### 2.02.06
## Commentary notes to the financial statement formats

Please note that paragraphs 1.01 and 1.02 of the management report provide an analysis of the business' management performance that may contribute to a better understanding of changes in the main categories of operating expenses and revenues.

## 1 Revenues

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Revenues from sales and services | 6,118.9 | 5,612.9 | 506.0 |
| Changes in contract work in progress, semi-finished and finished products | 15.5 | (0.8) | 16.3 |
| **Total** | **6,134.4** | **5,612.1** | **522.3** |

"Revenues from sales and services", the increase compared to the previous fiscal period mainly stems from the Gas and Electricity operating sectors. Concerning the Gas and Electricity sectors, there was an increase in volumes of both trading activities on the natural gas markets and the sale of electricity and methane gas, partially offset by a decrease in trading activities on electricity and revenues from the sale of energy produced by the plants managed by the Group.

This item essentially includes allocations for services provided to end customers not yet invoiced, including 166 million euro for the Gas sector, 150 million euro for the Electric sector and 76.2 million euro for the Water sector.

Revenues are earned mainly in Italy.

"Changes to contract work in progress, semi-finished and finished products" the increase compared to the previous fiscal period is mainly attributable to the higher volume of contract work in the public lighting and heat management businesses.

## 2 Other operating revenues

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Long-term contracts | 254.5 | 255.5 | (1.0) |
| White certificates | 95.7 | 128.6 | (32.9) |
| Operating grants and grants for separated waste collection | 63.3 | 62.5 | 0.8 |
| Grants related to plants | 10.7 | 9.8 | 0.9 |
| Use of funds | 7.3 | 5.6 | 1.7 |
| Insurance refunds | 4.8 | 4.3 | 0.5 |
| Other revenues | 55.7 | 58.5 | (2.8) |
| **Total** | **492.0** | **524.8** | **(32.8)** |

The most substantial changes by comparison with the previous fiscal year are described below.

"Long-term contracts" include revenues generated from the construction or improvement of infrastructures held in concession as per the interpretation of IFRIC 12 The change is due to a lower number of investments in the water networks and public lightning plants as compared to the 2017 financial year, partially counterbalanced by an increase in investments in natural gas distribution networks.

“White Certificates”, highlight the revenues calculated on the basis of energy efficiency objectives for the year as established by the Gse and accounted for in relation to the Cassa per i Servizi Energetici e Ambientali. The negative change of 32.9 million euro is due mainly to the significant decrease in the price due to the decree of the Ministry of Economic Development of July 10th 2018 that introduced a maximum value of the contribution for distribution companies equal to 250 euro per security, a value much lower than the contribution for the period 2017. The decrease is also due, albeit only to a residual degree, to the different timing of fulfilment of the obligations as compared to the previous year.

"Operating grants and grants for separated waste collection" include operating grants, amounting to 32.9 million Euro (31.1 million Euro in 2017), mainly comprising incentives provided by the GSE for the production of energy from renewable sources and contributions from sorted waste collection in the amount of 30.4 million euro (31.4 million euro in 2017) mainly comprising the value of packaging (cardboard, iron, plastic and glass) transferred to the Conai consortia.

"Grants related to plants" represent the proceeds associated with the depreciation rate of the assets subject to grants.

"Use of funds", this item is associated with the costs incurred internally and duly accounted for in relation to labour, leachate and use of vehicles.

"Other revenues" mainly represents proceeds from recovering the costs incurred for activities related to environmental, electrical and gas services.

## 3 Use of raw materials and consumables

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Gas earmarked for sale, net of changes in stocks | 1,450.8 | 1,063.8 | 387.0 |
| Electricity | 1,207.6 | 1,182.6 | 25.0 |
| White and grey certificates | 105.5 | 121.5 | (16.0) |
| Maintenance materials net of changes in stocks | 71.2 | 71.6 | (0.4) |
| Plastics net of changes in stocks | 51.1 | 44.7 | 6.4 |
| Water | 48.8 | 52.0 | (3.2) |
| Chemical products | 17.5 | 16.9 | 0.6 |
| Fuels, motor fuels and lubricants | 16.3 | 16.0 | 0.3 |
| Methane gas for industrial use | 13.9 | 15.6 | (1.7) |
| Fuels for heat management | 1.8 | 1.9 | (0.1) |
| Charges and revenues from derivatives | (32.9) | (8.9) | (24.0) |
| Consumables and miscellaneous | 32.5 | 29.1 | 3.4 |
| **Total** | **2,984.1** | **2,606.8** | **377.3** |

"Gas earmarked for sale net of changes in stocks", the increase as compared to the 2017 financial year is due to the greater volumes of trading activity on the wholesale natural gas markets and to the increase in sales to end customers.

"White, Grey and Green Certificates" includes the purchase cost of the various types of environmental certificates incurred during 2018, and specifically: 90.8 million euro for White certificates (119.5 million euro in 2017) and 14.2 million euro for Grey certificates (1.8 million euro in 2017). The change from the previous year was due to the different purchasing requirements in view of the Group's certificate needs. In relation to white certificates, these needs are defined on the basis of the requirements for the distribution companies that show procurement prices sharply decreasing as well as different completion timings of the requirements as compared to the previous year. With regard to grey certificates, both greater price volatility as compared with the previous period, resulting in a significant increase in market value, and greater trading activity were recorded in 2018.

"Plastic materials" includes the cost of purchasing plastic raw materials destined for subsequent processing, transformation and sales.

For the item "Charges and revenues from derivatives," please see note 19 of the statement of financial position.

## 4 Service costs

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Transport and storage | 998.7 | 941.0 | 57.7 |
| Work and maintenance expenses | 363.9 | 373.2 | (9.3) |
| Waste transportation, disposal and collection | 324.0 | 299.0 | 25.0 |
| Fees paid to local authorities | 67.4 | 71.2 | (3.8) |
| IT and data processing services | 46.2 | 39.5 | 6.7 |
| Professional, legal and tax services | 33.0 | 28.5 | 4.5 |
| Other commercial services | 27.0 | 26.2 | 0.8 |
| Rents and leases payable | 26.7 | 24.8 | 1.9 |
| Technical services | 22.0 | 19.5 | 2.5 |
| Recruitment, training and other staff costs | 19.9 | 19.3 | 0.6 |
| Agency costs | 18.6 | 15.8 | 2.8 |
| Insurance | 15.8 | 16.8 | (1.0) |
| Postal and telephone costs | 14.5 | 16.3 | (1.8) |
| Bank fees and charges | 10.7 | 11.4 | (0.7) |
| Legal and financial announcements and advertising, communication with customers | 8.0 | 6.4 | 1.6 |
| Cleaning and surveillance services | 7.7 | 7.8 | (0.1) |
| Meter reading | 6.9 | 6.5 | 0.4 |
| Remuneration to statutory auditors and directors | 5.2 | 5.5 | (0.3) |
| Rents payables | 4.0 | 4.3 | (0.3) |
| Other service costs | 20.3 | 19.3 | 1.0 |
| **Total** | **2,040.5** | **1,952.3** | **88.2** |

"Transport and storage" includes the costs of distributing, transporting and storing gas as well as electricity distribution as well as the network costs charged to the end customers. The increase as compared to 2017 is mainly due to the increase in electricity sales volumes.

"Charges for works and maintenance" includes the costs for the construction or improvement of infrastructures under concession pursuant to the application of the IFRIC 12 interpretation and costs for maintaining the plants: The change compared to the previous year is mainly due to fewer investments in networks under concession and to the decrease of the maintenance costs incurred for landfills and WTE plants.

“Waste transportation, disposal and collection," the increase is mainly due to the greater costs of waste disposal, and greater costs incurred in developing the commercial activity of the "decontamination" business, as well as the outsourcing process for treating by-products from composting plants.

"Fees paid to local authorities" includes, among other charges, the fees incurred for the use of public owned networks, fees paid to companies that own these assets for the management of gas, water and electricity cycle assets, and the fees paid to municipalities for the use of telecommunications networks.

"IT and data processing services", the increase is due both to higher costs for maintenance activities on existing applications used and the implementation of new applications.

"Professional, legal and tax services", the change is mainly due to back office costs for the administrative management of contracts for gas and electricity customers.

"Other costs for services” mainly includes the items concerning consumption, organizational services and laboratory analyses.

The value of rents payables still due on December 31st 2017 concerning the operating lease contracts, included under the item "Rents and leases payable", amounted to 130.2 million euro.

## 5 Personnel costs

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Salaries and wages | 384.9 | 384.6 | 0.3 |
| Social security expenses | 128.6 | 126.9 | 1.7 |
| Post-employment and other benefits | 0.7 | 0.8 | (0.1) |
| Other costs | 37.2 | 39.3 | (2.1) |
| **Total** | **551.4** | **551.6** | **(0.2)** |

The cost of labour is essentially in line with the previous financial year, due to the normal evolution of contractual dynamics.

The average number of employees in the period in question, analysed by category, is as follows:

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Managers | 150 | 153 | (3) |
| Middle management | 532 | 534 | (2) |
| Clerks | 4,593 | 4,596 | (3) |
| Blue-collar workers | 3,287 | 3,395 | (108) |
| **Total** | **8,562** | **8,678** | **(116)** |

Overall, the average cost of labour per capita for 2018 was 64.4 thousand euro (63.6 thousand euro in 2017).

At December 31st 2018, the actual number of employees was 8,622 (8,683 employees at December 31st 2017).

## 6 Other operating costs

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Taxation other than income taxes | 17.5 | 13.0 | 4.5 |
| State rentals | 12.3 | 13.0 | (0.7) |
| Losses on the sale and disposal of assets | 5.6 | 12.3 | (6.7) |
| Landfill special tax | 3.9 | 5.3 | (1.4) |
| Bad debt losses | - | 15.1 | (15.1) |
| Other minor charges | 23.2 | 25.9 | (2.7) |
| **Total** | **62.5** | **84.6** | **(22.1)** |

"Taxation other than income taxes" mainly relates to taxes on buildings, stamp duties and registration fees, public area occupation fees and excise duties. The increase from the previous period is mainly due to the payment of the Ici/Imu tax for previous fiscal periods as a result of a court settlement. Please refer to the detailed information in paragraph "tax litigations" at note 11 "taxes".

"State rentals" is mainly related to fees paid to the Emilia Romagna region, land reclamation consortia, sector agencies and mountain-area communities.

"Losses on the sale of goods and disposal of assets", arising mainly from the disposal of certain components of the distribution networks district heating and WTE plants. The most significant investments for the year relate mainly to the divestiture of WTE components, in the amount of 1.8 million euro, and meters, in the amount of 1.3 million euro.

"Special landfill levy" refers to the relevant environmental tax for the period on landfills operated by the Group. The decrease of 1.4 million euro is due mainly to lower volumes delivered to the Ravenna landfill and the temporary interruption of deliveries to the Tre Monti landfill.

"Credit losses" for the 2017 fiscal year referred mainly to the sale of "non performing" credits, related to household customers, for which the extra-judicial recovery activities ended with negative results. Such sale did not occur over the course of 2018.

"Other minor charges" mainly includes compensation for damages, fines, penalties and other non-recurring charges.

## 7 Capitalized costs

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Increase in self-constructed assets | 43.2 | 43.0 | 0.2 |

This item includes mainly the labour costs and other charges (such as storage materials and use of vehicles) directly attributable to the Group's self-constructed assets.

## 8 Amortisation, depreciation and provisions

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Amortisation property, plant and equipment | 164.5 | 165.8 | (1.3) |
| Amortisation intangible assets | 220.8 | 203.9 | 16.9 |
| Allowance for bad debts | 89.3 | 103.4 | (14.1) |
| Provisions for risks and charges | 46.9 | 45.2 | 1.7 |
| Impairment of property, plant and equipment and intangibles | 6.2 | 13.8 | (7.6) |
| De-provisioning | (6.7) | (8.4) | 1.7 |
| **Total** | **521.0** | **523.7** | **(2.7)** |

For breakdowns and further detail about these items, please refer to the comments under "property, plant and equipment", "intangible assets", "goodwill", "trade receivables" and "provisions for risks and charges" of the statement of financial position.

For "Amortisation property, plant and equipment", the decrease is mainly due to the lower contributions made to the Group's landfills as compared to the previous financial period, which led to lower amortisation and depreciation amounting to 1.4 million euro.

For "Amortisation intangible assets", the increase is mainly due to goods relating to public services under concession as a result of contract work carried out in previous years and the operations to develop and implement the IT systems. In addition, the acquisition of control over Blu Ranton Srl and Sangroservizi Srl in the 2018 financial period, as well as the acquisition of 13,000 electric customers for the greater protection service in the municipality of Gorizia , resulted in higher depreciation in the current period in the amount of approximately 1.9 million euro as a consequence of the registration of client lists.

"Impairment of property, plant and equipment and intangibles" mainly refers to:

- plants no longer in use in the Environment sector for 3.2 million euro, for which the technical valuations carried out at the end of the period quantified no recoverable value;
- Goodwill recorded during the initial consolidation of the company ASA ScpA, in the amount of 2.8 million euro; Following the impairment test, goodwill was completely written down, as the company is close to ceasing operations and the financial assets recorded, added to the residual cash flows, are sufficient exclusively to meet future obligations.

The item “De-provisioning” includes the re-verification of the funds in view of the fact that the underlying risks no longer exist. As of December 31st 2018, there were reclassifications in the amount of 2.6 million euro to the "Post-mortem provision", of 1.3 million euro to the "Waste disposal provision", of 1.6 million euro to the "Provision for legal and personnel disputes" and to the "Other provisions for risks and charges" in the amount of 1.2 million euro.

## 9 Share of profits (losses) pertaining to joint ventures and associated companies

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Joint venture share of net profits | 7.8 | 8.5 | (0.7) |
| Associated companies share of net profits | 7.1 | 6.2 | 0.9 |
| **Total** | **14.9** | **14.7** | **0.2** |

The share of profits/losses of joint ventures and associated companies includes the effects generated by the valuation of the companies included in the consolidation carried out using the equity method.

The "net joint venture income" mainly refers to the share of the Group's net income earned by Enomondo Srl, 2.6 million euro (2.7 million euro in 2017) and Estenergy Spa, 5.2 million euro (5.8 million euro in 2017).

"Associated companies share of net profits" relates to the companies:

- Aimag Spa, profits for 2.6 million euro (3.5 million euro in 2017);
- Sgr Servizi Spa, profits for 3,9 million euro ( 4 million euro in 2017).
- Aimag Spa, profits for 0.6 million euro (losses for 1.4 million euro in 2017);

## 10 Financial income and expense

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Revenues from derivatives | 57.7 | 49.3 | 8.4 |
| Customers | 25.0 | 27.3 | (2.3) |
| Other financial income | 14.2 | 7.9 | 6.3 |
| Income from valuation at fair value of financial liabilities | - | 20.5 | (20.5) |
| **Total income** | **96.9** | **105.0** | **(8.1)** |
| | | | |
| Financing and Bonds | 91.7 | 91.6 | 0.1 |
| Charges from derivatives | 46.0 | 68.6 | (22.6) |
| Discounting of provisions and finance leases | 21.3 | 21.4 | (0.1) |
| Charges from valuation at fair value of financial liabilities | 15.9 | 5.7 | 10.2 |
| Valuation at depreciated cost of financial liabilities | 11.0 | 8.8 | 2.2 |
| Write-downs of financial assets: | 6.9 | 9.5 | (2.6) |
| Loans | 4.9 | 4.9 | - |
| Factoring | 3.6 | 5.1 | (1.5) |
| Other financial expenses | 2.2 | 5.6 | (3.4) |
| **Total expenses** | **203.5** | **221.2** | **(17.7)** |
| | | | |
| **Total net financial expense (Income)** | **(106.6)** | **(116.2)** | **9.6** |

The change in financial management is described, overall, in the Directors' Report.

For further details on "Loans" and "Financing and bonds", see note 26 "Non-current and current financial liabilities", while for "Income and charges from valuation at fair value of financial liabilities" and "Income and charges from derivatives", see note 19 "Derivative financial instruments".

"Customers", mainly includes the interest on payments in arrears billing system for the gas and electricity customers.

"Other financial income" mainly includes capital gains earned from the sale of equity investments, dividends received from non-consolidated investee companies and income related to discounted receivables..

The item "Discounting of provisions and finance leases" is broken down as follows:

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Post-closure landfills | 14.1 | 12.8 | 1.3 |
| Restoration of third-party assets | 5.8 | 7.0 | (1.2) |
| Employee leaving indemnity and other benefits | 0.9 | 1.0 | (0.1) |
| Finance leases | 0.3 | 0.4 | (0.1) |
| Plants dismantling | 0.2 | 0.2 | - |
| **Total** | **21.3** | **21.4** | **(0.1)** |

The most substantial changes by comparison with the previous year are due to.

- the decrease in the discount rate used to determine the present value of the "Post-closure landfill fund", following the updating of its parameters to reflect current market conditions, as well as the revision of the assumptions on the timing of future disbursements in relation to certain depleted landfills;
- a lower incidence of adjusting the present value of the "Provision for restoration of third party assets" compared to the previous year, when the significant reduction in the discount rate used had led to a significant increase of financial charges.

"Write-downs of financial assets" mainly includes:

- loan of 4.5 million euro provided to the affiliate company Tamarete Energia Srl following the impairment test, as explained in Note 31 "Impairment Test";
- investment in the associated company Q.tHermo Srl for 1.5 million euro, the value of which is no longer considered recoverable in light of the significant uncertainties regarding the positive outcome of the authorisation process that would allow it to start operating;
- investment and financing of the Ioota Srl for a total of 0.5 million euro, the value of which is no longer considered recoverable as it is no longer part of the Groups development strategies;

The item "Valuation at depreciated cost of financial liabilities" represents the breakdown (depreciation) of the costs associated with financial liabilities for the entire duration of the loans using the effective interest method. The item is affected by the first application of the accounting principle IFRS 9, as illustrated in section 2.02.02, which should be consulted for further details.

"Factoring" refers to the sale of receivables aimed at optimizing the management of the Group's working capital.

## 11 Taxes

This item is made up as follows:

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Current taxes (Ires, Irap and substitute tax) | 132.6 | 166.8 | (34.2) |
| Deferred taxes | 5.9 | 1.5 | 4.4 |
| Pre-paid taxes | (16.7) | (75.7) | 59.0 |
| **Total** | **121.8** | **92.6** | **29.2** |

Taxes for the fiscal period increase from 92.6 million euro in 2017 to 121.8 million euro in 2018; The tax rate for 2018 is thus 29.1% as compared to the 25.8% of the previous year.
It should be noted that the tax rate of the previous year benefited from exemption operations, through payment of substitute tax, controlling shares and goodwill for a total of 19.2 million euro. Consequently, the tax rate of 29.1% for the 2018 financial year, if compared to that of the previous year, net of the exemption operations, in the amount of 30.9%, nevertheless improved. The benefits in terms of maxi and over amortization contributed in particular to this trend (the latter relating to substantial investments in capital goods needed for the technological and digital transformation of the company as it moves towards Industria 4.0) as well as to the concessions relating to the patent box and the tax credit for research and development.

Current taxes are broken down as follows:

| | 2018 | 2017 | Changes |
|---|---|---|---|
| Ires | 105.0 | 113.0 | (8.0) |
| Irap | 27.1 | 29.6 | (2.5) |
| Substitute tax | 0.5 | 24.2 | (23.7) |
| **Total** | **132.6** | **166.8** | **(34.2)** |

The statutory tax rate determined on the basis of the configuration of taxable income for the purposes of IRES is equal to 24%; the reconciliation with the effective rate is shown below.

| | 2018 | | 2017 | |
|---|---|---|---|---|
| | **Nominal effect** | **Percentage effect** | **Nominal effect** | **Percentage effect** |
| Earnings before taxes | 418.4 | | 359.4 | |
| **Ires** | | | | |
| Standard rate | (100.4) | (24.0)% | (86.3) | (24.0)% |
| Irap deduction | 0.8 | 0.2% | 0.6 | 0.2% |
| Participation exemption and impairment | (1.2) | (0.3)% | (2.4) | (0.7)% |
| Impairment of assets and goodwill | (0.7) | (0.2)% | (2.8) | (0.8)% |
| Tax benefits and incentives | 8.5 | 2.0% | 6.3 | 1.8% |
| IRES in previous financial periods | (0.2) | (0.0)% | 4.3 | 1.2% |
| Other changes (increases and/or decreases) | (0.5) | (0.1)% | (1.7) | (0.5)% |
| **Irap and other current taxes** | | | | |
| Irap | (27.5) | (6.6)% | (21.7) | (6.0)% |
| Exemption | (0.6) | (0.1)% | 11.1 | 3.1% |
| **Taxes** | **(121.8)** | **(29.1)%** | **(92.6)** | **(25.8)%** |

This reconciliation is performed only in connection with the IRES, given that, as a result of the particular rules governing the IRAP, reconciliation between the statutory tax rate derived from financial statement information and the effective tax rate, determined according to fiscal regulations, is no longer very meaningful.

The item "Tax benefits and incentives" includes benefits relating to patent boxes, tax credits for research and development, maxi and over amortization.

The item "Exemption" includes the substitute tax reported in the financial period and the release of the relevant amount of substitute tax associated with operations carried out in previous years. The value of the previous year mainly included the substitute tax recognised in the period and the tax asset recognised for IRES purposes for the exemption of controlling shareholdings and goodwill carried out in 2017.

The prepaid and deferred taxes relating to the year 2018 refer to the following variations between taxable income and profit recorded in the financial statements:

| **Deferred tax assets** | **2018** | | | **2017** | | |
|---|---|---|---|---|---|---|
| | **Differences** | **Tax effect (Ires + Irap)** | **Other minor changes** | **Differences .** | **Tax effect (Ires + Irap)** | **Other minor changes** |
| **Pre-paid taxes with effect on the income statement and the statement of comprehensive income.** | | | | | | |
| Allowance for bad debts | 176.6 | 42.4 | | 138.9 | 33.3 | |
| Provisions for risks and charges | 158.8 | 41.9 | | 152.1 | 35.3 | |
| Provisions for employee benefits | 10.4 | 2.8 | | 13.8 | 3.7 | |
| Depreciation | 376.0 | 94.9 | | 368.8 | 94.0 | |
| Equity investments | 143.9 | 40.3 | | 149.4 | 41.8 | |
| Cash flow hedge | 9.2 | 2.2 | | 0.7 | 0.1 | |
| Other | 70.0 | 18.9 | | 47.1 | 12.5 | |
| **Total tax effect** | **944.9** | **243.4** | **4.4** | **870.8** | **220.7** | **1.7** |
| Credited (or debited) amount to the statement of comprehensive income | | 1.6 | | | 0.1 | |
| Credited (or debited) amount to the income statement | | 16.7 | | | 75.7 | |

| **Deferred tax liabilities** | **2018** | | | **2017** | | |
|---|---|---|---|---|---|---|
| | **Differences** | **Tax effect (Ires + Irap)** | **Other minor changes** | **Differences .** | **Tax effect (Ires + Irap)** | **Other minor changes** |
| **Deferred taxes with effect on the income statement and the statement of comprehensive income.** | | | | | | |
| Provisions for risks and charges | 45.7 | 13.2 | | 48.0 | 13.8 | |
| Provisions for employee benefits | 2.3 | 0.7 | | 2.2 | 0.6 | |
| Depreciations (fta - fair value as deemed cost) | 283.9 | 81.2 | | 282.8 | 80.6 | |
| Deductible goodwill | 29.2 | 8.2 | | 26.2 | 7.4 | |
| Leases | 3.4 | 0.9 | | 3.4 | 1.0 | |
| Accrued capital gain | 1.0 | 0.2 | | 1.6 | 0.4 | |
| Cash flow hedge | 26.7 | 7.7 | | 5.1 | 1.5 | |
| Other | 67.3 | 16.3 | | 51.0 | 12.2 | |
| **Total tax effect** | **459.5** | **128.4** | **5.0** | **420.3** | **117.5** | **23.5** |
| Credited (or debited) amount to the statement of comprehensive income | | - | | | - | |
| Credited (or debited) amount to the income statement | | (5.9) | | | (1.5) | |

"Changes in equity" includes the balances of deferred tax assets and liabilities arising from:

- business combination operations that were accounted for in accordance with the international accounting principle IFRS3 revised (please see paragraph 2.02.03 for the specific values recorded during 2018).
- the first application of the accounting principle IFRS 9 "Financial instruments", (illustrated in section 2.02.02, which should be consulted for further details).
- marginal reclassifications arising between deferred tax assets and liabilities

These changes do not have an effect on the income statement or the statement of comprehensive income.

In determining tax rates for the period, the Group took into due consideration the effects of the IAS tax reform introduced by law 244 of December 24th 2007, and associated implementational decrees, Ministerial Decree of April 1st 2009, no. June 8th 2011, to coordinate international accounting standards with the rules to determine the taxable base for IRES and IRAP purposes, as per article 4, paragraph 7-quarter, of 38/2005. In particular, the reinforced derivation principle of article 83 of the Consolidated Tax Act (TUIR) was applied, which calls for entities that use IFRSs to use, including in a departure from the provisions of the TUIR, "the criteria for the determination, recognition and classification in the financial statements provided for by said accounting standards"

**Reporting on tax litigations**
Below is a brief summary of tax litigations as of December 31st 2018:

- Notices of assessment for Ici served to Herambiente Spa and Hera Spa concerning the classification in the real estate registry of the Ferrara waste-to-energy plant. Notices of assessment issued over time referred to tax periods from 2008 to 2014 and altogether amount to 10.2 million euro. In relation to the years 2008 and 2009, the rulings that the court of Ferrara issued in 2016 were all in favour of the Company. Subsequently, following the favourable, definitive rulings on the classification, on February 11th 2019 the Municipality of Ferrara issued orders for the total annulment of the assessments for the periods between 2008 and 2012 and the partial annulment for 2013 (for which EUR 0.7 million remain to be assessed). As of today, only the proceedings for 2014, amounting to 1.5 million euro, remain suspended until the favourable ruling concerning the land registry dispute , which has already been issued, is finalized. The Group, having consulted with its lawyers, decided it was not necessary to proceed with any risk fund provisions for the disputes in question, as the alleged violations are considered unfounded.
- Notices of assessment for ICI/IMU were served to Herambiente Spa concerning land, facilities and buildable areas located in Ravenna. These notices of assessment relate to tax periods from 2011 to 2015 and altogether amount to 2.1 million euro. The Company filed appeals or complaints against these notices in February 2017. Some of these disputes were settled by judicial settlements in June 2018, resulting in an outlay of 1.8 million euro. The Group, having obtained the advice of its legal counsel, decided to maintain a provision of 0.2 million euro to cover residual risks;
- Request to appear for non-payed Ici/Imu from 2010 to 2015 served to the Frullo Energia Ambiente Srl company, concerning the real estate registry classification of the waste to energy plant located in the municipality of Granarolo dell'Emilia. Notices of assessment issued during 2016 and 2017 related to tax periods from 2010 to 2015 and altogether amount to 29.2 million euro (including taxes, fines and interests). The Company filed appeals against these notices over the course of 2017 and the ruling by the Provincial Tax Committee, filed February 12th 2018, was unfavourable. On May 31st 2018 appeals were lodged with the Regional Tax Commission of Emilia Romagna in reference to the two unfavourable rulings. Finally, on October 23rd 2018, a judicial settlement was signed between the parties, providing for the payment of 4.5 million euro for taxes, penalties and interest; consequently, the Regional Tax Committees declared the trial to be extinguished due to the cessation of the dispute. It should be noted that the overall impact for company amounted to 2.3 million euro, seeing as 2.2 million euro can be reported in the context of the economic-financial plan (EFP) for the environmental tariff in relation to the amount of municipal solid waste disposed of by the company;
- Tax audits to Herambiente Spa, for tax years from 2009 to 2013 and focused mainly on the amount the company owed in relation to the IRAP subsidy "tax wedge". With respect to the 2009 tax period, the appeal hearing has not yet been scheduled after a favourable ruling for the company by the Provincial Tax Commission handed down in 2015. With regard to the 2010 and 2011 tax years, two sentences were handed down in 2017, also in the Company's favour. The Inland Revenue has filed appeals and a hearing has not yet been scheduled. In 2016, additional notices of assessment were served for the 2012 and 2013 tax years, against which the Company filed the relevant appeals. On November 10th 2017 the relative rulings were filed, both unfavourable to the Company. On May 8th 2018, the Company filed appeals against the abovementioned rulings. The Group, having consulted with its lawyers, decided it was not necessary to proceed with any risk fund provisions for the disputes in question, as the alleged violations are considered unfounded.
- Tax audits to Hera Trading Srl, concerning the tax periods from 2010 to 2014. The most significant of these notifications regards the correctness of the deduction of net financial

income related to commodity derivatives and environmental certificates for the purposes of calculating IRES. In 2016, a notice of assessment was served in relation to IRES 2011, for 2.1 million euro of tax, against which the Company appealed; on January 18th 2018 the ruling was filed as unfavourable to the Company, but without the application of penalties, while on July 17th 2018 the company filed an appeal. In response to this ruling, on March 6th 2018, one third of the tax was paid, plus interest, for a total of 0.9 million euro; on March 29th 2018, the second third of the tax was paid, plus interest, in the amount of 0.7 million euro. On September 7th 2017 a similar assessment notice was served for IRES 2012, amounting to 0.5 million euro in taxes, for which a presidential suspension of execution was obtained. The hearing was held on January 30th 2018 and the ruling, which was unfavourable to the company, was filed on May 8th 2018. An appeal was therefore lodged on December 7th 2018 and two-thirds of the amount was provisionally paid for EUR 0.3 million euro. On July 20th 2018 an assessment notice was served in relation to 2014, for 0.4 million against which an appeal was filed on October 17th 2018. In relation to that year, the suspension request was rejected and on December 20th 2018 one-third of the amount was provisionally paid for EUR 0.2 million euro. As of the current moment, the appeal hearing has yet to be scheduled. On September 20th 2018 an assessment notice was served in relation to Ires additional rate, so called Robin tax, 2013 for 0.4 million. On November 9th 2018 an appeal was filed and on February 13th 2019 one-third of the amount was provisionally paid. As of the current moment, the hearing has yet to be scheduled. The Group, having consulted with its lawyers, decided it was not necessary to proceed with any risk fund provisions for the disputes in question, as the alleged violations are considered unfounded.

- Assessment notices for the tax periods from 2013 to 2017 for TOSAP and COSAP, notified on June 28th 2018 and July 20th 2018 to Hera Spa by the Municipality of Riccione, relating to the permanent occupation of public land with waste bins, for a total amount of 3.5 million euro. On September 26th 2018, the related appeals for Tosap were submitted and the hearing was held on March 13th 2018. On February 18th 2019, the company received an assessment notice for 2014 from the Municipality of San Giovanni in Marignano concerning Tosap, amounting to 25 thousand euro. In this case, an appeal is being prepared. The Group, having also consulted its lawyers, has decided not to make any provision to the risk provision for the litigations in question.

## 12 Earnings per share

| | 2018 | 2017 |
|---|---|---|
| Profit or loss for the period attributable to holders of ordinary shares of the parent entity (A) | 281.9 | 251.4 |
| Weighted average number of shares outstanding for the purposes of calculation of earnings (loss) per share | | |
| basic (B) | 1,467,966,686 | 1,471,004,233 |
| diluted | 1,467,966,686 | 1,471,004,233 |
| **Earnings (loss) per share (in euro)** | | |
| basic (A/B) | **0.192** | **0.171** |
| diluted (A/C) | **0.192** | **0.171** |

Basic earnings per share are calculated on the operating result attributable to holders of ordinary shares of the parent company. Diluted earnings per share are equal to the base as there are no classes of shares other than ordinary shares and there are no instruments that can be converted into shares.

As of this writing, the share capital of the parent company, Hera S.p.A., consisted of 1,489,538,745 ordinary shares, unchanged from December 31st 2017, which were used in determining basic and diluted earnings per share.

## 13 Property, plant and equipment

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Land and buildings | 591.7 | 571.3 | 20.4 |
| Plants and machinery | 1,174.1 | 1,201.6 | (27.5) |
| Other movable assets | 131.1 | 120.3 | 10.8 |
| Assets under construction | 104.2 | 119.9 | (15.7) |
| **Total operating assets** | **2,001.1** | **2,013.1** | **(12.0)** |
| Investment property | 2.6 | 2.6 | - |
| **Total** | **2,003.7** | **2,015.7** | **(12.0)** |

The following are held on the basis of finance leasing arrangements:

- "Land and buildings" for 16.3 million euro (16.8 million euro as at December 31st 2017);
- "Plants and machinery" for 5.3 million euro (6.5 million euro as at December 31st 2017);

Property, plant and equipment are disclosed net of accumulated depreciation. Their composition and changes in the period are as follows:

| | opening balance | invest-ments | Dis-investments | de-preciation and amor-tisation | changes in the scope of consolidation | other changes | net closing balance | of which gross final amount | of which amortisation provision |
|---|---|---|---|---|---|---|---|---|---|
| **Dec 31st 17** | | | | | | | | | |
| Land and buildings | 564.3 | 6.6 | (1.7) | (19.0) | 18.1 | 3.0 | 571.3 | 768.3 | (197.0) |
| Plants and machinery | 1,233.3 | 39.5 | (7.7) | (120.7) | 13.9 | 43.3 | 1,201.6 | 2,653.0 | (1,451.4) |
| Other movable assets | 119.2 | 22.5 | (4.0) | (27.5) | 1.5 | 8.6 | 120.3 | 445.5 | (325.2) |
| Assets under construction | 99.6 | 81.4 | (3.1) | - | 0.1 | (58.1) | 119.9 | 119.9 | - |
| **Total** | **2,016.4** | **150.0** | **(16.5)** | **(167.2)** | **33.6** | **(3.2)** | **2,013.1** | **3,986.7** | **(1,973.6)** |
| **Dec 31st 18** | | | | | | | | | |
| Land and buildings | 571.3 | 19.5 | (1.7) | (19.1) | 0.6 | 21.1 | 591.7 | 807.5 | (215.8) |
| Plants and machinery | 1,201.6 | 44.5 | (4.0) | (120.5) | 0.8 | 51.7 | 1,174.1 | 2,724.5 | (1,550.4) |
| Other movable assets | 120.3 | 26.1 | (1.7) | (28.2) | - | 14.6 | 131.1 | 466.0 | (334.9) |
| Assets under construction | 119.9 | 69.0 | (0.7) | - | 0.2 | (84.2) | 104.2 | 104.2 | - |
| **Total** | **2,013.1** | **159.1** | **(8.1)** | **(167.8)** | **1.6** | **3.2** | **2,001.1** | **4,102.2** | **(2,101.1)** |

The breakdown and main changes within each category are commented on below.

"Land and buildings", totalling 591.7 million euro, consisted of 118.5 million euro in land and buildings and 473.2 million euro in buildings. These are mainly company-owned properties on which the majority of the sites and production plants stand. Investments during the period mainly related to the renewal and construction of the Group's office buildings.

"Plant and machinery", amounting to 1,174.1 million euro, is made up mainly of distribution networks and plants relating to business not falling within the scope of the concession system and, therefore: district heating, electricity in the Modena area, waste disposal and waste treatment. The main investments during the year related to waste treatment and heat management, for a total of 21.8 and 7.9 million euro respectively. It should be noted that in 2018 the useful life of the waste-to-energy plant in Granarolo dell'Emilia (BO) was re-evaluated on the basis of an appraisal drawn up by an independent expert. This reassessment led to a redefinition of the amortisation rates recorded in the current and future income statements.

"Other moveable assets", equal to 131.1 million euro, include the equipment, waste disposal bins for 65.4 million Euro, moveable assets, furniture and electronic machines for 17.6 million Euro, and vehicles and cars for 48.1 million Euro.

"Assets under construction and advance payments", amounting to 104.2 million Euro, include mainly investment for development of district heating and electricity distribution, cogeneration facilities and waste recycling plants. Ongoing investments for the latter, including the new digester for the production of biomethane in Sant'Agata Bolognese, have an overall value of 34.6 million euro.

"Other changes" includes adjustments for 3.8 million euro to dismantlement and reactivation costs - as estimated when the plants were created or expanded - for the year 2018, (as compared with 13.7 million euro in 2017). This item covers the in-progress reclassification of fixed assets to the specific categories for assets brought into operation during the financial year, as well as the reclassification from Property, plant and equipment to Intangible assets, especially when goods used in activities under contract are involved.

For further details on the "Changes in the scope of consolidation", reference should be made to paragraph 2.02.03 "Scope of consolidation".

**Real guarantees**

| | Dec 31st 18 | Dec 31st 17 |
|---|---:|---:|
| Real guarantees to third parties | 164.1 | 162.5 |

These include as of December 31st 2018:

- Special mortgages and privileges on land, plants and machinery pledged by the subsidiary Frullo Energia Ambiente Srl to the banking syndicate that issued financing in the amount of 150 million euro;
- Mortgages on a building owned by the subsidiary Waste Recycling Spa to a banking institute in the amount of 10 million euro;
- Mortgages on two buildings owned by the subsidiary Marche Multiservizi Spa to a banking institute in the amount of 3.7 million euro;

Compared with the previous year, there was an increase of 1.6 million euro in the mortgage on a building of the Pesaro and Urbino headquarters owned by Marche Multiservizi Spa, acquired through the merger by incorporation of Megas Net Spa.

## 14 Intangible assets

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---:|---:|---:|
| Industrial patents and intellectual property rights | 78.6 | 55.8 | 22.8 |
| Concessions, licences, trademarks and similar rights | 74.9 | 86.7 | (11.8) |
| Public services under concession | 2,689.1 | 2,574.3 | 114.8 |
| intangible assets under construction and public services under concession | 172.2 | 161.3 | 10.9 |
| intangible assets under construction | 51.6 | 63.9 | (12.3) |
| Customer lists | 153.8 | 148.1 | 5.7 |
| Other intangible assets | 34.7 | 36.9 | (2.2) |
| **Total** | **3,254.9** | **3,127.0** | **127.9** |

Intangible assets are stated net of their accumulated amortisation and are broken down below with details of the changes during the year:

| | net opening balance | investments | dis-investments | de-preciation and amortisation | changes in the scope of consolidation | other changes | net closing balance | of which gross final amount | of which amortisation provision |
|---|---|---|---|---|---|---|---|---|---|
| **Dec 31st 17** | | | | | | | | | |
| Industrial patents and intellectual property rights | 59.8 | 7.4 | - | (25.7) | - | 14.3 | 55.8 | 351.3 | (295.5) |
| Concessions, licences, trademarks and similar rights | 95.5 | 1.7 | - | (12.8) | - | 2.3 | 86.7 | 385.8 | (299.1) |
| Public services under concession | 2,539.6 | 142.2 | (0.6) | (145.5) | - | 38.6 | 2,574.3 | 4,242.4 | (1,668.1) |
| intangible assets under construction and public services under concession | 111.1 | 103.8 | (0.5) | - | - | (53.1) | 161.3 | 161.3 | - |
| intangible assets under construction | 48.5 | 32.1 | (0.1) | - | - | (16.6) | 63.9 | 63.9 | - |
| Customer lists | 86.1 | - | - | (11.7) | 73.7 | - | 148.1 | 179.8 | (31.7) |
| Other intangible assets | 27.4 | 2.9 | (0.1) | (8.2) | 13.9 | 1.0 | 36.9 | 122.9 | (86.0) |
| **Total** | **2,968.0** | **290.1** | **(1.3)** | **(203.9)** | **87.6** | **(13.5)** | **3,127.0** | **5,507.4** | **(2,380.4)** |
| **Dec 31st 18** | | | | | | | | | |
| Industrial patents and intellectual property rights | 55.8 | 11.2 | - | (31.3) | - | 42.9 | 78.6 | 405.4 | (326.8) |
| Concessions, licences, trademarks and similar rights | 86.7 | 0.7 | - | (12.5) | - | - | 74.9 | 386.3 | (311.4) |
| Public services under concession | 2,574.3 | 152.2 | (1.5) | (154.4) | 37.1 | 81.4 | 2,689.1 | 4,548.2 | (1,859.1) |
| Intangible assets under construction and public services under concession | 161.3 | 100.0 | (0.4) | - | - | (88.7) | 172.2 | 172.2 | - |
| Intangible assets under construction | 63.9 | 34.5 | - | - | - | (46.8) | 51.6 | 51.6 | - |
| Customer lists | 148.1 | 2.0 | - | (13.7) | 17.1 | 0.3 | 153.8 | 199.1 | (45.3) |
| Other intangible assets | 36.9 | 4.7 | (0.3) | (9.0) | - | 2.4 | 34.7 | 129.6 | (94.9) |
| **Total** | **3,127.0** | **305.3** | **(2.2)** | **(220.9)** | **54.2** | **(8.5)** | **3,254.9** | **5,892.4** | **(2,637.5)** |

The breakdown and main changes within each category are commented on below.

"Industrial patents and intellectual property rights," in the amount of 78.6 million euro, mainly refers to costs incurred in purchasing and implementing corporate information systems.

"Concessions, licences, trademarks and similar rights," amounting to 74.9 million euro, primarily comprises the value of the rights relating to the activities of gas distribution and integrated water management, classified as intangible assets even before the IFRIC 12 - service agreements interpretation was first applied.

"Public services under concession", amounting to 2,689.1 million euro, include assets relating to gas distribution, electricity distribution (Imola area), the integrated water cycle and public lighting activities (except for the latter, as specified in note 17 'Current and non-current financial assets') provided through contracts awarded the respective public bodies. These concession relationships and associated assets involved in carrying out the activities for which the Group holds the use rights, are accounted for by applying the intangible asset model as set forth by IFRIC interpretation 12. Investments for the year related mainly to the water networks, in the amount of 80.1 million euro, and gas distribution networks, in the amount of 64.3 million euro.

"Intangible assets under construction and public services under concession," amounting to 172.2 million euro, refers to investments related to the these same contracts that have yet to be concluded at year-end. The significant increase in investments compared to the previous period is mainly due to the works carried out on the water network under management.

"Intangible assets in progress and advance payments", equal to 51.6 million euro, essentially comprises IT projects that are still incomplete.

"Customer lists", amounting to 153.8 million euro, are recorded as a result of business combination transactions and the consequent valuation of the assets acquired. The amortisation period of these customer lists is correlated to the churn rate identified for each individual transaction.

The item "Other intangible assets", amounting to 34.7 million euro, refers mainly to use rights for networks and infrastructures for the passage and laying down of telecommunication networks, as well as multi-year contractual rights.

"Other changes" include reclassifications of assets under construction to their specific categories for assets that began to be used during the year and reclassifications to tangible assets, especially when goods used in activities under contract are involved.

For further details on the "Changes in the scope of consolidation", reference should be made to paragraph 2.02.03 "Scope of consolidation".

## 15 Goodwill

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Goodwill | 381.3 | 384.1 | (2.8) |

The change from the previous year was due to the complete depreciation, following an impairment test on the assets of the subsidiary company ASA Scpa. Indeed, the company is close to ceasing operations and the financial assets recorded, added to the residual cash flows, are sufficient exclusively to meet future obligations in relation to the post-closure management of the landfill under concession, which represent its only business.

The value of the goodwill as of December 31st 2018 mainly reflects the following operations:

- integration resulting in the creation of Hera S.p.A. in 2002, 81.3 million euro;
- acquisition of control through the merger of Agea Spa, effective beginning 1 January 2004, 41.7 million euro:
- acquisition of control over Gruppo Meta which took place at the end of the 2005 financial year, as a result of the merger of Meta Spa into Hera Spa, 117.7 million euro;
- acquisition of control over Sat Spa through the merger into Hera Spa, effective beginning 1 January 2008, 54.9 million euro:
- acquisition of control over the Gruppo Aliplast in early 2017, 25 million euro;
- acquisition of control over the Marche Multiservizi Spa Group, 20.8 million euro;
- acquisition of control over the Hera Comm Marche Srl, 4.6 million euro;

The carrying amounts of goodwill were tested for impairment, the results of which are outlined in note 31 "Impairment test".

## 16 Equity investments

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Investments valued using the equity method | 136.0 | 135.6 | 0.4 |
| Other Equity investments | 13.1 | 13.2 | (0.1) |
| **Total** | **149.1** | **148.8** | **0.3** |

The changes in joint ventures and associated companies as compared to December 31st 2017 take into account the pro-quota losses and profits reported by the respective companies (including the other components of the comprehensive income statement) as well as the possible reduction of the value for any dividends that were distributed and for depreciations due to the impairment test. The share of profit/(loss) pertaining to companies accounted for by the equity method is shown in note 9 "Share of profit (loss) of joint ventures and associated companies".

Changes in consolidated investments using the net equity method are as follows:

| | Dec 31st 17 | Investments | Valuation net equity | Dividends paid out | Other changes | Dec 31st 18 |
|---|---|---|---|---|---|---|
| Aimag Spa | 48.1 | - | 2.6 | (1.7) | - | 49.0 |
| Enomondo Srl | 15.3 | - | 2.6 | (1.8) | - | 16.1 |
| EstEnergy Spa | 12.8 | - | 5.2 | (5.9) | (0.8) | 11.3 |
| Set Spa | 34.8 | - | 0.6 | - | - | 35.4 |
| Sgr Servizi Spa | 22.1 | - | 3.9 | (2.9) | - | 23.1 |
| Other minor | 2.5 | 0.1 | - | - | (1.5) | 1.1 |
| **Total** | **135.6** | **0.1** | **14.9** | **(12.3)** | **(2.3)** | **136.0** |

The item "Other minor" includes the investment in Tamarete Energia Srl, whose the book value, however, was written down to zero as a result of the depreciations.

The changes outlined in the item “Depreciation and other changes” include:

- the write-down of the investments in QtHermo Srl for 1.5 million euro, see Note 10 "Financial income and expenses"
- the decrease of net equity in EstEnergy Spa, amounting to 0.8 million euro, represents the effect on the shareholders' equity of the company (for the portion pertaining to the Group) of the adoption of the new IFRS 9 standard, specifically with reference to the valuation of receivables using the expected loss method.

Investments in companies not included in the scope of consolidation underwent the following changes:

| | Dec 31st 17 | Investments | Disinvestments | Depreciation | Other changes | Dec 31st 18 |
|---|---|---|---|---|---|---|
| Calenia Energia Spa | 7.0 | - | - | - | - | 7.0 |
| Veneta Sanitaria Finanza di Progetto Spa | 3.6 | - | - | - | - | 3.6 |
| Other minor | 2.6 | 0.2 | (0.1) | (0.2) | - | 2.5 |
| **Total** | **13.2** | **0.2** | **(0.1)** | **(0.2)** | **-** | **13.1** |

The fair value assessment of the investment in Calenia Energia Spa generated a value substantially in line with the cost of the investment of 7 million euro, already recorded as of December 31st 2017. Although the company's profitability in the medium term is positive, in fact, the critical issues still present in the electricity generation sector add uncertainty to future scenarios, while enabling the investment to be fully recovered.

The carrying amounts of the equity investments representing vehicles through which the Group owns production quotas for electrical generation plants (Set Spa, Tamarete Energia Srl and Calenia Energia Spa) were tested for impairment, the results of which are outlined in note 31 "Impairment test".

Below are presented the main aggregate values of jointly controlled companies (Enomondo Srl and EstEnergy Spa) as well as companies with significant influence (Aimag Spa, Q.Thermo Srl, Set Spa, Sgr Servizi Spa, Sosel Spa, and Tamarete Energia Srl):

| **Assets** | **Subsidiaries Joint ventures** | **Subsidiaries Associated companies** | **Total** |
|---|---|---|---|
| **Non-current assets** | | | |
| Property, plant and equipment | 34.3 | 406.5 | 440.8 |
| Intangible assets | - | 47.4 | 47.4 |
| Goodwill | - | 39.3 | 39.3 |
| Equity investments | - | 11.0 | 11.0 |
| Financial assets | 0.1 | 3.7 | 3.8 |
| Deferred tax assets | 1.8 | 7.4 | 9.2 |
| **Total non-current assets** | **36.2** | **515.3** | **551.5** |
| **Current assets** | | | |
| Inventories | 0.7 | 5.8 | 6.5 |
| Trade receivables | 46.7 | 231.6 | 278.3 |
| Contract work in progress | - | 1.3 | 1.3 |
| Financial assets | - | - | - |
| Current tax assets | 0.2 | 0.2 | 0.4 |
| Other current assets | 10.8 | 19.8 | 30.6 |
| Cash and cash equivalents | 16.0 | 29.3 | 45.3 |
| **Total current assets** | **74.4** | **288.0** | **362.4** |
| **Total assets** | **110.6** | **803.3** | **913.9** |

| Net assets and liabilities | Subsidiaries Joint ventures | Subsidiaries Associated companies | Total |
|---|---|---|---|
| **Share capital and reserves** | | | |
| Share capital | 15.7 | 88.0 | 103.7 |
| Reserves | 23.2 | 238.5 | 261.7 |
| Profit (loss) for the year | 15.5 | 25.2 | 40.7 |
| **Group net equity** | **54.4** | **351.7** | **406.1** |
| Non-controlling interests | - | 9.6 | 9.6 |
| **Total net equity** | **54.4** | **361.3** | **415.7** |
| **Non-current liabilities** | | | |
| Non-current financial liabilities | - | 171.3 | 171.3 |
| Post-employment and other benefits | 0.1 | 8.7 | 8.8 |
| Provisions for risks and charges | 0.3 | 32.1 | 32.4 |
| Deferred tax liabilities | 0.5 | 0.5 | 1.0 |
| Financial instruments - derivatives | - | - | - |
| **Total non-current liabilities** | **0.9** | **212.6** | **213.5** |
| **Current liabilities** | | | |
| Current financial liabilities | 9.0 | 49.4 | 58.4 |
| Trade payables | 38.2 | 140.2 | 178.4 |
| Current tax liabilities | 2.2 | 0.1 | 2.3 |
| Other current liabilities | 5.9 | 39.7 | 45.6 |
| **Total current liabilities** | **55.3** | **229.4** | **284.7** |
| **Total liabilities** | **56.2** | **442.0** | **498.2** |
| **Total net assets and liabilities** | **110.6** | **803.3** | **913.9** |

| Income statement | Subsidiaries Joint ventures | Subsidiaries Associated companies | Total |
|---|---|---|---|
| Revenues | 146.1 | 505.4 | 651.5 |
| Other operating revenues | 9.1 | 3.9 | 13.0 |
| Use of raw materials | (66.4) | (275.2) | (341.6) |
| Service costs | (55.9) | (99.8) | (155.7) |
| Personnel costs | (4.6) | (34.9) | (39.5) |
| Amortisation, depreciation and provisions | (5.8) | (42.9) | (48.7) |
| Other operating costs | (0.8) | (13.3) | (14.1) |
| **Operating earnings** | **21.7** | **43.2** | **64.9** |
| Financial income | 0.3 | 1.2 | 1.5 |
| Financial expenses | (0.4) | (6.0) | (6.4) |
| **Total financial management** | **(0.1)** | **(4.8)** | **(4.9)** |
| Other recurrent non-operating revenues | - | 0.4 | 0.4 |
| Other non-recurrent non-operating revenues | - | (0.6) | (0.6) |
| **Earnings before taxes** | **21.6** | **38.2** | **59.8** |
| Taxes for the period | (6.1) | (11.8) | (17.9) |
| **Net revenues for the period** | **15.5** | **26.4** | **41.9** |

## 17 Current and non-current financial assets

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Loan receivables | 65.8 | 78.4 | (12.6) |
| Portfolio securities | 2.5 | 2.5 | - |
| Receivables for construction services | 17.4 | 12.7 | 4.7 |
| Other financial receivables | 32.7 | 31.6 | 1.1 |
| **Total non-current financial assets** | **118.4** | **125.2** | **(6.8)** |
| Loan receivables | 8.6 | 9.0 | (0.4) |
| Portfolio securities | 0.1 | 0.2 | (0.1) |
| Other financial receivables | 28.6 | 32.3 | (3.7) |
| **Total current financial assets** | **37.3** | **41.5** | **(4.2)** |
| **Total cash and cash equivalents** | **535.5** | **450.5** | **85.0** |
| **Total financial assets, cash and cash equivalents** | **691.2** | **617.2** | **74.0** |

"Loan receivables" comprises loans, regulated at market rate, made to the following companies:

| | Dec 31st 18 | | | Dec 31st 17 | | |
|---|---|---|---|---|---|---|
| | Non-current portion | Current portion | Total | Non-current portion | Current portion | Total |
| Aloe SpA | 8.5 | 0.8 | 9,3 | 9.2 | 0.8 | 10.0 |
| Calenia Energia Spa | 14.6 | 2.5 | 17.1 | 17.0 | 0.3 | 17.3 |
| Set Spa | 24.3 | 2.7 | 27.0 | 27.0 | 4.5 | 31.5 |
| Tamarete Energia Srl | 12.9 | 2.6 | 15.5 | 19.4 | 2.5 | 21.9 |
| Other minor | 5.5 | 0.0 | 5.5 | 5.8 | 0.9 | 6.7 |
| **Total** | **65.8** | **8.6** | **74.4** | **78.4** | **9.0** | **87.4** |

Loans to companies representing vehicles through which the Group owns production quotas for electrical generation plants (Set Spa, Tamarete Energia Srl and Calenia Energia Spa) were tested for impairment, the results of which are outlined in note 31 "Impairment test". With regard to the active loan toTamarete Energia Srl, the impairment test required a writedown for 4.5 million euro.

"Portfolio securities" include, for the non-current part, 2.5 million euro in bonds, funds and insurance policies to guarantee post-closure management of the landfill managed by the subsidiary Asa Scpa, the book value of which is substantially in line with the fair value at the end of the financial period. These securities are measured at fair value through other comprehensive income components.

"Receivables for construction services" from municipalities for the construction of public lighting systems identified in keeping with the financial asset model provided by the IFRIC 12 interpretation, as shown in greater detail in the section describing the evaluation criteria for the item "Loans and receivables";

For "Other financial receivables", the non-current section refers to the following entities:

- the municipality of Padua, a receivable regulated at market value and concerning the construction of photovoltaic systems which will be reimbursed at the end of 2030 in the amount of 17.9 million euro;
- the "Collinare" Consortium of Municipalities, in the amount of 12.1 million euro, represents the credit for the compensation owed to the outgoing provider when the gas distribution contract comes to an end;
- the municipality of Riccione, for a multi-year repayment plan signed in 2018 involving an overall cash outlay of 1.6 million euro.

For "Other financial receivables", the current section is mainly comprised of:

- public grant receivables to be received from various different subjects (Cato, the Friuli Venezia Giulia Region and the Veneto Region, among others) in the amount of 13.7

- receivables for collections to be received from the Consorzio Stabile Enrgie Locali (Csel) following the award of the public tender for the lighting service ( launched by Consip to award the contract to serve public administrations) in the amount of 7.8 million euro.
- advance payments to cover expenses paid by several Group companies as gas distribution service operators in view of the commencement of the calls for tender, in the amount of 4.6 million euro;

"Cash and cash equivalents" includes cash, cash equivalents, and bank cheques and drafts for a total of 535.4 million euro.

To better understand the financial dynamics taking place during the 2018 financial year, see the financial statement and the comments shown in the management report.

## 18 Deferred tax assets and liabilities

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Pre-paid tax assets | 243.4 | 220.7 | 22.7 |
| Offsetting of deferred tax liabilities | (85.3) | (72.0) | (13.3) |
| Substitute tax credit | 1.1 | 1.8 | (0.7) |
| **Total net deferred tax assets** | **159.2** | **150.5** | **8.7** |
| Deferred tax liabilities | 128.4 | 117.5 | 10.9 |
| Offsetting of deferred tax liabilities | (85.3) | (72.0) | (13.3) |
| **Total net deferred tax liabilities** | **43.1** | **45.5** | **(2.4)** |

"Pre-paid tax assets" arise from timing differences between reported profit and taxable profit, mainly in relation to bad debt provisions, risks and expenses funds, instances of civil depreciation that are greater than those relevant for tax purposes, and the redemption of goodwill and controlling interests.

"Deferred tax liabilities" arise from timing differences between reported profit and taxable profit, mainly in relation to greater tax deductions taken in previous years for provisions and amounts of property, plant and equipment not relevant for tax purposes.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets with the corresponding current tax liabilities.

"Substitute tax credits" as an advance payment on current taxes represent the amount paid for the release of goodwill reported in prior years for tax purposes.

The change as compared to the previous year is also related to the reporting of deferred tax liabilities as a result of business combination operations as described in paragraph 2.02.03 "Scope of consolidation".

For more details about the composition and dynamics of deferred tax assets and liabilities, see note 11 "Taxes"

## 19 Financial instruments - derivatives

| Non-current assets and liabilities | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Dec 31st 18 | | | Dec 31st 17 | | |
| **Underlying amounts hedged** | **Fair Value Hierarchy** | **Notional** | **Fair value assets** | **Fair value liabilities** | **Notional** | **Fair value assets** | **Fair value liabilities** |
| **Interest rate derivatives** | | | | | | | |
| Loans | 2 | 500 mn | 26.1 | 4.5 | 1,000 mn | 60.8 | |
| Loans | 2 | 563.3 mn | | 33.4 | 571.7 mn | | 34.5 |
| **Total non-current derivatives** | | | **26.1** | **37.9** | | **60.8** | **34.5** |
| **Exchange rate derivatives** | | | | | | | |
| Loans | 2 | 20 bn Jpy | 19.2 | | 20 bn Jpy | 5.3 | |
| | | | | | | | |
| **Total non-current derivatives** | | | **45.3** | **37.9** | | **66.1** | **34.5** |

| Current assets and liabilities | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Dec 31st 18 | | | Dec 31st 17 | | |
| **Underlying amounts hedged** | **Fair Value Hierarchy** | **Notional** | **Fair value assets** | **Fair value liabilities** | **Notional** | **Fair value assets** | **Fair value liabilities** |
| **Commodity derivatives** | | | | | | | |
| Foreign gas hubs | 3 | 3,359,619 MWh | 10.0 | | 1,894,963 MWh | 3.8 | |
| Formulas Electricity | 2 | 11,512,401 MWh | 86.2 | | 8,298,664 MWh | 36.4 | |
| Foreign gas hubs | 3 | 1,095,324 MWh | | 1.2 | 115,358 MWh | | 0.2 |
| Raw oil | 2 | 0 Bbl | | - | 7,000 Bbl | | 0.1 |
| Refined oil products/coal | 2 | 1,320 Ton | | 0.0 | 4,100 Ton | | 0.2 |
| Electricity formulas | 2 | 7,556,092 MWh | | 62.2 | 7,892,951 MWh | | 45.5 |
| **Total current commodity derivatives** | | | **97.1** | **63.5** | | **40.2** | **46.0** |
| **Interest rate derivatives** | | | | | | | |
| Loans | 2 | 500 mn | 14.8 | 2.7 | | | |
| Loans | 2 | 2.7 mn | | 0.1 | | | |
| **Total current rate derivatives** | | | **14.8** | **2.8** | | **-** | **-** |
| **Total current derivatives** | | | **111.9** | **66.3** | | **40.2** | **46.0** |

Derivative financial instruments classified under non-current liabilities amounted to 45.3 million euro (66.1 million euro as at December 31st 2017); they refer to interest rate derivatives for 26.1 million euro and to derivatives on exchange rates in connection to loans for 19.2 million euro. Derivative financial instruments classified under non-current assets amounted to 37.9 million euro (34.5 million euro as at December 31st 2017) and referred entirely to interest rate derivatives.
Financial instruments reported as current assets and liabilities represent derivative contracts whose execution is expected to take place within the next financial year. Derivative financial instruments classified under current assets amounted to 111.9 million euro (40.2 million euro as at December 31st 2017); they refer to commodity derivatives for 97.1 million (mainly the price of electric power) and to derivatives on exchange rates for 14.8 million. Derivative financial instruments classified under non-current liabilities amounted to 66.3 million euro (46 million euro as at December 31st 2017); they refer to commodity derivatives for 63.5 million and to derivatives on exchange rates for 2.8 million. In 2018, interest rate derivatives related to loans and bonds that are expected to be repaid by 2019 were reclassified to the current categories.

With regard to derivatives on current and long-term interest rates in the form of Interest Rate Swaps (IRS) as of December 31st 2018, the Group's net exposure was positive by 0.2 million euro, compared with a positive exposure of 26.3 million euro as of December 31st 2017. The decrease in the fair value as compared to the previous year, in view of interest rate curves that were depressed and mainly stable rates over the financial periods, is due to the achievement of the positive differential.

The fair value of derivatives set up to hedge the exchange rate and the fair value of foreign currency loans in the form of Cross Currency Swaps (CCS) is positive in the amount of 19.2 million euro as at December 31st 2018, as compared to an assessment that was positive, amounting to 5.3 million euro, as at December 31st 2017. The positive change in fair value in the amount of 13.9 million euro is due prevalently to the exchange rate, since the Japanese yen gained remarkably on the euro during 2018.

At December 31st 2018, the net fair value of commodity derivatives pertaining trade operations was positive for 33.6 million euro, as compared to a negative fair value of 5.8 million euro at December 31st 2017. The increase in absolute terms in the fair value of assets and liabilities is mainly due to the increase in the volumes of the existing Formule Energia Elettrica - Electricity formula contracts and to the greater volatility of the national standard price during the year.

## Interest and exchange rate derivatives

Interest rate and foreign exchange derivative instruments held as of December 31st 2018, subscribed in order to hedge loans, can be classed into the following categories:

| **Hedging interest/exchange rate derivatives Financial management** | | | | | | |
|---|---|---|---|---|---|---|
| **Type** | **Dec 31st 18** | | | **Dec 31st 17** | | |
| | **Notional** | **Fair value assets** | **Fair value liabilities** | **Notional** | **Fair value assets** | **Fair value liabilities** |
| Cash flow hedge | 416.2 mn | - | 9.7 | 421.9 mn | - | 0.9 |
| Fair value hedge | 149.8 mn | 19.2 | 23.7 | 149.8 mn | 5.3 | 25.7 |
| Non hedge accounting | 1,000 mn | 41.0 | 7.3 | 1,000 mn | 60.8 | 7.9 |
| **Total fair value** | | **60.1** | **40.6** | | **66.1** | **34.5** |
| **Type** | **Dec 31st 18** | | | **Dec 31st 17** | | |
| | **income** | **expenses** | **Effect net** | **income** | **expenses** | **Effect net** |
| Cash flow hedge | 0.2 | (0.7) | (0.5) | | (0.9) | (0.9) |
| Fair value hedge | 20.3 | (8.1) | 12.2 | 10.4 | (28.9) | (18.5) |
| Non hedge accounting | 37.2 | (37.2) | 0.0 | 38.9 | (38.8) | 0.1 |
| **Total income (expenses)** | **57.7** | **(46.0)** | **11.7** | **49.3** | **(68.6)** | **(19.3)** |

Interest rate derivatives identified as cash flow hedges are mainly attributable to a future financing operation, for an overall amount of 400 million euro and expected to be issued in 2020.
The negative fair value of derivative financial instruments classified as cash flow hedges, amounting to 9.7 million euro (0.9 million euro as at December 31st 2017), is mainly generated by derivatives hedging the above-mentioned future financing operation. These derivatives do not provide for the

settlement of differentials before the underlying issuing transaction is carried out, and therefore do not produce effects in the form of income or expenses incurred. As of December 31st 2018, the breakdown of net charges relating to derivatives classified as cash flow hedges amount to 0.5 million euro (0.9 million as of December 31st 2017). Charges associated with this class of derivatives refer to cash flows realised, or to the recording of shares of flows in this period, which shall have a financial impact in the following period. No significant ineffective portions were found in the financial year.
In the 2018 financial year, the hedge relationships between the above derivative contracts and their underlying current or future liabilities resulted in recording net expenses. Gross of the fiscal effect, for 8.7 million euro to the statement of comprehensive income (as compared with 0.4 million euro of net income recorded as of December 31st 2017), divided as follows:

| **Cash flow hedges** | **Dec 31st 18** | | | **Dec 31st 17** | | |
|---|---|---|---|---|---|---|
| | **Positive components** | **Negative components** | **Net effect** | **Positive components** | **Negative components** | **Net effect** |
| Changes to expected cash flows | | (9.2) | (9.2) | | (0.3) | (0.3) |
| Reserve transferred to the income statement | 0.5 | | 0.5 | 0.7 | | 0.7 |
| **Overall effect of derivatives on the statement of comprehensive income cash flow hedge** | **0.5** | **(9.2)** | **(8.7)** | **0.7** | **(0.3)** | **0.4** |

The derivatives on interest rates and exchange rates, identified as fair value hedges of liabilities reported in the balance sheet have an overall negative fair value of 4.5 million euro as compared to a negative fair value of 20.4 million euro, as at December 31st 2017. This positive change in the period is mainly due to the effect of Cross Currency Swaps (CCS) illustrated above.

As of December 31st 2018, the assessment of derivatives classified as fair value hedges generated net earnings for a total of 12.2 million euro (18.5 million euro as at December 31st 2017).
The table below provides a breakdown of financial income and expense associated with derivatives designated as fair value hedges and related underlying liabilities, as adjusted for the income and losses attributable to the hedged risk:

| **Fair value hedges** | **Dec 31st 18** | | | **Dec 31st 17** | | |
|---|---|---|---|---|---|---|
| | **Income** | **Expenses** | **Net effect** | **Income** | **Expenses** | **Net effect** |
| Assessment of derivatives | 15.9 | - | 15.9 | 5.7 | (20.5) | (14.8) |
| Accrued interest | 0.1 | | 0.1 | | (0.2) | (0.2) |
| Realized cash flows | 4.4 | (8.1) | (3.7) | 4.7 | (8.2) | (3.5) |
| **Economic effect fair value hedge derivatives** | **20.3** | **(8.1)** | **12.2** | **10.4** | **(28.9)** | **(18.5)** |

| **Underlying amounts hedged** | **Dec 31st 18** | | | **Dec 31st 17** | | |
|---|---|---|---|---|---|---|
| | **income** | **expenses** | **Net effect** | **income** | **expenses** | **Net effect** |
| Assessment of financial liabilities | - | (15.9) | (15.9) | 20.5 | (5.7) | 14.8 |

The derivatives on interest rates, identified as non-hedge accounting hedges, have an overall positive fair value of 33.7 million euro (52.9 million euro as at December 31st 2017). In this regard, it should be noted that, during 2015, the Group decided to restructure its portfolio of derivatives as part of a move to review the balance between debt at fixed rates and debt at variable rates. This restructuring resulted in revoking certain hedging relationships and signing new derivative contracts that do not qualify for hedge accounting under IFRS 9. The new derivative contracts, despite being classified as non-hedge accounting, have as their main objective to provide coverage from interest rate fluctuations and have no impact on the income statement (mirroring).

As at December 31st 2018 the breakdown of net charges and revenues relating to derivatives classified as non-hedge accounting is as follows:

| Non-hedge accounting | Dec 31st 18 | | | Dec 31st 17 | | |
|---|---|---|---|---|---|---|
| | income | expenses | Net effect | income | expenses | Net effect |
| Assessment of derivatives | 2.0 | (21.3) | (19.3) | 3.6 | (22.8) | (19.2) |
| Accrued interest | 0.1 | | 0.1 | | (0.1) | (0.1) |
| Realized cash flows | 35.1 | (15.9) | 19.2 | 35.3 | (15.9) | 19.4 |
| **Economic effect non-hedge accounting derivatives** | **37.2** | **(37.2)** | **0.0** | **38.9** | **(38.8)** | **0.1** |

The economic effect associated with the assessment of this type of hedge as compared to the previous financial year, reflects changes in the fair value of the financial instruments described above.

**Interest rate risk and currency risk on financing transactions**

The cost of financing is affected by interest rate fluctuations. In the same way, the fair value of financial liabilities is also subject to interest rate and exchange rate fluctuations.

To mitigate interest rate volatility risk and simultaneously ensure a correct balance between fixed rate debt and variable rate debt, the Group has stipulated interest rate derivatives (cash flow hedges and Fair Value hedges) in relation to a portion of its financial liabilities. At the same time, to mitigate exchange rate volatility risk, the Group has stipulated foreign exchange derivatives (Fair Value Hedges) to fully hedge loans in foreign currencies.

This Risk Mitigation policy is detailed in the management report, which can be consulted for further information on this topic (see in particular the section "Rate Risk " and "Exchange rate risk not connected to the commodity risk")

**Sensitivity Analysis - Financial transactions**

In conjecturing an instant shift of -25 basis points in the interest rate curve with respect to the interest rates effectively applied for the assessments as at December 31st 2018, at like-for-like exchange rates, the potential decrease in fair value of the existing derivative financial instruments on interest rates and exchange rates would amount to roughly 6.7 million euro. Likewise, conjecturing an instant shift of +25 basis points in the interest rate curve, there would be a potential increase in fair value of approximately 6.6 million euro.

These changes in fair value of financial instruments accounted for as hedges would have no effect on the income statement if it were not for their potential ineffective portion, which moreover is not significant.

As to derivatives designated as fair value hedges, any change in fair value would not have any effect on the income statement, other than for the credit adjustment part, as any such change would be essentially offset by a movement in the opposite direction of the hedged liability.

Assuming an instant change of 10% in the euro/yen exchange rate, given the same interest rates, the potential decrease in fair value of the derivative financial instruments in place at December 31st 2018 would amount to approximately 17.3 million euro. Likewise, assuming an instant reduction of the same amount, the potential fair value increase would be approximately 21.2 million euro. As exchange rate derivatives related to financing transactions are treated as fair value hedges, any change in these fair values would not have any effect on the income statement, other than for the ineffective part, as any such change would be offset by a movement in the opposite direction of the hedged liability.

## Commodity derivatives

Commodity derivative instruments held as at December 31st 2018 can be classed into the following categories:

| Commodity/exchange derivatives Operating management | | | | | | |
|---|---|---|---|---|---|---|
| **Type** | **Dec 31st 18** | | | **Dec 31st 17** | | |
| | **Fair value assets** | **Fair value liabilities** | **Net effect** | **Fair value assets** | **Fair value liabilities** | **Net effect** |
| Hedge accounting | 33.7 | 0.7 | 33.0 | 6.2 | | 6.2 |
| Non hedge accounting | 63.4 | 62.8 | 0.6 | 34.0 | 46.0 | (12.0) |
| **Total fair value** | **97.1** | **63.5** | **33.6** | **40.2** | **46.0** | **(5.8)** |
| **Type** | **Dec 31st 18** | | | **Dec 31st 17** | | |
| | **income** | **expenses** | **Net effect** | **income** | **expenses** | **Net effect** |
| Assessment of derivatives | 79.4 | (74.7) | 4.7 | 107.5 | (105.1) | 2.4 |
| Realized cash flows | 28.2 | | 28.2 | 7.6 | (1.1) | 6.5 |
| **Economic effect of derivatives** | **107.6** | **(74.7)** | **32.9** | **115.1** | **(106.2)** | **8.9** |

Commodity derivatives designated as cash flow hedges refer to planned future operations for the purchase of electricity and gas that are viewed as highly likely. The increase as compared with the previous financial period is mainly due to the increase in the volumes underlying outstanding contracts. The hedge relationships between the above derivative contracts and their underlying operations resulted in recording net revenues, gross of the associated fiscal effect, for 26.8 million euro to the income statement (as compared with 6.2 million euro as of December 31st 2017), divided as follows:

| **Hedge accounting commodities** | **Dec 31st 18** | | | **Dec 31st 17** | | |
|---|---|---|---|---|---|---|
| | **Positive components** | **Negative components** | **Net effect** | **Positive components** | **Negative components** | **Net effect** |
| Changes to expected cash flows | 40.5 | | 40.5 | 6.2 | | 6.2 |
| Reserve transferred to the income statement | | (13.6) | (13.6) | | | - |
| **Overall effect of derivatives on the statement of comprehensive income cash flow hedge** | **40.5** | **(13.6)** | **26.9** | **6.2** | **-** | **6.2** |

The commodity derivatives classified as non-hedge accounting mainly include contracts put in place substantially for hedging purposes, but which, on the basis of the requirements set forth by international accounting standards, cannot be formally classified under hedge accounting. In any event, these contracts generate income and charges referring to higher/lower purchase prices of raw materials and, as such, are reported as operating costs.
Overall, the commodity derivatives, in the 2018 financial year, generated a net income of 32.9 million euro (8.9 million as of December 31st 2017), which essentially correspond to respective changes in the opposite direction in the costs of raw materials (gas and electricity) and in all respects form an integral part of this.

**Market risk and currency risk on commercial transactions**
Concerning the wholesale business carried on by Hera Trading S.R.L., the Group manages risks related to the misalignment between indexation formulas related to the purchase of gas and electric energy and the indexation formulas related to the sales of the same commodities (including contracts entered into at fixed prices) as well as exchange rate risks in case the trading contracts for the commodities are denominated in currencies other than the euro (U.S. dollar).

With reference to these risks, the Group has set up a number of commodities derivatives aimed at pre-establishing the effects on sales margins irrespective of changes in market conditions.
These derivatives, even those not formally falling under the IFRS 9 standard to be accounted for under hedge accounting, effectively serve the function of simply hedging for fluctuations in prices and exchange rates on raw materials purchased, and fall within the Risk Mitigation Policy detailed in the management report; please refer to this report for further information (see in particular the section "risks associated with the macroeconomic environment").

**Sensitivity Analysis - Commercial transactions**
In assuming an instant 10 dollar-per-barrel rise in the Brent price, with no change in the Euro/Dollar exchange rate, and no change in the curve of the national standard price, the potential reduction in the fair value of derivative financial instruments held as at December 31st 2018 would amount to approximately 12.6 million euro. On the contrary, an instant fall in the same amount would bring about a potential decrease in the fair value of the instruments of approximately 12.6 million euro.
In assuming an instant +5 Euro/MWh change in the national standard price curve, with no change in the Euro/Dollar exchange rate, and no change in the Brent price, the potential increase in the fair value of derivative financial instruments held as at December 31st 2018 would amount to approximately 25.9 million euro. On the contrary, an instant change of -5 euro/MWh would bring about a potential decrease in the fair value of the instruments of approximately 25.9 million euro.

## 20 Inventories

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Raw materials and stocks | 95.1 | 73.5 | 21.6 |
| Materials earmarked for sale and final products | 15.1 | 15.5 | (0.4) |
| Contract work in progress | 47.1 | 32.2 | 14.9 |
| **Total** | **157.3** | **121.2** | **36.1** |

"Raw materials and stocks", stated net of an obsolescence provision, mainly comprise gas stocks, for 53.6 million euro (32.6 million euro as at December 31st 2017), spare parts and equipment used for maintenance and running of operating plants and networks, equal to 33.8 million euro (34.6 million euro as at December 31st 2017) and plastic materials earmarked for regeneration in the amount of 7.7 million euro (6.3 million euro as at December 31st 2017). The change in the gas stock values as compared to December 31st 2017 is mainly due to higher stocked amounts at the end of the period.

"Materials earmarked for sale" mainly consists of:

- GVG system - Steam Grid Generator and complementary plant components for a total of 9.6 million euro (the value assessed as of December 31st 2017 is confirmed in the lack of significant new elements for the identification of the recoverable value).
- plastic products made in the Group's regeneration plants equal to 5.1 million euro (5.5 million euro as of December 31st 2017).

"Commissioned work in progress" includes long-term contracts for plant engineering construction work, mainly in relation to water and public lighting (respectively in the amount of 14.4 million euro and 21.9 million euro), as well as for design activities aimed at acquiring commissions in the national and international markets (6.6 million).

## 21 Trade receivables

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Receivables from customers | 1,408.6 | 1,317.4 | 91.2 |
| Allowance for bad debts | (342.1) | (271.0) | (71.1) |
| loans to customers for bills and invoices not yet issued | 775.7 | 714.5 | 61.2 |
| **Total** | **1,842.2** | **1,760.9** | **81.3** |

Trade receivables comprise estimated consumption, for the portion pertaining to the period, relating to bills and invoices which will be issued after December 31st 2018, as well as receivables for revenues coming due during the period, referring to the water sector which will be billed in the following period, in accordance with the billing methods for final customers established by the relevant Authority.

Changes in the provisions for bad debts are as follows:

| | Final balance previous period | Adoption of IFRS 9 | Opening balance | Provisions | Changes scope of consolidation | Uses and other movements | Closing balance |
|---|---|---|---|---|---|---|---|
| 2017 financial year | 211.1 | - | 211.1 | 103.4 | 0.5 | (44.0) | 271.0 |
| 2018 financial year | 271.0 | 18.2 | 289.2 | 89.3 | 0.8 | (37.2) | 342.1 |

The recording of the provision is made on the basis of analytical valuations in relation to specific receivables, supplemented by measurements made based on future-oriented analyses of the receivables regarding the general body of customers (in relation to the age of the receivables, the type of recovery action undertaken and the status of the debtor), as described in the following paragraph "credit risk".

As a result of the application of the impairment model based on the expected credit loss, the adoption of IFRS 9 resulted in an adjustment in the provision in the amount of 18.2 million euro, with particular reference to receivables not yet past due. Reference should be made to paragraph 2.02.02 "Adoption of IFRS 9" for a more detailed explanation of the new assessment model for financial assets.

The change in the scope of consolidation as of December 31st 2018 reflects the acquisition of Blu Ranton Srl for 0.5 million euro and Megas Net Spa into Marche Multiservizi Spa for 0.3 million euro.

The following table displays these receivables from clients on the basis of bills issued, organized by degree of past-due:

| | Dec 31st 18 | Inc.% | Dec 31st 17 | Inc.% | Changes |
|---|---|---|---|---|---|
| Not yet due | 646.9 | 46% | 394.9 | 30% | 252.0 |
| Due 0-30 days | 91.4 | 6% | 107.8 | 8% | (16.4) |
| Due 31-180 days | 129.7 | 9% | 171.5 | 13% | (41.8) |
| Due 181-360 days | 118.5 | 8% | 139.7 | 11% | (21.2) |
| Due beyond 360 days | 422.1 | 30% | 503.5 | 38% | (81.4) |
| **Total** | **1,408.6** | | **1,317.4** | | **91.2** |

**Credit risk**

The value of trade receivables reported in the financial statements at December 31st 2018 represents the Group's maximum exposure to credit risk. The Group's credit management model makes it possible to analytically determine the different risks associated with the collectability of trade receivables from customers as soon as they arise and progressively according to their increasing seniority. This approach allows the company to reduce the concentration and exposure to credit risk posed by both business and household customers. With regard to mass client base receivables, write-downs are carried out on the basis of future-oriented analysis regarding the amount of probable future income, taking into consideration the seniority of the receivables, the type of recovery action undertaken and the status of the creditor. From time to time, analyses are conducted on the individual credit positions yet to be resolved, identifying any criticality, and if the amounts outstanding are uncollectible, in whole or in part, the related receivables are written down.

## 22 Current tax assets and liabilities

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Income tax receivables | 14.8 | 8.2 | 6.6 |
| IRES refund receivables | 19.5 | 21.6 | (2.1) |
| **Total current tax assets** | **34.3** | **29.8** | **4.5** |
| Income tax payables | 6.0 | 23.6 | (17.6) |
| Substitute tax payables | - | 14.3 | (14.3) |
| **Total current tax liabilities** | **6.0** | **37.9** | **(31.9)** |

"Income tax receivables" refer to the excess advance IRES and IRAP payments over the tax amount payable.

The "IRES refund receivables" refers to the requests for IRES refund due for the period 2007-2011, following the deductibility of IRAP from IRES related to labour costs and the like under Law Decree 201/2011.

"Income tax payables" includes provisions for IRES and IRAP made in relation to profit for the period.

"Substitute tax payables": during the 2018 financial year, the amount due for a controlling shareholding franking operation was paid, which had already been planned and approved by management at the end of the previous financial year.

## 23 Other current assets

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Energy efficiency bonds and emissions trading | 55.1 | 104.7 | (49.6) |
| Security deposits to suppliers | 53.2 | 32.3 | 20.9 |
| VAT, excise and additional taxes | 38.7 | 50.0 | (11.3) |
| Incentives from renewable sources | 29.7 | 32.1 | (2.4) |
| Fund for electricity and environmental services for standardisation and continuity income | 24.0 | 21.5 | 2.5 |
| Prepaid costs | 18.3 | 18.3 | - |
| Advances to suppliers and employees | 12.6 | 8.4 | 4.2 |
| Other receivables | 49.6 | 36.0 | 13.6 |
| **Total** | **281.2** | **303.3** | **(22.1)** |

The breakdown and changes in the main items are described compared with December 31st 2017.

"Energy efficiency bonds and emissions trading", includes:

- white certificates, 39.6 million euro (92.5 million euro as of December 31st 2017);
- green certificates, 9.8 million euro, in line with the previous financial year;
- grey certificates, 5.7 million Euro (2.4 million euro as of December 31st 2017);

In relation to white certificates, the value decrease is mainly due to the lower economic value of the certificates recognised as achieving energy efficiency objectives as well as different completion timings of the requirements as compared to the previous year.
In relation to green certificates, by virtue of the incentive mechanism valid beginning in 2016 for the production of electricity from renewable sources, according to which green certificates are no longer recognized and replaced by a special rate for the sale of the electricity produced, the portfolio of this type of bonds will be cancelled with a negative effect in terms of evaluation, delivery times to GSE or sales on the market.
In relation to grey certificates, the increase in the value of the portfolio is mainly due to the remarkable increase of the market value of this type of certificates as compared with the previous year.

"Security deposits", mainly include:

- security deposit made to Acosea Impianti S.r.l. in the amount of 12.5 million euro;
- deposits provided as security for participation in foreign platforms that deal in commodity contracts, auctions on the electricity market, and to secure transactions on wholesale markets for electricity and natural gas, totalling 31.4 million euro;
- security deposits required by Customs amounting to 2.3 million euro.

The change with respect to December 31st 2017 is mainly due to the Group's increased activity on the European commodity trading markets, which requires to pay security deposits to guarantee the transactions carried out.

"VAT, excise and additional taxes", is comprised of tax credits receivables to the treasury for value added tax in the amount of 30.7 million euro and for excise and additional taxes in the amount of 8 million euro. The change as compared to December 31st 2017 is attributable to a decrease of 13.2 million euro in receivables for value added tax (43.9 million euro s at December 31st 2017) and an increase of 1.9 million euro in receivables for excise and additional taxes (6.1 million euro as at December 31st 2017). These changes should be interpreted together with the same change shown in note 30 "Other current liabilities". In particular, with regard to excise duties and additional taxes, the procedures that govern the financial relations with the tax authorities should be taken into account: as a matter of fact, advance payments made during the year are calculated on the basis of the quantities of gas and electricity billed in the previous year. These methods can generate credit or debit positions with differences that may be significant even between one period and another.

"Incentives from renewable sources", consist of receivables from the GSE for the new incentive mechanism to promote the production of electricity from renewable sources, which replaced the mechanism for recognising green certificates.

For "Fund for electricity and environmental services for standardisation and continuity income“, the increase is mainly due to a higher receivable for components and equalisation of the water cycle and higher receivables of the gas distribution and electricity sector, only partially offset by lower receivables due to the equalization of the electricity sector for the higher protection sale.

"Prepaid costs" are mainly costs for a future period deriving from external work and services in the amount of 4.7 million euro (5.5 million euro as of December 31st 2017), costs incurred for insurance policies, surety, bank fees and charges in the amount of 3.8 million euro (3.6 as of December 31st 2017) and fees due in the amount of 3.5 million euro (3.2 as of December 31st 2017).

## 24 Assets and liabilities held for sale

As of December 31st 2017, in accordance with IFRS 5, this item almost exclusively represented the contribution that Medea Spa, identified as a disposal group, made to the consolidated financial statements in terms of assets and liabilities. During the course of 2018, the sale of the entire investment was completed, with the consequent derecognition of all assets and liabilities.

It should be noted that, as of December 31st 2017, assets and liabilities held for sale were entered at their book value, as they were valued at less than their fair value, and were included in the item "Attributed net working capital" of the "Gas" operating segment in the disclosure by operating segment provided in section 2.02.07.

## 25 Share capital and reserves

Compared to December 31st 2017, shareholders' equity increased by 140.7 million euro due to the combination of the following effects:

- overall revenues for the period in the amount of 311.1 million euro;
- the distribution of dividends in the amount of 152.3 million euro;
- increase due to changes in the scope of consolidation, in the amount of 34.4 million euro;
- decrease due to transactions on treasury shares, in the amount of 23.1 million euro;
- decrease due to the transition to accounting standard IFRS 9, in the amount of 19.9 million euro;
- decrease due to transactions on treasury shares, in the amount of 9.5 million euro.

The statement of changes in net equity is shown in section 2.01.05.

**Share capital**
The share capital as at December 31st 2018 amounted to 1,465.3 million euro, made up of 1,489,538,745 ordinary shares with a nominal value of 1 euro each and is fully paid-up.
The treasury shares, whose nominal value at December 31st 2018 was 23.6 million euro, and the costs associated with the new share issues, net of the relevant tax effects, are deducted from share capital.

**Reserves**
This item, amounting to 913.5 million euro, include retained earnings and reserves accrued in previous financial years and in-kind equity injections, or shares, in the amount of 946.4 million euro, cumulative losses in the other components of comprehensive income for 13.3 million euro and negative reserves for operations on treasury shares in the amount of 19.6 million euro. These latter items reflect transactions carried out on treasury shares as at December 31st 2018. Changes over the course of the financial year generated an overall capital gain in the amount of approximately 2.1 million euro.

**Non-controlling interests**
This item reflects the amount of capital and reserves of subsidiaries held by parties other than the parent company's shareholders. In particular, it includes minority equity interests in the Herambiente Group and the company Marche Multiservizi Spa.

## 26 Current and non-current financial liabilities

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Bonds and loans | 2,651.7 | 2,856.9 | (205.2) |
| Payables for the acquisition of controlling interests and potential payments | 17.4 | 17.4 | - |
| Financial leasing payables | 12.2 | 13.9 | (1.7) |
| Other financial liabilities | 3.3 | 4.0 | (0.7) |

| | | | |
|---|---|---|---|
| **Total non-current financial liabilities** | **2,684.6** | **2,892.2** | **(207.6)** |
| Bonds and loans | 463.5 | 55.3 | 408.2 |
| Payables for the acquisition of controlling interests and potential payments | 9.1 | 7.0 | 2.1 |
| Financial leasing payables | 1.7 | 2.0 | (0.3) |
| Other financial liabilities | 67.0 | 28.3 | 38.7 |
| Overdrafts and interest expenses | 70.3 | 187.0 | (116.7) |
| **Total current financial liabilities** | **611.6** | **279.6** | **332.0** |
| **Total financial liabilities** | **3,296.2** | **3,171.8** | **124.4** |

"Bonds and loans" increased mainly as a result of the following loans taken out during the year:

- the assumption on June 15th 2018 of a new loan, granted by the European Investment Bank, with a nominal value of 110 million euro to be repaid by 2030, to support the implementation of an investment programme in the waste collection, treatment and disposal sector;
- the assumption on December 21st 2018 of a new loan, granted by Unicredit Spa, to be repaid by 2021;
- the assumption on December 21st 2018 of a new loan, granted by Mediobanca Spa, with a nominal value of 50 million euro and to be repaid by 2021;
- In addition, the amortized cost method used to value the bonds issued in 2018 resulted in an increase of 11 million euro for these items.

In addition, 401.9 million euro were reclassified from non-current financial liabilities to current financial liabilities of the bond maturing December 3rd 2019 with a nominal value of 394.6 million euro.

"Payables for the acquisition of controlling interests and potential payments" include the amounts still to be paid to transferor shareholders as part of the business combination transactions concluded in the period or in previous periods, as well as the estimate of the potential payments foreseen by the agreements signed at the time of the acquisition, as of the balance sheet date. As of December 31st 2018 this item mainly refers to:

- Aliplast Group, in the 2017 financial year, in the non-current part for 17.4 million euro and in the current part for 4.2 million euro;
- Blu Ranton Srl , in 2018, for a total of 3.5 million euro in the current portion;
- Biogas Srl, merged by incorporation into Herambiente Spa, in 2017, for 1 million euro in the current portion.

The item "Financial leasing payables" represents the recording of payables due from leases arising from accounting for leasing transactions using the financial method.
The change as compared to December 31st 2017 is due to paying down overdue principal instalments.
The value of the lease payments still due on December 31st 2018 amounted to 15.6 million euro.

The item "Other financial liabilities", in relation to the portion due after the current period, includes 3.3 million euro due to the Municipal Pension Fund of the Municipality of Trieste. The current part mainly consists of payables due to:

- Advances for 27.6 million euro for contracts for the exchange of electric power carried out on the Eex platform, which provide for the daily settlement of differentials;
- collections from customers under safeguard, gas customers for last resort services and customers affected by seismic events since May 20th 2012, against advances already received for the same, amounting to 20.8 million euro (4.2 million euro as of December 31st 2017);
- collection of receivables factored without recourse still to be transferred to factoring companies at year-end, in the amount of 13.7 million euro;
- RAI licence fee collection for 3 million euro (2.5 million euro at December 31st 2017);

In "Overdrafts and interest expenses", the change compared with the previous year is represented by the reimbursement of a short-term loan in December 2018, issued in the previous period in the form of hot money, amounting to 100 million euro.

At December 31st 2018 the Hera Group provided the following security interests for certain bank loans. Specifically:

- mortgages and special liens on property, plants and equipment by the Hera Group to the syndicate of banks in relation to the project financing for the waste-to-energy plant in Granarolo (Bo), whose nominal amount outstanding is 5.4 million euro;

- mortgages on buildings in Pesaro and Urbino held by a bank that provided a loan to the subsidiary Marche Multiservizi Spa with a nominal outstanding value of 0.7 million euro.
- mortgages securing the loan granted to the subsidiary AcegasApsAmga Spa, with a nominal outstanding value of 0.6 million Euro.

The table below shows the financial liabilities broken down by category as at December 31st 2018, with an indication of the portion expiring within the period, within 5 years and after 5 years:

| Type | Residual amount June 31st 18 | Portion due within the period | Portion due within 5th year | Portion due beyond 5th year |
|---|---|---|---|---|
| Bond | 2,422.6 | 401.9 | 360.8 | 1,659.9 |
| Bank loans | 692.6 | 61.6 | 314.5 | 316.5 |
| Payables for the acquisition of controlling interests and potential payments | 26.5 | 9.1 | 17.4 | - |
| Finance lease payables | 13.9 | 1.7 | 5.8 | 6.4 |
| Other financial liabilities | 70.3 | 67.0 | 3.3 | - |
| Overdrafts and interest expenses | 70.3 | 70.3 | - | - |
| **Total** | **3,296.2** | **611.6** | **701.8** | **1,982.8** |

The main conditions of the bonds outstanding as of December 31st 2018 are as follows:

| Financing and Bonds | Negotiation | Duration (years) | Maturity | Nominal value (mn) | Coupon | Annual interest rate |
|---|---|---|---|---|---|---|
| Eurobond | Listed | 10 | Dec 3rd 19 | 394.6 Eur | Annual | 4.50% |
| Bond | Listed | 8 | Oct 4th 21 | 289.8 Eur | Annual | 3.25% |
| Bond | Listed | 10 | May 22nd 23 | 68.0 Eur | Annual | 3.375% |
| Green bond | Listed | 10 | Jul 4th 24 | 500.0 Eur | Annual | 2.375% |
| Bond | Unlisted | 15 | Aug 5th 24 | 20,000 Jpy | Six monthly | 2.93% |
| Bond | Listed | 12 | May 22nd 25 | 15.0 Eur | Annual | 3.50% |
| Bond | Listed | 10 | Oct 14th 26 | 400.0 Eur | Annual | 0.875% |
| Bond | Unlisted | 15/20 | May 14th 27/32 | 102.5 Eur | Annual | 5.25% |
| Bond | Listed | 15 | Jan 29th 28 | 700.0 Eur | Annual | 5.20% |

As of December 31st 2018 the outstanding bonds, totalling a nominal value of e 2,619.7 million (unchanged from December 31st 2017), were recorded at amortized cost of 2,428.1 million euro with a fair value of 2,890.8 million euro (3,023.4 as of December 31st 2017) determined by market quotations where available.
There are no covenants on the debt except that, for some loans, which requires the company not to have even one agency lower its rating below "investment grade" (BBB-). As of the balance sheet date this covenant has been complied with.

**Liquidity risk**
Liquidity risk concerns the inability to meet the financial obligations taken on due to a lack of internal resources or an inability to find external resources at acceptable costs. Liquidity risk is mitigated by adopting policies and procedures that maximise the efficiency of management of financial resources. For the most part, this is done through the centralised management of cash inflows and outflows (centralised treasury service); in the prospective assessment of the liquidity conditions; in obtaining adequate lines of credit; and preserving an adequate amount of liquidity.
Current cash and lines of credit, in addition to the resources generated by the operating and financing activities, are deemed more than sufficient to meet future financial needs. In particular, at December 31st 2018, the Group had unused "committed" lines of credit amounting to approximately 300 million euro, long-term lines of credit, stipulated in December, for 350 million euro of which 100 million were used, as well as wide margins on "uncommitted" credit lines amounting to 668.5 million euro.

The analysis of cash flows, broken down by maturity date, related to borrowings outstanding at the balance sheet date is illustrated in the Report on operations in the section 1.06.03 "Financial policy and rating".

**Sureties and guarantees**

| | Dec 31st 18 | Dec 31st 17 |
|---|---|---|
| Sureties and bank guarantees | 911.6 | 935.9 |
| Sureties and insurance guarantees | 408.0 | 379.7 |
| **Total** | **1,319.6** | **1,315.6** |

"Sureties and bank guarantees", the value as at December 31st 2018 comprises the following:

- 545.8 million euro for sureties made to public institutions (the Ministry of the Environment, the Regions, provinces and municipalities) and private entities to guarantee the suitable management of plants for treating waste, for the suitable provision of waste disposal and intermediation services, for reclamation work and for the proper fulfilment of contractual commitments;
- 365.8 million euro for guarantees and comfort letters issued to guarantee timely payment for the sourcing of raw materials

"Sureties and insurance guarantees", as at December 31st 2018, refers to sureties issued to public entities (provinces, municipalities and the Ministry of the Environment) and third parties to guarantee the suitable management of public utility and waste disposal services, the proper execution of the work to lay company pipelines across land owned by private individuals, reclamation work, managing waste treatment and disposal systems.

## 27 Post-employment and other benefits

This includes provisions for employee leaving indemnities and other contractual benefits, net of advances paid out and payments made to the social security institutions pursuant to current regulations. The calculation is made using actuarial techniques and discounting future liabilities to the balance sheet date. These liabilities comprise the matured receivables of the employee at the presumed date of leaving the company.

The item "Gas discount" represents annual indemnities provided to Federgasacqua employees, hired prior to January 1980, which may be transferred to their heirs. "Premungas" is a supplementary pension fund for employee members of Federgasacqua hired prior to January 1980. This fund was closed with effect from January 1997, and changes quarterly solely to settle payments made to eligible retirees. The "tariff reduction" provision was provided to cover the charges deriving from the acknowledgement to retired staff of the electricity business unit of tariff concessions for electricity consumption.

The table below shows the changes in the above provisions during the year:

| | Dec 31st 17 | Service cost | Financial expenses | Actuarial income (losses) | Uses & other move-ments | Changes scope of consol. | Dec 31st 18 |
|---|---|---|---|---|---|---|---|
| Post-employment | 126.3 | 0.7 | 0.8 | (2.0) | (10.9) | 0.4 | 115.3 |
| Tariff reduction | 7.3 | - | 0.1 | (0.7) | (0.3) | - | 6.4 |
| Premungas | 4.4 | - | - | 0.1 | (0.5) | - | 4.0 |
| Gas discount | 4.3 | - | - | (0.1) | (0.4) | - | 3.8 |
| **Total** | **142.3** | **0.7** | **0.9** | **(2.7)** | **(12.1)** | **0.4** | **129.5** |

The item “Service Cost” regards companies with a small number of employees for whom the employee severance indemnity fund continues to represent a defined benefit plan. "Financial charges" are calculated by applying a specific discount rate for each company, determined on the basis of the average financial life of the bond. "Actuarial gains(losses)" reflects the re-measurement of the liabilities for employee benefits arising from changes in actuarial assumptions. These components are recorded directly in the comprehensive income statement.

"Uses and other movements" refers almost exclusively to the amounts paid to employees over the course of the period, equal to 12 million euro.

The tables below outline the main assumptions used in the actuarial estimate of employee benefits, subdivided by geographical area:

| | Hera Group (Central area) | Hera Group (north-eastern area) |
|---|---|---|
| Technical actuarial yearly rate | 0.86% | 0.71% |
| Overall increase of salary yearly rate | 2.50% | |
| Yearly frequency of exit from work for reasons other than death | 1.57% | 1.49% |
| Yearly average frequency of use severance pay provision | 2.00% | 1.80% |

In interpreting said assumptions, account is taken of the following:

- regarding inflation rates, the inflation scenario was derived employing an IPCA index of 1.4%;
- for probabilities of death, Istat 2017 tables were consulted;
- in the actuarial valuations, account was taken of the new effective dates for pensions under Law Decree December 6th 2011, no. 201 entitled "Urgent measures for growth, equity, and the consolidation of public finances", as amended by Law 214 December 22nd 2011, as well as the regulation for adjusting requirements for accessing the pension system in view of increased life expectancies in accordance with Article 12 of Legislative Decree no. . 78 of May 31st 2010 as amended by Law 122 of July 30th 2010; .
- for the probability of leaving employment for reasons other than death, an average yearly exit rate of 1.57% was hypothesized, since the analysis differentiated by professional level and sex did not result in statistically significant results;
- to take into account the phenomenon of early leaving, the incidence and amount of average anticipated severance pay were hypothesized. The frequency of advance payments as well as the average percentage of severance pay requested as an advance were drawn from corporate data. The rate of severance pay requested as an advance was hypothesized at 70% of severance pay or the maximum amount set by current regulations;

Lastly, actuarial projections were made on the basis of the Euro Composite AA yield curve as of December 31st 2018.

**Sensitivity Analysis - Obligations of defined-benefit plans**

Assuming a 50 bps increase in the internal rate of return compared to the discount rate actually applied to value the liabilities at December 31st 2018, all other actuarial assumptions being equal, the potential decrease of the present value of the obligations of the existing defined-benefit plans would amount to about 1.4 million Euro. Likewise assuming a reduction of this rate of 50 bps, there would be an increase in the present value of the liabilities of about 1.4 million euro.

Assuming a 50 bps increase in the in the rate of inflation compared to that actually applied to value the liabilities at December 31st 2018, all other actuarial assumptions being equal, the potential increase of the present value of the obligations of the existing defined-benefit plans would amount to about 0.9 million euro. Likewise assuming a reduction of this rate of 50 bps, there would be a decrease in the present value of the liabilities of about 0.8 million Euro.

Changes in the remaining actuarial assumptions would not produce significant effects on the present value of the liabilities of the defined-benefit plans reported in the financial statement.

## 28 Provisions for risks and charges

| | Dec 31st 17 | Provisions | Financial expenses | Uses and other movements | Changes scope of consol. | Dec 31st 18 |
|---|---|---|---|---|---|---|
| provision for third-party asset restoration | 193.6 | 10.0 | 5.8 | (9.5) | - | 199.9 |
| Provision for closure and post-closure landfill costs | 143.2 | 7.2 | 14.1 | (16.9) | - | 147.6 |
| provision for legal cases and disputes brought by personnel | 14.1 | 5.6 | - | (3.4) | - | 16.3 |
| Plants dismantling provision | 7.4 | - | 0.2 | - | - | 7.6 |
| Waste disposal provision | 7.1 | 6.6 | - | (6.7) | - | 7.0 |
| Other provisions for risks and charges | 67.1 | 17.8 | 0.0 | (4.7) | - | 80.2 |
| **Total** | **432.5** | **47.2** | **20.1** | **(41.2)** | **-** | **458.6** |

The "provision for landfill closure and post-closure expenses" represents the amount set aside to cover the costs which will have to be incurred for the management of the closure and post-closure period pertaining to the landfills currently managed. The future outlays, calculated for each landfill by means of a specific appraisal, have been discounted to present value in compliance with the provisions of IAS 37. The increases in the provision comprise the financial component derived from the discounting and provision procedure due to changes in the assumptions on future outlays, following the change in estimates both on current and closed landfills. Uses represent the effective outlays during the year. Changes in estimated closure and post-closure costs in relation to active or new landfills, which entailed the recording of an adjustment of the same amount as the value of the property, were classified under "Uses and Other movements".

"Uses and other movements" of the item "Provision fo landfill closure and post-closure expenses" decreased by 17.7 million euro, as follows:

- decreases in the amount of 18.9 million euro due to current cash outlays for the management of landfills, 7.3 million euro of which refer to internal costs included in "other operating revenues";
- increases in the amount of 3.8 million euro due to changes in the assumptions on future outlays, following the change in estimates on current landfills.
- increases in the amount of 2.6 million euro due to changes in the assumptions on future outlays, following the change in estimates on closed landfills.

The "provision for third-party asset restauration", includes provisions made in relation to law and contractual requirements for the Group companies as lessees of the distribution networks of the entity that owns the assets. The allocations are made on the basis of depreciation rates held to be representative of the remaining useful life of the assets in question in order to compensate the owner companies for the wear and tear of the assets used for business activities. The provision reflects the present value of these outlays which will be determined in future periods (usually on expiry of the agreements entered into with the area agencies, as far as the water service is concerned, and on expiry of the transitory period anticipated by current legislation as far as gas distribution is concerned). The increases in the provision comprise the sum total of the provisions for the year, including those discounted to present value, and the financial charges for the period associated with the cash flows discounted to present value.

The "provision for legal cases and disputes brought by personnel" reflects the outcomes of lawsuits and disputes brought by employees.

“Plants dismantling provision” represents the amount set aside to cover future dismantling work on waste-to-energy plants.

"Waste disposal fund" records the estimated costs of disposal of the waste already stored at the Group's plants. The provisions, amounting to 6.6 million euro, reflect the estimated costs of contributions for the year 2018 not yet processed at the end of the financial period, while the uses, amounting to 6.7 million euro, represent the costs incurred as of December 31st 2018 for the processing of waste that was residual at the end of the previous year.

"Other provisions for risks and charges" comprises provisions made against sundry risks. Below, there is a description of the main items:

- 18.8 million euro related to the potential risk of the amount of the WTE green certificates not being recognised calculated according to the difference between auxiliary services resulting from total self-consumption and services estimated on the basis of the benchmark percentage;
- 11.3 million euro, due to the potential liability related to existing obligations (guarantee on financial exposure given by AcegasApsAmga S.p.A.) in case of abandonment of the operations run by the foreign subsidiary Aresgas (Bulgaria).
- 7.1 million euro for the potentially higher expenses that may be incurred in connection with extraordinary maintenance on the Ponte San Nicolò (Padua) landfill.
- 7.4 million euro, for the risk associated with the enactment of the Decree of the Ministry of Economic Development of November 20th 2012 "New procedures to determine the component of the avoided fuel cost (CEC)", under measure CIP6/92, which introduced new calculation criteria for determining the bonus that are different from those initially expected for the years 2011 and 2012;
- 6 million euro for uncertainties regarding how to calculate the reimbursement value of the networks when participating in tenders for the gas distribution service in certain areas already served by the Group;
- 4.5 million euro for the dispute that arose with the subsidiary Hestambiente Srl in connection with the payment of CIP6 incentives for the Trieste waste to energy plant for the years 2010-2012;
- 3.3 million euro for the risk arising from the Authority's resolution 527/2016, which, in keeping with the findings of the GSE, established that the Fund for Energy and Environmental Services recover the amounts that the Group would have been unduly received for the electricity produced by the Granarolo (Bo) WTE plant.

"Provisions" for the year under the item "Other provisions for risks and charges" refer, in particular, to the following risks:

- 8.1 million euro related to the likelihood that a portion of the green certificates produced by Imola cogeneration plan will not be recognized
- 4.5 million euro for the likelihood that the CIP6 incentives for the waste to energy plant in Trieste will not be recognised for the years 2010-2012, in the period when the Group was managing the plant;
- 2.4 million euro, for the risk associated with the enactment of the Decree of the Ministry of Economic Development of November 20th 2012 "New procedures to determine the component of the avoided fuel cost (CEC)", under measure CIP6/92.

“Uses and other movements" of the item "Other provisions for risks and charges" decreased by 3.9 million euro net, as follows:

- uses in the amount of 1.8 million euro incurred in connection with the settlement of conciliation agreements with Ravenna Entrate Spa (June 27th 2018 and November 28th 2018) for the payment of Ici/Imu resulting from changes in the income attributed to certain environmental facilities;
- de-provisioning for 0.5 million euro due to the fact that the risk of incurring penalties for failure to comply with safety regulations applicable to gas distribution for the years 2015-2017 is no longer probable;
- de-provisions for 0.3 million euro following the end of the period in which charges could be announced for interruptions in the electricity supply in the municipalities of Modena and Imola.

## 29 Trade payables

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Payables to suppliers | 602.0 | 716.8 | (114.8) |
| Payables to suppliers for invoices not yet received | 758.4 | 679.1 | 79.3 |
| **Total** | **1,360.4** | **1,395.9** | **(35.5)** |

The majority of trade payables are the result of transactions carried out in Italy.

## 30 Other current liabilities

| | Dec 31st 18 | Dec 31st 17 | Changes |
|---|---|---|---|
| Payables for advances to the fund for energy and environmental services | 274.1 | 221.5 | 52.6 |
| plant investment grants | 190.7 | 174.5 | 16.2 |
| Security deposits from clients | 101.2 | 103.5 | (2.3) |
| Fund for components and equalization of the Electricity and Gas Sectors | 76.6 | 74.0 | 2.6 |
| Personnel | 48.7 | 47.2 | 1.5 |
| Payables to social security institutions | 47.0 | 45.6 | 1.4 |
| VAT, excise and additional taxes | 31.5 | 13.7 | 17.8 |
| Employee withholding | 16.6 | 16.4 | 0.2 |
| Environmental damage | 13.7 | 19.2 | (5.5) |
| Payables for damage in customs | 13.6 | 12.8 | 0.8 |
| Anticipated revenues and other accrued expenses | 9.7 | 9.2 | 0.5 |
| Other payables | 43.5 | 31.8 | 11.7 |
| **Total** | **866.9** | **769.4** | **97.5** |

"Liabilities for advances to the Fund for energy and environmental services" comprises non-interest-bearing advances granted by the electricity sector Equalization Fund, as follows:

- 239.6 million euro of payables for advances in compliance with the integration mechanism set forth by resolution 370/2012/R/Eel and 456/2013/R/Eel by the Authority in charge of regulating the energy networks and environment (Arera), for overdue and unpaid receivables from customers managed as protected customers up to December 31st 2016;
- 32.1 million euro in compliance with the integration mechanism set forth in Law 239 of 23 August 2004 and by Arera's Tivg , for the charges for delinquency of services of last resort in the natural gas sector (Fui, Ftf and Fdd) until the 2016-2017 thermic year.
- 1.6 million euro in compliance with the recognition mechanism established by Arera resolution 627/2015/R/com for overdue charges related to the supply of electricity, gas and integrated water service to the populations affected by the 20 May 2012 earthquakes in the Emilia-Romagna region;

The change of 52.6 euro as compared to December 31st 2017 is mainly due to the collection of advances relating to the reporting of overdue and unpaid receivables due from customers managed as protected customers for 2016 and from customers managed under default gas regime for the 2016-2017 thermic year and for adjustments relating to previous periods.

"Plant investment grants" refers mainly to investments made in the water and environment sector; this item decreases in proportion to the amount of depreciation calculated on the fixed assets in question and increases as a result of new investments subject to grants. Specifically, this item includes 40 million euro in contributions related to the new Servola purification plant, built in the Municipality of Trieste, and 39.1 million euro in contributions related to the FoNI fund (new water system investment fund) and 16.4 million euro in contributions related to the construction of laminating tanks and submarine ducts in the Rimini area . The change as compared to December 31st 2017 is mainly due to the grants received for investments in the water sector, net of the company's share for the period.

"Security deposits" reflect the amount paid by customers for gas, water and electricity provision contracts.

"Fund for components and equalisation of the energy and environmental services", reflects the liabilities for the Fund for energy and environmental services mainly due to the equalization on the gas distribution and measurement, of some system components of the gas and electricity service for the protected market categories and equalization of the electricity service. The decrease as compared to December 31st 2017 is mainly due to a higher credit for certain components of gas and electricity distribution and sales amounting to 15.9 million euro, counterbalanced by a lower debt for components of gas distribution and sale as well as by lower debt due to equalization of both the gas and electricity service for a total of 13.3 million euro.

“Personnel" includes the vacation time accrued and not used, as well as the productivity bonuses accounted for by department, as of December 31st 2018.

"Payables to social security institutions" and "employee withholdings" relate to contributions and withholdings owed to social security institutions and the inland revenue for the month of December.

"VAT, excise and additional taxes" include payables for value added tax amounting to 0.9 million euro (0.5 million euro at December 31st 2017) and excise duties and additional taxes amounting to 30.6 million euro (13.2 million euro at December 31st 2017). As illustrated in note 23, "Other current assets", this increase must be understood taking into account the factors that regulate financial relations with the Inland Revenue Office, which can generate credit/debit positions with differences that can be significant even between one financial period and another.

"environmental damage" represents the payments to be made to municipalities, on the basis of specific agreements, as compensation for activities that impact on the environment for waste delivered to plants in their territory. The amount of these contributions is related to the amount of waste disposed of annually, which were less that those disposed of during the previous financial year.

"Payables for damage in customs", amounting to 13.6 million euro, includes the value of insurance deductibles that the Group must repay directly to damaged third parties or insurance companies.

The item "other payables" is mainly composed of the following:

- requirement to return Energy Efficiency Certificates for 6 million euro, comprising almost entirely grey certificates, to the competent authorities (2.1 million euro as of December 31st 2017).
- payments on account and specific tariff subsidies payable to customers amounting to 3.9 million euro (4.3 million euro as of December 31st 2017);
- liabilities owed to minority shareholders for dividends, amounting to 3.9 million euro (1 million euro as at  December 31st 2017);
- sundry tax payables of 2.2 million euro (2.5 million euro as of December 31st 2017);

## 31 Impairment test

**Cash-generating and start-up units**

As required by the reference accounting standards (IAS 36), assets and goodwill have been subjected to impairment tests by determining the value in use, which is the current value of operating cash flows (duly discounted according to the DCF - discounted cash flow method) resulting from the 2018 - 2022 business plan approved by the Board of Directors of the parent company at its meeting January 10th 2019.

The impairment test was applied to the following CGUs (Cash generating units): gas, electricity, integrated water management, environmental and other services (Public lighting, telecommunications and minor businesses) that are consistent with the business areas used for internal periodic reporting and with the information contained in the annual financial report in paragraph 2.02.07 "Information by operating segments".

In relation to this, it should be noted that the Group has implemented a structured process for preparing and reviewing the business plan, which involves formulating the Plan on an annual basis according to an external context scenario that takes into account the market trends and rules for regulated businesses, with the support of all the business units and following a "bottom-up" logic.

Specifically, assumptions were implemented in developing the 2018-2022 Business Plan consistent with those used in previous plans and, on the basis of the final reported values, forecasts were defined that refer to the most authoritative and up external sources available wherever necessary.

Revenues for regulated business areas were developed on the basis of the evolution of the rates deriving from national regulations and/or agreements with the Area Authority. In particular, revenues from energy distribution were forecasted according to the principles of the Authority 775/16 (RTDG) and 654/15 (TIT) resolutions for gas and electricity respectively, and taking into account the respective WACC values, approved through Resolution no. 639/18 for the three year period 2019-2021 in relation to the electric power sector and for 2019 for the gad distribution and measurement, and were updated for the following years in line with the methodology of resolution no. 583/15 and according to the forecasts of the financial and fiscal parameters integrated into the approved Business Plan. Revenues from energy sales under protected conditions have been estimated on the basis of the respective regulatory AEEGSI reference texts, i.e. the TIV (resolution 301/12) for electricity and TIVG (resolution 64/09) for gas. For integrated water management, the hypothesis used to forecast revenues assumed no change in the volumes distributed and was based on the rates originating from the agreements in effect with ATERSIR at the date the Plan and the application of the Water Rate method (MTI) set forth by AEEGSI resolution no. 664/15, also taking account the parameters underlying the hedging of financial and tax charges, among other factors. For urban sanitation, the hypothesis formalized involved achieving full rate coverage over all the areas served within the duration of the plan, consistent with the provisions of rules currently in effect.

Price trends for electric energy and gas bought and sold in the open market were worked out on the basis of business considerations consistent with the energy scenario under which the business plan was prepared, considering the forecasts provided by a panel of institutional observers.

The development of plants for the treatment and recycling of waste is consistent with the forecasts of the provincial plans in which the Hera Group operates. The investment schedule and the subsequent start of new plants is the result of the best estimate of the managers in charge.

The inertial evolution of the Group's costs in the plan timeframe was developed by formulating hypotheses based on the information available at the time the plan was prepared. Therefore, the most recent levels of inflation recorded in the final balance were taken into account, along with the anticipated trends outlined in the Economic and Financial Planning Document, as well as the forecasts made available by the Bank of Italy and European Commission. In relation to employees and labour costs, instead, the indications included in the various types of employment contracts were taken into account.
The first year of the Plan represents the base reference for identifying economic, financial and management objectives that converge in the annual Budget, the guiding operational element for achieving the Group's growth objectives.

The cash flows generated were therefore determined using the forecasted data for the 2019 - 2022 period as a base. In particular, the Net Profit Margin was used, from which taxes were deducted, depreciation and provision were added and the maintenance investments planned for each year of the plan were deducted.

Following the last year of the plan, normalized Cash Flows (Normalized Free Cash Flows) were considered equal to the value of the Net Operating Profit for the last year of the plan, in the event that the value of depreciation and provisions remains equal to the investments.

In the event that the plan does not take into account the prediction of future events that significantly influence estimated cash flows as a result of its medium-term timeframe, adjustments were applied in order to also incorporate the effects of such events. The cash flows are calculated by applying the growth rate ("g") to the "normalized Free Cash Flows" with the medium/long-term timeframe for the relevant sector (2% on average) for the 2023-2038 period (20 years total). For regulated services, these flows are brought into line with the expected continuation of market share following the completion of the expected calls for tenders.

These flows are supplemented by the current value of perpetuity, calculated as follows:
- for activities under market (gas and electricity sales), the cash flow resulting from the application of the perpetuity criterion for the last year (2038) was considered, assuming an average factor growth of 2%;
- for assets under contract, the terminal value was established by considering the cash flow resulting from the application of the perpetuity criterion weighted by the percentage of competitive bidding processes that the Group is expected to win at the end of the contract periods (100% for network services, 80% for urban sanitation services) and the redemption value of assets weighted by the proportion of competitive bidding processes which the Group expected not to win; this value was estimated as equal to the current value of the net book value of assets owned and leasehold improvements, less the recovery values, in order to properly represent the non-renewal of the contract and the subsequent sale of the assets to the new operator with a value equal to the remaining book value.

To discount unlevered cash flows, the rate used was the weighted average cost of capital (WACC), which represents the yield expected by the funders and shareholders of the company for the use of equity capital, adjusted for the risk of the specific country in which the asset being valued. The value of the specific country risk to be included in the discount rate is defined on the basis of information provided by external providers.
The cash flows are thus differentiated according to the specific characteristics and consequent risks characterizing business areas as well as the countries in which the Group operates. For Italy, a WACC of 5.55% was used for the environment and 4.73% for other businesses, while for the gas distribution managed in Bulgaria a WACC of 4.82% was used.

The results of the tests were positive. A sensitivity evaluation was also conducted. In this regard, it should be noted that the Group's business model, with its distinct resilience thanks in part to the diversified portfolio of assets under management, has made it possible to achieve constantly improving results over the years with no overall significant changes in the planned hypotheses despite the adverse macroeconomic environment.

In view of this, the sensitivity analysis that was developed focused on the marginality of the individual businesses, hypothesizing a 5% decrease that would result in a reduction in the cash flows developed in the years covered by the plan and subsequent years. In this context, the values obtained are much higher than those recorded in the balance sheets, therefore this analysis further confirmed the carrying values.

**Electricity generation assets**
With reference to the market for electric generation, in the presence of impairment indicators and in keeping with previous financial periods, an in-depth analysis was performed to determine the recoverable amount of the Group's investments, and related financial assets, operating in the sector. In particular, the analysis was conducted by duly discounting to present value the cash flows expected to be generated over the remaining useful lives of the plants of Calenia Energia S.p.A., Set S.p.A. and Tamarete Energia S.r.l. for the purpose of verifying the recoverability of financial assets, equity investments and receivables recorded for them in the amounts of 24.1 million euro, 62.4 million euro and 15.5 million euro respectively at the end of the valuation process.

The negative trend in the electricity generation market highlighted a few years ago characterized the 2018 financial year as well, although signs of improvement appearing in recent years confirm that the expectation of consolidating this recovery in the medium to long term remains valid. The factors that have determined the performance of the electricity generation market during this decade are due to the combination of multiple factors on both demand and supply sides. The main factors affecting current price dynamics are to be found in:
- the introduction of significant production capacity in renewable energy in the past few years;