodiversity and the reasons behind the gradual reduction in the variety of animal and vegetable species. In 1992 all member states of the EC signed the Convention on Biological Diversity in Rio, recognising the in situ conservation of ecosystems and natural habitats as a priority to pursue, and setting themselves the goal of "anticipating, preventing and attacking the causes of significant reduction or loss of biological

diversity at source because of its intrinsic value and because of its ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic value".

As tangible proof of the commitments undertaken, the EU issued two directives, Directive no. 409/79, adopted in April 1979, regarding the conservation of wild birds (the "Birds Directive") and Council Directive no. 43/92, adopted in May 1992, regarding the conservation of natural habitats and wild flora and fauna ("Habitats Directive").

These two Directives constitute the legislative basis for the protection and conservation of habitats and wild species in Europe. Another of the key initiatives adopted was the creation of a consistent ecological network of protected areas in the European Union, known as NATURA 2000. The protected natural areas are portions of land or water areas where alterations generated by mankind are very limited or absent. These areas are subject to special projection and management regimes, as they are intended for the conservation of the biological diversity, cultural heritage and natural resources.

In the province of Ferrara, the two largest water collection plants (Pontelagoscuro and Stellata, on the Po river) are located within the Special Protection Area called "Fiume Po da Stellata a Mesola e Cavo napoleonico". In the province of Ravenna, the Marina di Ravenna treatment plant is located within the EU Conservation Area "Piallassa Piombone", while the Ravenna city treatment plant disposes of the wastewater treated within the SPA "Piallassa Baiona". At these two plants, in order to protect biodiversity, Hera carries out acute toxicity tests. In the period 2005-2011, these tests demonstrated that the water disposed of was not toxic in any way.

Hera's waste disposal plants, which are being upgraded and newly built, are subject to the Environmental Impact Assessment (EIA) procedure. For plants located near protected areas (generally within 5 km distance and when specific conditions exist that may result in even a limited impact), Hera performs a Incidence Assessment, which is a sort of evaluation of specific environmental impact for the peculiarities and natural abundance in the protected areas. The Councillor for Cultural Heritage, the Parks Department and the Region of Emilia-Romagna analyse these assessments, prescribing mitigation measures aimed at containing any impact and protecting the biodiversity of the indigenous plant and animal species (i.e. planting of species of trees and bushes, adoption of measures to avoid attracting animals which are excessively sythropic or opportunistically trophic).

In 2011, impact evaluations were carried out on SCI and/or SPA as part of a project to develop a sludge treatment plant in Cervia (Ravenna), projects to expand the landfills at Voltana di Lugo (Ravenna) and Baricella (Bologna), and the "Landfill mining" project involving the development of a new landfill for hazardous waste in Ravenna. In all cases, the outcome of the evaluations demonstrated a "low impact" on the Sites of Community Interest and Special Protection Areas closest to the intervention areas.

This evaluations analyse the possible interference of the planned work on the environment and, in particular, the specific biotic (flora, fauna and ecosystems) and abiotic components (air, soil, subsoil, surface water and underground water) in the protected area; also examined are aspects related to ecological connections, i.e. the presence of waterways, rows of trees, hedges etc., that make it possible to install ecological networks between the most natural ecosystems and the plant department subject to the work.

The projects to expand/develop landfills or other waste treatment plants contain a specific section dedicated to environmental renovation, renaturalisation and the visual mitigation of the areas surrounding the intervention location, which describe the specific actions aimed at creating and strengthening ecological networks in a manner consistent with existing networks.

# **Appendices**

# **Glossary**

# Inhabitant equivalent

The concept of inhabitant equivalent was introduced to enable the comparison of various types of sewage (urban, household, industrial) in terms of organic pollution. Using conversion factors, an estimation is made of how many inhabitants would be required to produce (with normal domestic sewage) the same amount of pollution. Generally, one inhabitant equivalent corresponds to 60g of BOD5 per day.

#### AEEG

The Italian Authority for Electricity and Natural Gas, formed under Law no. 481/1995.

# Water and Waste Regulatory Authorities (ATO)

In accordance with Law no. 36/1994, the ATO water and waste regulatory authorities define the local level of organisation of the integrated water services in order to overcome the fragmentation of management and to reach suitable sizes for the areas managed.

#### ARPA

Regional Environmental Protection Agency. The system of Regional Environmental Protection Agencies currently comprises 19 agencies across Italy.

### Ammonia nitrogen

The term ammonia nitrogen (NH<sub>4</sub>) refers to the concentration of ammonia ions in water. It provides an index of biodegradation of nitrogenous organic substances. It is expressed in mg/l.

### **Sustainability Report**

An instrument which accounts for the impact of corporate activities on three dimensions of sustainability: economic, social and environmental.

#### Biogas

Term used to refer to a mixture of types of gas (mainly methane) produced by natural bacterial fermentation (in anaerobic conditions, i.e. in the absence of oxygen) of organic residues from waste.

#### BOD

The term BOD (biochemical oxygen demand) is used to define the amount of oxygen consumed during a specific time period (5 days for BOD5), at a given temperature, to biodegrade the organic matter present in the water via bacterial action (uptake of oxygen by micro-organisms). High biochemical oxygen demand indicates intense biodegradation of organic matter, and may highlight the presence of organic pollution. It is therefore an indirect measure of pollution levels. Its value is expressed in mg/l.

### Bonds

Stock loan issued by a company. These are long-term loans: investors are guaranteed the right to annual interest payments at a fixed rate, with return of the capital on a set date.

### **Services Charter**

Corporate document that establishes quality standards for corporate services.

#### **CCGT**

A Combined Cycle Gas Turbine is an electricity generation plant that functions thanks to the combined presence of a gas turbine and a steam turbine. CCGT technology is one of the most advanced available today and guarantees elevated performances and greater environmental compatibility.

### WDF

Waste-derived fuel.

#### **Green certificates**

Certificates issued according to the provisions of Article 5 of the Italian Ministerial Decree dated 11 November 1999. All producers or importers must introduce into the grid a 6.05% quota of electricity produced from plants fuelled by renewable sources. Electricity produced at plants fuelled by renewable sources is entitled to Green Certification. Green Certificates can be sold as a means of ensuring compliance with the obligation to introduce energy from renewable sources.

#### COD

The term COD (chemical oxygen demand) refers to the amount of oxygen required for the complete oxidation of organic and inorganic compounds present in a water sample. Thus, this is an index for measuring the degree of pollution, mainly organic, in the water from substances which can be oxidized. It is expressed in mg/l.

### **Code of Ethics**

Document setting forth a number of principles and specifying conduct, commitments and ethical responsibilities to be put into practice by members of the Board of Directors, staff and collaborators of the company.

The Code may be described as a "Constitutional Charter" of a company, a charter of moral rights and duties that establishes the ethical and social responsibilities of all those who work within the organisation.

## Cogeneration

Simultaneous production of electricity and thermal energy (in the form of steam).

# Composting

Aerobic treatment (in the presence of oxygen) of biodegradable organic waste, whose final product is compost, a soil improver, which can be used in vegetable cultivation.

# Social cooperatives

Cooperatives regulated by Law no. 381 of 8 November 1991. This law breaks these cooperatives down into two types:

- type A = cooperatives providing social, health and educational services;
- type B = cooperatives operational within the production and labour sectors which have, among their members, a level of at least 30% who are differently-abled or otherwise face hardship.

# **Corporate governance**

The processes, policies, habitual practices, laws and institutions which influence the manner in which a company is managed and controlled. Corporate Governance also covers the relations between the various players involved (stakeholders, those who have a vested interest of any type in the company).

#### CSR

Corporate Social Responsibility is the set of social, environmental and economic responsibilities that the company must take on to meet the legitimate expectations of its stakeholders.

## Warning

A warning is a deed issued by the Public Administration and/or supervisory bodies in cases where, in exercising their inspection and control activities, they detect existing or possible future deviations from regulations and provisions of national and regional law: the warning sets a term by which breaches must be eliminated.

## **Dispatching (electricity sector)**

Activities aimed at providing instructions for the use and the coordinated operation of production plants, the transmission grid and auxiliary services (Bersani Decree).

# **Dispatching (gas sector)**

Activities aimed at providing instructions for the use and the coordinated operation of extraction and storage plants, the transport and distribution network and auxiliary services (Letta Decree).

#### **EMAS**

EU Regulation no. 761/2001 which provides for the adoption by business concerns of environmental management systems based on policies, programmes, procedures and objectives aimed at improving the environment, and the publication of an Environmental Statement, to be validated by the Ecoaudit Committee.

# **Primary energy**

Primary energy is the energy potential presented by energy carriers in their natural form, for example oil, natural gas, coal, natural uranium, water and other renewable energy sources. In the majority of the cases, the primary energy must be transformed into secondary energy in electricity power stations, refineries, etc.

#### Focus group

A surveying technique based on discussions between members of a group of persons. The main aim is to conduct an in-depth study of a specific issue in relation to given targets. Interaction between focus group members provides the basis for the surveying action.

#### **Ethical funds**

This term is used to describe mutual investment funds whose choice of shares, bonds and government securities is inspired by ethical selection criteria. These parameters are defined as exclusion/inclusion.

### Renewable energy sources

Renewable energy sources are: wind, solar, geothermal, wave motion, tidal, hydraulic, biomass, landfill gas, treatment process gas and biogas. Biomass means the biodegradable part of products, waste and residues generated by farming (including vegetable and animal substances), forestry and associated industries, as well as the biodegradable part of industrial and urban waste.

# Greenhouse gas

These gases are transparent with respect to solar radiation, and prevent the dispersion of heat from the Earth, thus leading to the overheating of the atmosphere. Over and above greenhouse gases of natural origin, the main greenhouse gases produced by mankind are carbon dioxide, methane, chlorofluorocarbons and nitric oxides.

#### Geothermics

The science dedicated to problems relating to the internal energy of the Earth and to the practical applications of this energy source.

#### IAFR

Qualification as an IAFR, a "Plant Fuelled by Renewable Energies", is a prerequisite for obtaining some of the most important incentives for the production of electricity from renewable sources (issuing of Green Certificates and access to the feed-in tariff). The Energy Services Manager has the task of qualifying production plants fuelled by renewable sources once possession of the necessary requisites has been verified. IAFR qualification can be attained both by plants that are already operational and plants that are at the planning stage at the time of the request.

### **KPI**

Key Performance Indicators are specific indicators selected on the basis of corporate information needs. They are used to carry out corporate monitoring. KPIs may be financial, production-oriented, commercial, environmental or social in nature, or may regard multiple aspects.

#### **Mobility Management**

Refers to an internal corporate department in charge of managing staff commuting.

#### $\mathbf{Nm}^3$

Normal cubic metre, volume of gas at 0°C and 0.1 Mpa

### OHSAS 18001: 2007

The OHSAS 18001 (Occupational Health & Safety Assessment Series) standard is an internationally recognised benchmark for the certification of workplace health and safety management systems.

#### Nitric oxides

Nitric oxides (mainly NO and NO<sub>2</sub>), gases produced by the combustion of fossil materials. Nitric oxides contribute to the formation of ozone in the lower atmosphere and acid rain.

# PCB (polychlorinated biphenyls)

Highly toxic organic compounds used in a wide range of applications e.g. as fluids for capacitors and transformers. When managing and disposing of them careful attention must be paid to ensure they are not released into the environment, in accordance with laws in force.

# Leachate

Substance deriving from the filtration of water and other liquid mixtures through waste.

#### $PM_{10}$

Particulate matter, or dust, of a diameter of less than 10 microns from various sources (natural or generated by mankind).  $PM_{10}$  includes a variety of solid or liquid particles of differing characteristics. Given their smallness, they tend to remain suspended in the air.

#### Heat pump

This is a device capable of transferring heat from a body at a lower temperature to a body at a higher temperature, using electricity.

# Waste

Legislative Decree no. 22/1997 defines waste as "any substance or object which the holder disposes of or has decided or is required to dispose of". This decree classified waste based on its origin, as urban or industrial, and, according to the level of dangerousness, as hazardous or non-hazardous.

# **SA 8000**

International certification standard regarding respect for human rights, respect for workers' rights, safeguards against exploitation of minors, and guarantees with respect to workplace health and safety conditions.

### **TSS**

The term TSS (total suspended solids), which are the cause of the turbidity of liquids, means the total amount of suspended solids and filterable solids. This represents the total amount of substances present in the sample following drying, at 105°C. Its value is expressed in mg/l.

#### Stakeholders

Stakeholders are persons with vested interests. They may or may not belong to the company of which they are a stakeholder, and they may have a bearing on the decisions, conduct or success of a company.

#### Subsidence

Sinking of the soil caused by the lowering of the underground water table, in turn caused by withdrawal of groundwater at a faster rate than the natural recharging time.

### Sustainable development

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Bruntland Report, World Commission for Economic Development, 1987).

### **District Heating**

Transfer over distances of heat from thermoelectric power stations, cogeneration plants or waste-toenergy plants through an energy vector (hot water, superheated water, steam).

#### Toe

Tonne of oil equivalent. Conventional unit of measurement of sources of energy equivalent to 10,000 Mcal (= the energy obtained from combustion of a tonne of oil).

# Waste-to-energy plant

Plants using waste as a fuel to produce heat or energy.

## Turboexpander

Machine that transforms energy of a given kind (e.g. potential energy) into mechanical energy, made available for use via a rotating axis. The resulting energy may in turn be used for the production of other energy (e.g. by coupling an alternator to the turbine to enable the alternator to exploit the mechanical energy to produce electricity).

# **UNI EN ISO 9001:2008**

International technical standard for the certification of quality management systems.

### UNI EN ISO 14001: 2004

International technical standard for the certification of environmental management systems.

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