

2.02.06

Commentary notes to the financial statement formats

Please note that paragraphs 1.03 and 1.06 of the Directors' 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

	2019	2018	Changes
Revenues from sales and services	6,910.9	6,118.9	792.0
Changes in contract work in progress, semi-finished and finished products	1.9	15.5	(13.6)
Total	6,912.8	6,134.4	778.4

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

This item essentially includes allocations for services provided to end customers not yet invoiced, including 135 million euro for the electricity sector, 120.5 million euro for the gas sector and 102.9 million euro for the water sector.

Revenues are achieved mainly in Italy.

"Changes to contract work in progress, semi-finished and finished products" the decrease compared to the previous fiscal period is mainly attributable to the lower volume of contract work in the public lighting business.

2 Other operating revenues

	2019	2018	Changes
Long-term contracts	300.4	254.5	45.9
White certificates	91.6	95.7	(4.1)
Operating grants and grants for separated waste collection	62.5	63.3	(0.8)
Grants related to plants	12.3	10.7	1.6
Use of funds	7.4	7.3	0.1
Insurance refunds	3.7	4.8	(1.1)
Other revenues	52.9	55.7	(2.8)
Total	530.8	492.0	38.8

"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 the higher number of investments in the water networks held under concession, in the public lightning plants and in natural gas distribution networks.

"White Certificates" comprise the revenues calculated on the basis of energy efficiency objectives for the year as established by the GSE and regulated in relation to the Cassa per i Servizi Energetici e Ambientali. The change is due, given substantially the same contribution provided for by the entity regulating the distribution companies, to the different obligations recorded with respect to the previous year.

"Operating grants and grants for separated waste collection" include operating grants, amounting to 27.4 million euro (32.9 million euro in 2018), mainly comprising incentives provided by the GSE for the production of energy from renewable sources, contributions from sorted waste collection in the amount of 35.1 million euro (30.4 million euro in 2018) mainly comprising the value of packaging (cardboard, iron, plastic and glass) transferred to the Conai consortia as well as contributions from public entities, authorities or institutions for specific projects carried out by the Group's companies.

"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.

3 Use of raw materials and consumables

	2019	2018	Changes
Gas earmarked for sale, net of changes in stocks	1,946.6	1,450.8	495.8
Electricity	1,099.5	1,207.6	(108.1)
White and grey certificates	107.2	105.5	1.7
Maintenance materials net of changes in stocks	76.3	71.2	5.1
Water	49.5	48.8	0.7
Plastics net of changes in stocks	47.5	51.1	(3.6)
Charges and revenues from derivatives	44.7	(32.9)	77.6
Chemical products	20.0	17.5	2.5
Fuels, motor fuels and lubricants	17.4	16.3	1.1
Methane gas for industrial use	13.3	13.9	(0.6)
Charges and revenues from certificate valuation	2.6	-	2.6
Fuels for heat management	1.9	1.8	0.1
Consumables and miscellaneous	31.7	32.5	(0.8)
Total	3,458.2	2,984.1	474.1

"Gas earmarked for sale net of changes in stocks", the increase as compared to the 2018 financial year is due to the greater volumes of procurement activity on the wholesale natural gas markets.

"Electricity", the decrease as compared to 2018 is mainly due to the lower volumes of procurement activity on wholesale markets through bilateral contracts, partially offset by the increase in purchases through the GME.

"White and Grey Certificates" includes the purchase cost of the various types of environmental certificates incurred during 2019, and specifically: 92.2 million euro for White certificates (90.8 million euro in 2018) and 13.3 million euro for Grey certificates (14.2 million euro in 2018) and 1.7 million euro for Recs certificates - renewable energy certificate system (0.1 million euro in 2018). Over the course of the year, market prices for all types of certificates remained substantially unchanged compared to the previous year. It should also be noted that in relation to white certificates, supply needs are defined according to the obligations allocated to distribution companies.

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

"Charges and revenues from certificate valuation" reflects the valorisation of environmental certificates in stock, mainly made up of white and grey certificates as well as the valorisation of commitments for purchasing electricity certifications produced from renewable sources in relation to contracts signed with end customers.

For the item "Charges and revenues from derivatives", please see note 21.

4 Service costs

	2019	2018	Changes
Transport and storage	1,225.1	998.7	226.4
Work and maintenance expenses	407.1	363.9	43.2
Waste transportation, disposal and collection	354.6	324.0	30.6
Fees paid to local authorities	66.4	67.4	(1.0)
IT and data processing services	50.6	46.2	4.4
Professional, legal and tax services	36.4	33.0	3.4
Other commercial services	28.8	45.6	(16.8)
Technical services	24.9	22.0	2.9
Recruitment, training and other staff costs	19.0	19.9	(0.9)
Insurance	15.5	15.8	(0.3)
Postal and telephone costs	13.8	14.5	(0.7)
Rents and leases payable	12.6	26.7	(14.1)
Bank fees and charges	10.9	10.7	0.2
Cleaning and surveillance services	8.3	7.7	0.6
Meter reading	7.0	6.9	0.1
Legal and financial announcements and advertising, communication with customers	6.2	8.0	(1.8)
Remuneration to statutory auditors and directors	5.4	5.2	0.2
Rents payables	1.3	4.0	(2.7)
Other service costs	24.3	20.3	4.0
Total	2,318.2	2,040.5	277.7

"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 2018 is mainly connected 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 managed by the Group. The change compared to the previous fiscal period is mainly due to greater investments in networks under concession, as already highlighted in note 2 "Other operating revenues", and to greater costs incurred in developing the activities relating to the "decontamination" business and to increased ancillary services requested by the Group's end customers in the gas and electricity sector.

"Waste transportation, disposal and collection", the increase is due to the higher volumes and costs of both urban hygiene and waste disposal sectors. Specifically, the increase of the waste disposal sector is due to the development of the commercial activity of the "decontamination" business, as well as the outsourcing process for treating by-products from composting plants.

The item "Fees paid to local authorities" also includes the charges 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, to a lower degree, fees paid to municipalities for the use of telecommunication networks.

"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 commercial services" includes the costs incurred in developing and managing sales activities, specifically natural gas and electricity sales and associated support structures. It is worth noting that, in view of transitioning the electric power market from the greater protection system to the deregulated market and the resulting opportunities to expand the customer base, over the course of the year the Group developed a series of commercial initiatives and adapted its management systems in order to accurately monitor the incremental costs related to the new contracts. As required by IFRS 15, these incremental costs, involving mainly commissions paid to agents, were recorded as assets and are depreciated over the average lifetime of new customers (churn rate). The decrease compared to the previous period therefore reflects, thanks to the new business processes, the recognition as assets of agency costs previously recorded entirely in the income statement.

"Rents and tenancy payable" and "lease payables", the changes as compared with the previous period reflects the fact that as at 31 December 2018 the two items included fees paid for lease and rental contracts, amounting to 14.4 million euro, falling within the scope of application of accounting standard IFRS 16 beginning 1 January 2019. For further details, see paragraph 2.02.02 "Adoption of IFRS 16" and note 15 "Rights of use and leasing liabilities". It should also be noted that this item also includes the instalments relating to short-term leases and leases of low value, the value of which for 2019 is not significant.

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

5 Personnel costs

	2019	2018	Changes
Salaries and wages	396.9	384.9	12.0
Social security expenses	127.7	128.6	(0.9)
Post-employment and other benefits	0.8	0.7	0.1
Other costs	35.0	37.2	(2.2)
Total	560.4	551.4	9.0

The increase of 9 million euro in labour costs as compared with the previous period is mainly due to business combination operations carried out over the period that expanded the number of employees, as well as to the normal evolution of contractual trends regarding the national collective labour agreement.

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

	2019	2018	Changes
Managers	150	150	-
Middle management	541	532	9
Clerks	4,720	4,593	127
Blue-collar workers	3,340	3,287	53
Total	8,751	8,562	189

Overall, the average cost of labour per capita for 2019 was 64.0 thousand euro (64.4 thousand euro in 2018).

At 31 December 2019, the actual number of employees was 8,982 (8,622 employees at 31 December 2018).

Please note that the difference between the average number for the period and the actual number of employees as of 31 December 2019 is mainly due to the partnership operation with Ascopiave that occurred 19 December 2019, which involved the recruitment of 259 units in the sales sector and the departure of 102 units following the sale of the gas distribution branch.

6 Other operating costs

	2019	2018	Changes
Taxation other than income taxes	13.3	17.5	(4.2)
State rentals	13.0	12.3	0.7
Losses on the sale and disposal of assets	5.3	5.6	(0.3)
Landfill special tax	4.5	3.9	0.6
Bad debt losses	0.4	-	0.4
Other minor charges	22.8	23.2	(0.4)
Total	59.3	62.5	(3.2)

"Taxation other than income taxes" mainly relates to taxes on buildings, stamp duties and registration fees, public area occupation fees and excise duties. Note that the value for the 2018 period included the payment of the ICI/IMU tax for previous fiscal periods as a result of a court settlement.

"State rentals" is mainly related to fees paid to the Emilia Romagna region, land reclamation consortia, sector agencies and mountain-area communities, mainly regarding the withdrawal and use of water, as well as maintenance and management costs for hydraulic works, and rents established by decree 2012/933 as well as fees paid for the functioning of Atesir.

"Losses on the sale of goods and disposal of assets", arising mainly from the disposal of certain components of the WTE plants and disposal and treatment plants and distribution networks. The most significant investments for the year relate mainly to the divestiture of WTE components, in addition to the normal process of obsolete part replacements.

"Special landfill levy" refers to the relevant environmental tax for the period on landfills operated by the Group. The increase of 0.6 million euro is due mainly to higher volumes delivered to the landfills opened over the course of the 2019 fiscal period.

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

7 Capitalized costs

	2019	2018	Changes
Increase in self-constructed assets	37.6	43.2	(5.6)

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

8 Amortisation, depreciation and provisions

	2019	2018	Changes
Amortisation property, plant and equipment	167.0	164.5	2.5
Rights of use amortisation	15.1	-	15.1
Amortisation intangible assets	246.6	220.8	25.8
Allowance for bad debts	80.5	89.3	(8.8)
Provisions for risks and charges	37.7	46.9	(9.2)
Impairment of property, plant and equipment and intangibles	5.0	6.2	(1.2)
De-provisioning	(9.3)	(6.7)	(2.6)
Total	542.6	521.0	21.6

For breakdowns and further detail about these items, please refer to the comments under note 14 "property, plant and equipment", note 15 "Rights of use and leasing liabilities", note 16 "Intangible assets", note 23 "Trade receivables" and note 29 "Provisions for risks and charges"

For "Amortisation property, plant and equipment", the increase is mainly due to the revision of the useful lives of some categories of electric meters, which were valued technologically obsolete and which will be replaced in the coming years, amounting to 1.7 million euro.

"Rights of use amortisation" includes the amortisation of assets recorded in relation to leasing contracts falling within the scope of application of accounting standard IFRS 16.

For "Intangible assets amortisation", the increase is mainly due to goods relating to public services under concession, in particular involving the methane gas distribution sector and water cycle. The increased value for the current period is partly due to:

- the revision of the technical-economic useful lives of the assets of the integrated water cycle. This analysis, which was carried out in collaboration with a leading company operating in the asset valuation sector, led to an increase in the depreciation rates of certain categories with a net effect of approximately 8.2 million euro. It should also be noted that, following this revision, the depreciation rates of the integrated water cycle are substantially in line with those defined by Arera for the 2020 - 2023 tariff period;
- incremental costs incurred to obtain sales contracts with end customers recognised under intangible assets (as illustrated in note 4); customer lists related to the acquisition of control of Sangroservizi Srl recorded at the end of 2018 and the sale of gas and electricity by CMV Energia&Impianti Srl in the first half of 2019;
- the fair value of the authorisation to operate the waste placement service at the Pistoia Ambiente Srl landfill, the control of which was acquired on 1 July 2019.

"Impairment of property, plant and equipment and intangibles" mainly refers to decreased value of a landfill located in the Imola area in which volumes of waste are still authorised to be placed. This depreciation was caused by the suspension of waste disposal ordered by the competent authorities.

The item "De-provisioning" includes the re-verification of the funds in view of the fact that the underlying risks no longer exist. As at 31 December 2019, verification are being carried out in relation to "Other provisions for risks and charges" for 8.1 million euro, mainly due to interpretive uncertainty surrounding the determination of the reimbursement value of the networks when participating in tenders for gas distribution services in relation to certain areas already served by the Group.

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

	2019	2018	Changes
joint venture share of net profits	6.5	7.8	(1.3)
associated companies share of net profits	6.9	7.1	(0.2)
Total	13.4	14.9	(1.5)

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, 1.8 million euro (2.6 million euro in 2018) and Estenergy Spa, 4.7 million euro (5.2 million euro in 2018). It should be noted that at the end of the 2019 financial year, control of EstEnergy Spa was acquired, so the share of profits reflects the company's contribution to the consolidated financial statements as a jointly controlled company. For further details, reference should be made to paragraph 2.02.03 "Scope of consolidation".

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

- Aimag Spa, profits for 3.6 million euro (2.6 million euro in 2018);
- Sgr Servizi Spa, profits for 3,1 million euro (3.9 million euro in 2018);
- Set Spa, profits for 0.2 million euro (0.6 million euro in 2018).

10 Financial income and expense

	2019	2018	Changes
Revenues from derivatives	49.2	57.7	(8.5)
Revenues from derivatives	12.7		12.7
Customers	38.4	25.0	13.4
Other financial income	7.9	14.2	(6.3)
Total income	108.2	96.9	11.3
Bonds	90.1	91.7	(1.6)
Charges from derivatives	75.9	46.0	29.9
Write-downs of financial assets:	26.1	6.9	19.2
Discounting of provisions and finance leases	24.1	21.3	2.8
Valuation at depreciated cost of financial liabilities	14.7	11.0	3.7
Loans	6.3	4.9	1.4
Charges from valuation at fair value of financial liabilities	5.2	15.9	(10.7)
Factoring	1.9	3.6	(1.7)
Other financial expenses	3.3	2.2	1.1
Total expenses	247.6	203.5	44.1
Total net financial expense (Income)	(139.4)	(106.6)	(32.8)

The change in overall financial management, including reference to the Group's average cost of debt, is described in the Directors' Report in paragraph 1.03.03.

For further details on "Financial income from trading", "Other financial income", "Loans" and "Financing and bonds", see note 27 "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 21 "Derivative financial instruments".

"Customers", mainly includes the interest on payments in arrears billing system for the gas and electricity customers. The increase for the financial period is mainly due to the billing of default interest for protected market customers.

"Financial income from trading", the item includes income related to the partial renegotiation, carried out during the fiscal period, of two bonds maturing in 2021 and 2024, which led to booking in the income statement the current value difference calculated in accordance with the provisions of IFRS 9 for 1.7 million euro and 11 million euro respectively.

"Other financial income" mainly includes bank interest receivables, dividends received from non-consolidated investee companies and income related to discounted receivables.

"Write-downs of financial assets" includes the result of valuations carried out as part of the impairment test, as described in note 32, and mainly refer to:

- loan of 11.6 million euro provided to the affiliate company Tamarete Energia Srl;
- equity investments of 9.1 million euro in the affiliated company Set Spa;
- equity investments of 5.2 million euro in the affiliated company Calenia Energia Spa;

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

	2019	2018	Changes
Post-closure landfills	11.5	14.1	(2.6)
Restoration of third-party assets	7.5	5.8	1.7
Leases	3.9	0.3	3.6
Employee leaving indemnity and other benefits	1.0	0.9	0.1
Plants dismantling	0.2	0.2	-
Total	24.1	21.3	2.8

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

- the lower impact of the updated present value of the "Provisions for post-closure landfills", 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;
- the higher impact of the updated present value of the "Provision for restoration of third party assets" compared to the previous year, following the reduction of the discount rate;
- the application, as at 1 January 2019, of the accounting standard for contracts containing a lease (see paragraph 2.02.02 "Adoption of IFRS 16"), which, having involved recording a discounted financial liability, resulted in the recognition of the resulting financial expense.

The item "Valuation at depreciated cost of financial liabilities" represents the breakdown (depreciation) of the costs associated with financial liabilities, including the costs of re-negotiations made that did not lead to derecognise the liability, for the entire duration of the loans using the effective interest method.

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

"Other financial charges" mainly includes expenses for financial intermediation and capital losses for the sale of equity investments.

11 Other non-operating revenues (expenses)

	2019	2018	Changes
Other non-operating revenues (expenses)	111.6	-	111.6

The item includes some effects related to the partnership operation with the Ascopiave Group, specifically:

- re-statement at fair value of the equity investment previously held in EstEnergy Spa, over which the Group previously had joint control, in relation to the acquisition of control of the company, amounting to 81.4 million euro, in accordance with the provisions of paragraph 42 of IFRS 3 for cases of business combinations carried out in several stages (step acquisition);
- net capital gain obtained following the transfer of control of the newly incorporated company AP Reti Gas Nord Est Srl, to which the "Gas network distribution" business unit was transferred, equal to 30.2 million euro.

For further details, reference should be made to paragraph 1.03.01 "Hera-Ascopiave partnership".

12 Taxes

This item is made up as follows:

	2019	2018	Changes
Current taxes (Ires, Irap and substitute tax)	139.7	132.6	7.1
Deferred taxes	(6.9)	5.9	(12.8)
Pre-paid taxes	(6.7)	(16.7)	10.0
Total	126.1	121.8	4.3

Taxes for the fiscal period increased from 121.8 million euro in 2018 to 126.1 million euro in 2019; The tax rate for 2018 is thus 23.9% as compared to the 29.1% of the previous year.

It should be noted that the tax rate for the year is affected by a number of results and associated non-recurrent tax effects. For a more consistent analysis of its performance, reference should be made to paragraph 1.03.02 "Economic and financial results" of the annual report, where both the pre-tax result and the tax rate for the period have been adjusted by some special items, in order to determine an adjusted tax rate, in any case significantly improved, perfectly comparable with that of the previous year.

The reduction in the tax rate, net of the above mentioned non-recurring items, was mainly due to the benefits obtained in terms of maxi and hyper depreciation and patent boxes, in particular with regard to the investments made to accompany the technological, digital and environmental transformation undertaken by the Group.

Current taxes are broken down as follows:

	2019	2018	Changes
Ires	104.2	105.0	(0.8)
Irap	33.3	27.1	6.2
Substitute tax	2.2	0.5	1.7
Total	139.7	132.6	7.1

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.

	2019		2018	
	Nominal effect	Percentage effect	Nominal effect	Percentage effect
Earnings before taxes	528.1		418.4	
Ires				
Standard rate	(126.7)	(24.0)%	(100.4)	(24.0)%
Irap deduction	0.7	0.1%	0.8	0.2%
Divestiture of equity investments (Pex)	3.9	0.7%	(1.2)	(0.3)%
Equity investment impairment	(6.2)	(1.2)%		
Tax benefits and incentives	11.8	2.2%	8.5	2.0%
IRES in previous financial periods	1.2	0.2%	(0.2)	(0.0)%
Equity investment appreciation	19.5	3.7%		
Other changes (increases and/or decreases)	0.6	0.1%	(1.2)	(0.3)%
Irap and other current taxes				
Irap	(31.0)	(5.9)%	(27.5)	(6.6)%
Exemption	0.1	0.0%	(0.6)	(0.1)%
Taxes	(126.1)	(23.9)%	(121.8)	(29.1)%

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 "equity investment impairment" reflects the tax effect following the non-deductibility of depreciations made as part of the impairment test, as explained in Note 32.

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

The item "Equity investment appreciation" represents the effect related to the income from the fair value valuation of the equity interest previously held in EstEnergy Spa recorded only in the consolidated financial statements at the time the control of the company was obtained, as illustrated in note 1.03.01 "Hera-Ascopiave Partnership".

The item "Exemption", in addition to the in addition to the issuance of the relevant portion of the substitute tax relating to operations carried out in previous years, includes the substitute tax reported in the financial period and the tax asset reported for the IRES for exemption operations of intangible assets reported in business combination operations.

The prepaid and deferred taxes relating to the year 2019 refer to the following variations between taxable income and profit recorded in the financial statements:

Deferred tax assets	2019			2018		
	Temporary changes	Tax effect (Ires + Irap)	Equity changes	Temporary changes	Tax effect (Ires + Irap)	Equity changes
Pre-paid taxes with effect on the income statement and the statement of comprehensive income						
Allowance for bad debts	175.9	42.2		176.6	42.4	
Provisions for risks and charges	172.8	47.3		158.8	41.9	
Provisions for employee benefits	12.2	3.3		10.4	2.8	
Depreciation	392.2	97.9		376.0	94.9	
Equity investments	138.3	38.7		143.9	40.3	
Cash flow hedge	38.4	11.1		9.2	2.2	
Leases	6.5	1.8				
Other	84.6	22.5		70.0	18.9	
Total tax effect	1,020.9	264.8	5.1	944.9	243.4	4.4
Credited (or debited) amount to the statement of comprehensive income		9.6			1.6	
Credited (or debited) amount to the income statement		6.7			16.7	
Deferred tax liabilities						
	2019			2018		
	Temporary changes	Tax effect (Ires + Irap)	Equity changes	Temporary changes	Tax effect (Ires + Irap)	Equity changes
Deferred taxes with effect on the income statement and the statement of comprehensive income.						
Provisions for risks and charges	47.7	13.7		45.7	13.2	
Provisions for employee benefits	2.4	0.7		2.3	0.7	
Depreciation	789.1	163.3		283.9	81.2	
Discounted liabilities	133.8	32.1		-	-	
Deductible goodwill	29.2	8.2		29.2	8.2	
Cash flow hedge	7.7	2.2		26.7	7.7	
Leases	3.3	0.9		3.4	0.9	
Accrued capital gain	0.9	0.2		1.0	0.2	
Other	98.5	23.7		67.3	16.3	
Total tax effect	1,112.6	245.0	123.5	459.5	128.4	5.0
Credited (or debited) amount to the statement of comprehensive income		-			-	
Credited (or debited) amount to the income statement		6.9			(5.9)	

"Equity changes" includes the balances of deferred tax assets and liabilities arising from:

- business combination operations (please see paragraph 2.02.03 "Scope of consolidation" for the specific values recorded during 2019);
- the first application of the accounting standard IFRS 16 "Leases", (illustrated in section 2.02.02 "Adoption of IFRS 16" for further details).
- marginal reclassifications arising between deferred tax assets and liabilities.

These changes do not have an effect on the income statement and the statement of comprehensive income of the financial period, considering the reporting of the associated deferred tax effects.

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 24 December 2007, and associated implementational decrees, Ministerial Decree of 1 April 2009, no. 48 and Ministerial Decree of 8 June 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 Legislative Decree 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 the Group's tax litigations as at 31 December 2019:

- 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 referred to tax periods from 2008 to 2014 and altogether amount to 10.2 million euro. Regarding the notices of assessment for the years 2008 and 2009, the rulings by the tax committee of Ferrara issued in 2016 were all in favour of the Company. Subsequently, following the favourable, definitive rulings on the classification, on 11 February 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 0.7 million euro 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 finalised. The Group, having also consulted its lawyers, has decided not to make any provision for the litigations in question;
- notices of assessment for ICI/IMU were served to Herambiente Spa concerning land, facilities and buildable areas located in Ravenna. These notices of assessment related to tax periods from 2010 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 and December 2018. The Group, having obtained the advice of its legal counsel, decided to maintain a provision of 0.2 million euro to cover residual risks;
- notices of assessment for ICI/IMU served to Herambiente Spa and Hera Spa concerning the classification in the real estate registry of the Lugo compost plant. These notices of assessment relating to tax periods from 2008 to 2011 were settled through the payment of 0.1 million euro on 29 November 2019. The 2014 tax period was settled through the payment of 0.1 million euro on 22 January 2020. For the remaining years, the Group, having also consulted its lawyers, decided to make a provision 0.4 million euro to cope with possible liabilities;
- assessment notices for the tax periods from 2013 to 2017 for TOSAP and COSAP, notified on 28 June 2018 and 20 July 2018 to Hera Spa by the Municipality of Riccione, for a total amount of 3.5 million euro, for the permanent occupation of public land with waste bins. On 26 September 2018, the related appeals were submitted and the hearing was held on 12 March 2019. On 26 November 2019, the court handed down the rulings by which the judge partially upheld the appeals, redefining the tax and the penalties, resulting in a charge to the company of 1 million euro paid on 10 March 2020. On 5 and 6 November 2019 similar assessment notices were served in relation to 2018 and 2019, for a total of 2.1 million euro against which an appeal was filed on 10 January 2020. On 30 December 2019 an assessment notice was served from the municipality of Corian for the Tosap waste bins in relation to 2014, totalling 0.2 million euro, against which an appeal was filed on 28 February 2020. The Group, having also consulted its lawyers, decided not to make any provision to the risk provision for the litigations in question;
- tax audits to Herambiente Spa, for covered fiscal 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 second instance ruling, filed on 21 November 2019, was unfavourable to the company, 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 filed appeals and the company filed appeal for 2010 on 18 May 2018; as at today a hearing has not yet been scheduled. In relation to the 2011 tax period, on 9 December 2019 the hearing was held and the ruling, handed down on 18 February 2020, was unfavourable. In 2016, additional notices of assessment were served for the 2012 and 2013 tax years, against which the Company filed the relevant appeals. On 10 November 2017 the relative rulings were filed, both unfavourable to the Company, who filed two appeals on 7 May 2018. In relation to this complex matter, the Group recognised charges of 1.4 million euro in the income statement for the amounts to be paid for provisional registration as a result of the second-instance loss for 2009 and 2011;
- 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 18 2018 the ruling was filed as unfavourable to the Company, but without the application of penalties, while on 17 July 2018 the company filed an appeal. As of today, the hearing has not yet been scheduled. Against this ruling, on 6 March

2018, one third of the tax was paid, plus interests, for a total of 0.9 million euro; on 29 March 2018, the second third of the tax was paid, plus interests, for 0.7 million euro. On 7 September 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 30 January 2018 and the ruling, which was unfavourable to the company, was filed on 8 May 2018. An appeal was therefore lodged on 7 December 2018, the hearing has not yet been scheduled, and two-thirds of the amount was provisionally paid for 0.3 million euro. On 20 July 2018 an assessment notice was served in relation to 2013, for 0.4 million euro against which an appeal was filed on 17 October 2018. In relation to that year, the suspension request was rejected and on 20 December 2018 one-third of the amount was provisionally paid for 0.2 million euro. In relation to that year, the first instance ruling was filed on 4 June 2019, unfavourable to the company, and on 7 August 2019 the second third of the amount was provisionally paid for 0.2 million euro. Following service of the appeal by the Regional Department of Friuli Venezia-Giulia, on 4 January 2020, the deed of counter-deduction with incidental appeal was filed with the Regional Tax Commission of Trieste; a second instance hearing has yet to be scheduled. Finally, it should be noted that the company was also served the same assessment notice with regard to the Robin Tax. The Group, having consulted with its lawyers, decided it was not necessary to proceed with any provisions for the disputes in question, as the alleged violations are considered unfounded;

- tax audits to Inrete Distribuzione Energia Spa, concerning the tax period 2016. On 26 November 2019, the objection report was issued with which the verifiers contested, for IRES purposes, the undue deduction of discounting charges for 0.4 million euro and the erroneous determination of the "maxi-depreciation" allowance, with regard to accessory charges related to smart meters for 0.1 million euro. The Group, having consulted with its lawyers, decided it was not necessary to proceed with any provisions for the disputes in question, as the alleged violations are considered unfounded.

13 Earnings per share

	2019	2018
Profit (loss) for the period attributable to holders of ordinary shares of the parent entity (A)	385.7	281.9
Weighted average number of shares outstanding for the purposes of calculation of profit (loss) per share		
basic (B)	1,472,516,974	1,467,966,686
diluted (C)	1,472,516,974	1,467,966,686
Earnings (loss) per share (in euro)		
basic (A/B)	0.262	0.192
diluted (A/C)	0.262	0.192

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 31 December 2018, which were used in determining basic and diluted earnings per share.

14 Property, plant and equipment

	31 Dec 19	31 Dec 18	Changes
Land and buildings	583.5	591.7	(8.2)
Plants and machinery	1,181.6	1,174.1	7.5
Other movable assets	134.9	131.1	3.8
Assets under construction	90.3	104.2	(13.9)
Total operating assets	1,990.3	2,001.1	(10.8)
Investment property	2.4	2.6	(0.2)
Total	1,992.7	2,003.7	(11.0)

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

	Net opening balance	Investments	Disinvestments	Depreciation and amortisation	Changes in the scope of consolidation	Other changes	Net closing balance	of which gross final amount	of which amortisation provision
31 Dec 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)
31 Dec 19									
Land and buildings	591.7	12.8	(0.9)	(18.3)	2.5	(4.3)	583.5	815.8	(232.3)
Plants and machinery	1,174.1	59.8	(3.1)	(123.7)	10.8	63.7	1,181.6	2,858.1	(1,676.5)
Other movable assets	131.1	24.7	(2.0)	(29.6)	2.1	8.6	134.9	489.8	(354.9)
Assets under construction	104.2	67.1	(0.6)	(0.2)	0.5	(80.7)	90.3	90.3	-
Total	2,001.1	164.4	(6.6)	(171.8)	15.9	(12.7)	1,990.3	4,254.0	(2,263.7)

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

"Land and buildings", totalling 583.5 million euro, consisted of 117.2 million euro in land and buildings and 466.4 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 1,181.6 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 activities, for a total of 35 million euro, which include the completion of the biomethane production plant in Sant'Agata Bolognese and the construction of facilities for the landfills in Cordenons and Ravenna 9th and 10th sectors, for a total investment of 10.6 million euro. Other significant investments related to heat management and district heating, for a total of 7.5 and 7.7 million euro respectively.

The depreciation and amortisation column includes 4.4 million euro in writedowns of certain plants, including a landfill located in Imola, as explained in Note 8 "Depreciation, amortisation and provisions".

"Other movable assets", equal to 134.9 million euro, include the equipment, waste disposal bins for 68.5 million euro, movable assets, furniture and electronic machines for 16.5 million euro, and vehicles and cars for 49.9 million euro.

"Assets under construction and advance payments", amounting to 90.3 million euro, include mainly investment for development of district heating and electricity distribution, cogeneration facilities and waste recycling plants.

"Other changes" includes the reclassification to Rights of use of the value of contracts previously classified as financial leases (IAS 17) and recorded under property, plant and equipment due to their nature, as explained in note 15. 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.

The column "Changes in the scope of consolidation" includes the business combination operations carried out during the financial year and the transfer of control of the "Gas Network Distribution" branch (transferring it to the AP Reti Gas Nord Est Srl company) as part of the partnership operation with the Ascopiave Group. More specifically, acquisition operations led to the entry of property, plant and equipment for a total of 16.6 million euro (for a more detailed analysis see paragraph 2.02.03 "Scope of consolidation"), while the divestment entailed assets disposal for 0.7 million euro. It should be noted that the main effects generated by the transfer of control of the Gas Network Distribution business unit are reported under intangible assets, since they are mainly assets under concession.

Real guarantees

	31 Dec 19	31 Dec 18
Real guarantees to third parties	153.7	164.1

These include as of 31 December 2019:

- 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 Herambiente Servizi Industriali Srl 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;

15 Rights of use and leasing liabilities

The application of the international accounting standard IFRS 16 resulted in recognising as at 1 January 2019:

- rights of use, stated under non-current assets, were calculated for the most part as net carrying amounts of the goods under contracts, calculated as if the standard had been applied from the initial date of the contracts, using the discount rate established at the transition date;
- current and non-current liabilities were calculated as the present value of the remaining future payments at the transition date, discounted using for each contract the marginal loan rate applicable according to the expiration date.

The following tables show the breakdown of rights of use (reported net of the associated amortisation provision) and leasing liabilities at the transition date and the related movements as at 31 December 2019.

	31 Dec 19	Impacts at the transition date 1 Jan 19	IAS 17 effect 31 Dec 18
Non-current assets			
Right of use land and buildings	69.1	67.3	16.3
Right of use plants and machinery	7.9	4.2	5.3
Right of use other movable assets	19.9	19.5	
Total	96.9	91.0	21.6
Non-current liabilities			
Non-current lease liabilities	76.1	82.7	12.2
Current liabilities			
Current lease liabilities	19.4	13.9	1.7
Total	95.5	96.6	13.9

	Net opening balance	New contracts and contractual changes	Decrease	Depreciation and amortisation	Changes in the scope of consolidation	Other changes	Net closing balance	of which gross final amount	of which amortisation provision
31 Dec 19									
Rights of use land and buildings	67.3	(10.3)	-	(7.7)	3.3	16.5	69.1	101.3	(32.2)
Rights of use plants and machinery	4.2	-	-	(0.9)	-	4.6	7.9	10.0	(2.1)
Rights of use other movable assets	19.5	6.2	-	(6.5)	0.7	-	19.9	32.5	(12.6)
Total	91.0	(4.1)	-	(15.1)	4.0	21.1	96.9	143.8	(46.9)

The column "New contracts and contractual amendments" shows the leases signed over the course of the period, as well as the change in the assumptions regarding their duration and contractual options.

The column "Other changes" includes the value of contracts previously classified as financial leases (IAS 17) and recorded under property, plant and equipment due to their nature.

"Rights of use land and buildings", totalling 69.1 million euro, consisted of 63.9 million euro in rights of use of buildings and 5.2 million euro in rights of use of land. The rights of use for buildings refer mainly to contracts concerning the real estate structures used for headquarters, offices and customer service desk.

"Rights of use of plant and machinery" equal 7.9 million euro and refer mainly to contracts regarding purification and composting plants.

"Rights of use of other movable assets" equal 19.9 million euro and refer mainly to contracts concerning IT infrastructures (especially data centres), operational vehicles and cars.

Financial liabilities are broken down below with details of the changes:

	Net opening balance	New contracts and contractual changes	Decreases	Financial expenses	Changes in the scope of consolidation	Other changes	Net closing balance
31 Dec 19							
Lease liabilities	96.6	(4.2)	(18.9)	4.0	4.1	13.9	95.5
of which							
non-current liabilities	82.7						76.1
current liabilities	13.9						19.4

Financial liabilities due to leases mainly include financial payables arising from the rental fees of the Group's operating and administrative offices. The column "New contracts and contractual amendments" mainly includes the re-assessment of the liabilities of some of the existing contracts, generated by the update of the assumptions underlying the contracts themselves concerning options of renewal, purchase or early termination. "Decreases" are generated by the reimbursement of contractual fees due over the course of the financial period. "Other changes" includes the reclassification of the debt of contracts previously classified under financial leases (IAS 17) and recorded financial liabilities.

In accordance with its procurement policies, the Group subscribed contracts in line with market standards for all types of underlying assets. In the case of offices, customer service desks, cars and IT infrastructure, the contracts do not contain any binding clauses or special fees in the event of annulment, as these assets are perfectly interchangeable and are offered by a large number of counterparties. The liability reported in the financial statements therefore represents the most likely total sum of disbursements that the Group will have to make in future years. For the above reasons, moreover, the renewal clauses, when they exist, are not currently expected to be exercised, possibly assessing their cost-effectiveness in the future. Finally, with regard to the leased buildings hosting important production facilities, which represent the contracts with the most significant absolute value, it is currently assumed that the option to redeem them will be exercised and therefore the value of the liability already reflects the option to transfer ownership.

The table below shows the lease liabilities broken down by category according to their expiration date, within the financial period, within 5 years and after 5 years:

Type	31 Dec 19	Portion due within the period	Portion due within 5th year	Portion due beyond 5th year
Lease liabilities	95.5	19.4	42.7	33.4

16 Intangible assets

	31 Dec 19	31 Dec 18	Changes
Industrial patents and intellectual property rights	78.6	78.6	-
Concessions, licences, trademarks and similar rights	132.0	74.9	57.1
Public services under concession	2,718.6	2,689.1	29.5
Customer lists	578.4	153.8	424.6
Other intangible assets	49.6	34.7	14.9
Intangible assets under construction and public services under concession	157.3	172.2	(14.9)
Intangible assets under construction	65.7	51.6	14.1
Total	3,780.2	3,254.9	525.3

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

	Net opening balance	Investments	Disinvestments	Depreciation and amortisation	Changes in the scope of consolidation	Other changes	Net closing balance	of which gross final amount	of which amortisation provision
31 Dec 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)
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)
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	-
Total	3,127.0	305.3	(2.2)	(220.9)	54.2	(8.5)	3,254.9	5,892.4	(2,637.5)
31 Dec 19									
Industrial patents and intellectual property rights	78.6	8.3	-	(34.1)	0.2	25.6	78.6	442.2	(363.6)
Concessions, licences, trademarks and similar rights	74.9	0.8	(0.1)	(11.9)	67.4	0.9	132.0	458.0	(326.0)
Public services under concession	2,689.1	196.2	(1.1)	(171.2)	(109.2)	114.8	2,718.6	4,593.8	(1,875.2)
Customer lists	153.8	-	-	(14.9)	439.5	-	578.4	638.0	(59.6)
Other intangible assets	34.7	24.5	-	(14.5)	(0.2)	5.1	49.6	163.8	(114.2)
Intangible assets under construction and public services under concession	172.2	90.4	(0.2)	-	(0.8)	(104.3)	157.3	157.3	-
Intangible assets under construction	51.6	48.9	(0.1)	(0.2)	-	(34.5)	65.7	65.7	-
Total	3,254.9	369.1	(1.5)	(246.8)	396.9	7.6	3,780.2	6,518.8	(2,738.6)

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 132 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 interpretation of IFRIC 12 "Service concession arrangements" was first applied.

"Public services under concession", amounting to 2,718.6 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 19 "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 12 interpretation. Investments for the year related mainly to the water networks, in the amount of 102.2 million euro, and gas distribution networks, in the amount of 74.1 million euro.

"Intangible assets under construction and public services under concession," amounting to 157.3 million euro, refers to investments related to the same contracts that have yet to be concluded at year-end.

"Intangible assets in progress and advance payments", equal to 65.7 million euro, essentially comprises IT projects that are still incomplete.

"Customer lists", amounting to 578.4 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 49.6 million euro, refers mainly to the rights of use for networks and infrastructures for the passage and laying down of telecommunication networks and the incremental costs incurred for obtaining new sale contracts. Over the course of the period, and specifically in light of the new opportunities for expanding its customer base in the development of the electricity market, the Group designed a series of commercial activities and adapted its management systems in order to accurately monitor the incremental costs related to the new contracts. As required by IFRS 15, these incremental costs, involving mainly commissions paid to agents, were recorded as assets and are depreciated over the average lifetime of new customers (churn rate). The commissions stated as assets for the year 2019 amount to 23.6 million euro.

"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.

The column "Changes in the scope of consolidation" includes the business combination operations carried out during the financial year and the transfer of control of the "Gas Network Distribution" branch (transferring it to the AP Reti Gas Nord Est Srl company) as part of the partnership operation with the Ascopiave Group. More specifically, acquisition operations led to the entry of intangible assets for a total of 525.8 million euro (for a more detailed analysis see paragraph 2.02.03 "Scope of consolidation"), while the divestment entailed assets disposal for 128.9 million euro, specifically the gas distribution network for the regions of Veneto and Friuli-Venezia Giulia.

17 Goodwill

	31 Dec 19	31 Dec 18	Changes
Goodwill	812.9	381.3	431.6

The value of the goodwill as of 31 December 2019 mainly reflects the following operations:

- acquisition of control of "Ascopiave commercial activities" in the Veneto, Friuli-Venezia Giulia and Lombardy regions, that is the companies EstEnergy Spa, Ascotrade Spa, Ascopiave Energie Spa, Blue Meta Spa and Etra Energia Srl, as well as the company Amgas Blu Srl operating in the province of Foggia, for a total of 430.6 million euro;
- integration that in 2002 resulted in the creation of Hera S.p.A., 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.

The change as compared to the previous period is solely related to business combination operations carried out during 2019 as described in paragraph 2.02.03 "Scope of consolidation".

The carrying amounts of goodwill were tested for impairment, the results of which are outlined in note 32 "Impairment test".

18 Equity investments

	31 Dec 19	31 Dec 18	Changes
Investments valued using the equity method	135.8	136.0	(0.2)
Other Equity investments	7.7	13.1	(5.4)
Total	143.5	149.1	(5.6)

The changes in joint ventures and associated companies as compared to 31 December 2018 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:

	31 Dec 18	Investments and disinvestments	Valuation net equity	Dividends paid out	Changes in the scope of consolidation	Depreciation and other changes	31 Dec 19
Aimag Spa	49.0	-	3.6	(2.2)	-	-	50.4
Enomondo Srl	16.1	-	1.8	(2.0)	-	-	15.9
EstEnergy Spa	11.3	-	4.7	(5.2)	(10.8)	-	-
Set Spa	35.4	-	0.2	-	-	(9.2)	26.4
Sgr Servizi Spa	23.1	-	3.1	(2.6)	-	(0.1)	23.5
ASM SET Srl	-	-	-	-	18.5	-	18.5
Other minor	1.1	(0.9)	(0.0)	(0.1)	1.0	-	1.1
Total	136.0	(0.9)	13.4	(12.1)	8.7	(9.3)	135.8

The item "Investments and disinvestments" mainly includes the divestment of shares held in the company So.sel Spa, leading to state a capital loss of 0.7 million euro and proceeds of 0.3 million euro.

The item "Changes in the scope of consolidation" includes the effects of the business combination involving the purchase of gas and electricity sales activities from the Ascopiave Group. More specifically, the acquisition of equity investments in ASM SET Srl for 18.5 million euro and in Sinergie Italiane Srl in liquidation for 1 million euro, in addition to the line-by-line consolidation of EstEnergy Spa as at 31 December 2019.

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

	31 Dec 18	Investments	Disinvestments	Depreciation	Other changes	31 Dec 19
Calenia Energia Spa	7.0	-	-	(5.2)	-	1.8
Veneta Sanitaria Finanza di Progetto Spa	3.6	-	-	-	-	3.6
Other minor	2.5	0.2	(0.4)	-	-	2.3
Total	13.1	0.2	(0.4)	(5.2)	-	7.7

The assessment of the investment in Calenia Energia Spa generated a value loss of 5.2 million euro due to the criticalities currently still existing in the electrical generation sector.

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) underwent the impairment test; for the test results and further details regarding the assumptions, please see note 32 "Impairment test".

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

Assets	Joint ventures	Associated companies	Total
Non-current assets			
Property, plant and equipment	32.6	419.4	452.0
Rights of use		0.3	0.3
Intangible assets		53.4	53.4
Goodwill		62.5	62.5
Equity investments		8.3	8.3
Financial assets		1.0	1.0
Deferred tax assets	0.1	7.6	7.7
Total non-current assets	32.7	552.5	585.2
Current assets			
Inventories	0.8	5.4	6.2
Trade receivables	6.3	224.7	231.0
Contract work in progress		0.4	0.4
Financial assets		18.3	18.3
Current tax assets	0.1		0.1
Other current assets	7.4	28.6	36.0
Cash and cash equivalents	0.8	24.2	25.0
Total current assets	15.4	301.6	317.0
Total assets	48.1	854.1	902.2

Net assets and liabilities	Joint ventures	Associated companies	Total
Share capital and reserves			
Share capital	14.0	88.9	102.9
Reserves	14.2	252.7	266.9
Profit (loss) for the year	3.6	30.7	34.3
Group net equity	31.8	372.3	404.1
Non-controlling interests		11.8	11.8
Total net equity	31.8	384.1	415.9
Non-current liabilities			
Non-current financial liabilities	3.6	190.0	193.6
Non-current lease liabilities		0.2	0.2
Post-employment and other benefits	0.1	5.4	5.5
Provisions for risks and charges	0.3	39.2	39.5
Deferred tax liabilities		0.5	0.5
Derivative financial instruments			-
Total non-current liabilities	4.0	235.3	239.3
Current liabilities			
Current financial liabilities	3.5	39.5	43.0
Current lease liabilities		0.1	0.1
Trade payables	8.7	137.4	146.1
Current tax liabilities		2.0	2.0
Other current liabilities	0.1	55.7	55.8
Total current liabilities	12.3	234.7	247.0
Total liabilities	16.3	470.0	486.3
Total net assets and liabilities	48.1	854.1	902.2
Income statement			
	Joint ventures	Associated companies	Total
Revenues	16.5	745.4	761.9
Other operating revenues	6.6	17.6	24.2
Use of raw materials	(1.7)	(506.1)	(507.8)
Service costs	(11.8)	(121.3)	(133.1)
Personnel costs	(0.3)	(24.5)	(24.8)
Amortisation, depreciation and provisions	(3.9)	(47.5)	(51.4)
Other operating costs	(0.2)	(16.0)	(16.2)
Operating revenues	5.2	47.6	52.8
Financial income		2.8	2.8
Financial expenses	(0.1)	(5.6)	(5.7)
Total financial management	(0.1)	(2.8)	(2.9)
Other non-operating revenues (expenses)		0.8	0.8
Earnings before taxes	5.1	45.6	50.7
Taxes for the period	(1.5)	(13.6)	(15.1)
Net profit for the period	3.6	32.0	35.6

19 Current and non-current financial assets

	31 Dec 19	31 Dec 18	Changes
Loan receivables	50.6	65.8	(15.2)
Portfolio securities	2.5	2.5	-
Receivables for construction services	33.7	17.4	16.3
Other financial receivables	48.5	32.7	15.8
Total non-current financial assets	135.3	118.4	16.9
Loan receivables	23.5	8.6	14.9
Portfolio securities	0.1	0.1	-
Other financial receivables	46.5	28.6	17.9
Total current financial assets	70.1	37.3	32.8
Total cash and cash equivalents	364.0	535.5	(171.5)
Total financial assets, cash and cash equivalents	569.4	691.2	(121.8)

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

	31 Dec 19			31 Dec 18		
	Non-current portion	Current portion	Total	Non-current portion	Current portion	Total
Aloe SpA	7.7	0.8	8.5	8.5	0.8	9.3
Calenia Energia Spa	11.9	-	11.9	14.6	2.5	17.1
Set Spa	21.4	2.9	24.3	24.3	2.7	27.0
Tamarete Energia Srl	-	2.8	2.8	12.9	2.6	15.5
Other minor	9.6	17.0	26.6	5.5	(0.0)	5.5
Total	50.6	23.5	74.1	65.8	8.6	74.4

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 32 "Impairment test". With regard to the active loan to Tamarete Energia Srl, the impairment test resulted in a writedown for 11.6 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 of the item "Loans and receivables" in paragraph 2.02.04 "Evaluation criteria and consolidation principles".

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

- Municipality of Padua, receivables 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 services contract comes to an end;
- Acosea Impianti Srl, regarding a security deposit in the amount of 12.5 million euro;
- 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 subjects (Cato, the Friuli Venezia Giulia Region and the Veneto Region) in the amount of 13.4 million euro;

- receivables for cash-pooling claimed by the sales companies acquired by the Ascopiave Group at the end of the financial year from the former parent company for a total of 16.2 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 14 million euro;
- 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 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 4.7 million euro.

"Cash and cash equivalents" include almost exclusively bank and postal deposits.

To better understand the financial dynamics taking place during the 2019 financial year, see the financial statement and the comments shown in the Directors' report in paragraph 1.03.04 "Analysis of financial structure".

20 Deferred tax assets and liabilities

	31 Dec 19	31 Dec 18	Changes
Pre-paid tax assets	264.8	243.4	21.4
Offsetting of deferred tax liabilities	(90.5)	(85.3)	(5.2)
Substitute tax credit	0.5	1.1	(0.6)
Total net deferred tax assets	174.8	159.2	15.6
Deferred tax liabilities	245.0	128.4	116.6
Offsetting of deferred tax liabilities	(90.5)	(85.3)	(5.2)
Total net deferred tax liabilities	154.5	43.1	111.4

"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. The increase for the period is mainly due to the business combinations carried out during the year, described in paragraph 2.02.03.

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.

For more details about the composition and dynamics of deferred tax assets and liabilities, see note 12 "Taxes"

21 Derivative financial instruments

Non-current assets and liabilities							
Underlying amounts hedged	Fair Value Hierarchy	31 Dec 19			31 Dec 18		
		Notional	Fair value assets	Fair value liabilities	Notional	Fair value assets	Fair value liabilities
Interest rate derivatives							
Loans	2	500.0 mln	18.7	4.2	500.0 mln	26.1	4.5
Loans	2	161.7 mln		23.2	563.3 mln		33.4
Total non-current derivatives			18.7	27.4		26.1	37.9
Exchange rate derivatives							
Loans	2	20 mld Jpy	22.5		20 mld Jpy	19.2	
Total non-current derivatives			41.2	27.4		45.3	37.9
Current assets and liabilities							
Underlying amounts hedged	Fair Value Hierarchy	31 Dec 19			31 Dec 18		
		Notional	Fair value assets	Fair value liabilities	Notional	Fair value assets	Fair value liabilities
Commodity derivatives							
Foreign gas hubs	3	310,300 MWh	1.6		3,359,619 MWh	10.0	
Formulas Electricity	2	12,564,290 MWh	70.5		11,512,401 MWh	86.2	
Foreign gas hubs	3	5,564,835 MWh		25.6	1,095,324 MWh		1.2
Refined oil products/coal	2	1,222 Ton		0.1	1,320 Ton		0.0
Electricity formulas	2	17,230,886 MWh		112.7	7,556,092 MWh		62.2
Total current commodity derivatives			72.2	138.4		97.1	63.5
Interest rate derivatives							
Loans	2				500.0 mln	14.8	2.7
Loans	2				2.7 mln		0.1
Total current rate derivatives						14.8	2.8
Total current derivatives			72.2	138.4		111.9	66.3

Derivative financial instruments classified under non-current liabilities amounted to 41.2 million euro (45.3 million euro as at 31 December 2018); they refer to interest rate derivatives for 18.7 million euro and to derivatives on exchange rates in connection to loans for 22.5 million euro. Derivative financial instruments classified under non-current assets amounted to 27.4 million euro (37.9 million euro as at 31 December 2018) 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 72.2 million euro and 138.4 million euro respectively (111.9 and 66.3 million euro as at 31 December 2018); they mainly refer to commodity derivatives. In 2019, interest rate derivatives related to loans and bonds that in the previous year were recorded as current, were repaid.

With regard to derivatives on current and long-term interest rates in the form of Interest Rate Swaps (IRS) as at 31 December 2019, the Group's net exposure was negative by 8.7 million euro, compared with a positive exposure of 0.2 million euro as at 31 December 2018. 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 22.5 million euro as at 31 December 2019, as compared to an assessment that was positive, amounting to 19.2 million euro, as at 31 December 2018. The positive change in fair value in the amount of 3.3 million euro is due prevalently to the exchange rate, since the Japanese yen gained remarkably on the euro during 2019.

At 31 December 2019, the net fair value of commodity derivatives pertaining trade operations was positive for 66.2 million euro, as compared to a negative fair value of 33.6 million euro at 31 December 2018. The decrease in absolute terms in the fair value of portfolio contracts is mainly due to the increase in the underlying volumes as a result of increased requests for hedges from commercial companies (mainly as a result of the type of fixed price offers) and the volatility of the Pun during the year.

Interest/exchange rate derivatives

Interest rate and foreign exchange derivative instruments held as of 31 December 2019, subscribed in order to hedge loans, can be classed into the following categories:

Hedging interest/exchange rate derivatives						
Financial operations						
Type	31 Dec 19			31 Dec 18		
	Notional	Fair value assets	Fair value liabilities	Notional	Fair value assets	Fair value liabilities
Cash flow hedge	11.9 mln	-	0.4	416.2 mln	-	9.7
Fair value hedge	149.8 mln	22.4	22.8	149.8 mln	19.2	23.7
Non hedge accounting	500 mln	18.7	4.2	1,000 mln	41.0	7.3
Total fair value		41.1	27.4		60.1	40.6
Type	31 Dec 19			31 Dec 18		
	Income	Expenses	Net effect	Income	Expenses	Net effect
Cash flow hedge	0.4	(27.9)	(27.5)	0.2	(0.7)	(0.5)
Fair value hedge	10.0	(9.2)	0.8	20.3	(8.1)	12.2
Non hedge accounting	38.8	(38.8)	(0.0)	37.2	(37.2)	0.0
Total income (expenses)	49.2	(75.9)	(26.7)	57.7	(46.0)	11.7

The negative fair value of derivative financial instruments classified as cash flow hedges amounts to 0.4 million euro (9.7 million euro as at 31 December 2018). The fair value decrease was generated by the redemption of derivatives hedged to cover a future financing operation at maturity, with a total nominal value of 400 million euro, although the operation did not occur according to the scenario assumed by the management. As of 31 December 2019, the breakdown of net charges relating to derivatives classified as cash flow hedges amount to 27.5 million euro (0.5 million as of 31 December 2018). The expenses associated with this class mainly relate to the redemption of the aforementioned derivatives, which resulted in reporting to the income statement the full amount that had been previously reported to the statement of comprehensive income. No significant ineffective portions connected to the residual financial instruments were found in the financial period.

In the 2019 financial year, the hedge relationships between the above derivative contracts and their underlying current or future liabilities resulted in recording net expenses for 8.9 million euro to the statement of comprehensive income (as compared with 8.7 million euro of net income recorded as of 31 December 2018), divided as follows:

Cash flow hedges	31 Dec 19			31 Dec 18		
	Positive components	Negative components	Net effect	Positive components	Negative components	Net effect
Changes to expected cash flows		(18.6)	(18.6)		(9.2)	(9.2)
Reserve transferred to the income statement	27.9	(0.4)	27.5	0.5		0.5
Derivatives effect on statement of comprehensive income cash flow hedge	27.9	(19.0)	8.9	0.5	(9.2)	(8.7)

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 0.4 million euro as compared to a negative fair value of 4.5 million euro, as at 31 December 2018. This positive change in the period is mainly due to the effect of Cross Currency Swaps (CCS) illustrated above.

As at 31 December 2019, the assessment of derivatives classified as fair value hedges generated net earnings for a total of 0.8 million euro (12.2 million euro as at 31 December 2018).

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	31 Dec 19			31 Dec 18		
	Income	Expenses	Net effect	Income	Expenses	Net effect
Assessment of derivatives	5.2	(1.0)	4.2	15.9	-	15.9
Accrued interest	0.1	(0.0)	0.1	0.1		0.1
Realized cash flows	4.8	(8.2)	(3.4)	4.4	(8.1)	(3.7)
Economic effect fair value hedge derivatives	10.0	(9.2)	0.8	20.3	(8.1)	12.2

Underlying amounts hedged	31 Dec 19			31 Dec 18		
	Income	Expenses	Net effect	Income	Expenses	Net effect
Assessment of financial liabilities	-	(5.2)	(5.2)	-	(15.9)	(15.9)

The derivatives on interest rates, identified as non-hedge accounting hedges, have an overall positive fair value of 14.5 million euro (33.7 million euro as at 31 December 2018). The decrease in fair value is mainly due to the termination at maturity of two instruments during the financial period. In relation to this new class of derivatives, originating in full from past restructuring operations, despite being classified as non-hedge accounting pursuant to IFRS 9, have as their main objective to provide coverage from interest rate fluctuations and have no impact on the income statement (mirroring).

As at 31 December 2019 the breakdown of net charges and revenues relating to derivatives classified as non-hedge accounting is as follows:

Non-hedge accounting	31 Dec 19			31 Dec 18		
	Income	Expenses	Net effect	Income	Expenses	Net effect
Assessment of derivatives	2.6	(21.8)	(19.2)	2.0	(21.3)	(19.3)
Accrued interest	1.2	(1.3)	(0.1)	0.1		0.1
Realized cash flows	35.0	(15.7)	19.3	35.1	(15.9)	19.2
Economic effect non-hedge accounting derivatives	38.8	(38.8)	(0.0)	37.2	(37.2)	0.0

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.

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 31 December 2019, 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 14.5 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 14.4 million euro.

These changes in fair value of financial instruments accounted for as cash flow hedges would have no effect on the income statement if it were not for their potential ineffective portion, which moreover is not significant. In the event of an increase or decrease in fair value, there would be a non-significant increase or decrease in net equity. 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. Finally, even non-hedge accounting derivatives would have no impact on the income statement, as they are the result of mirroring operations that determine their neutrality (i.e. their fair value will tend to decrease over time when the expected cash flows are generated).

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 31 December 2019 would amount to approximately 17.6 million euro. Likewise, assuming an instant reduction of the same amount, the potential fair value increase would be approximately 20.9 million euro. As exchange rate derivatives related to borrowing 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 credit adjustment 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 of 31 December 2019, subscribed in order to hedge mismatches between purchase and sale formulas, are classed into the following categories:

Commodity/exchange derivatives						
Operations management						
Type	31 Dec 19			31 Dec 18		
	Fair value assets	Fair value liabilities	Net effect	Fair value assets	Fair value liabilities	Net effect
Cash flow Hedge	38.2	87.7	(49.5)	37.6	0.8	37.0
Non hedge accounting	34.0	50.7	(16.7)	59.5	62.7	(3.2)
Total fair value	72.2	138.4	(66.2)	97.1	63.5	33.8
Type	31 Dec 19			31 Dec 18		
	Income	Expenses	Net effect	Income	Expenses	Net effect
Assessment of derivatives	94.9	(108.9)	(14.0)	79.4	(74.7)	4.7
Realized cash flows	4.6	(35.3)	(30.7)	28.2		28.2
Economic effect of derivatives	99.5	(144.2)	(44.7)	107.6	(74.7)	32.9

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. Beginning in 2019, with regard to electricity, in order to achieve every possible synergy and optimize coverage, the Group renewed its strategic approach to operations management and primarily operates with a single commercial portfolio. Specifically, the organisational model adopted and the management systems were reviewed simultaneously making it possible to identify the nature of the operation (hedging vs. trading) and produce the information required for a formal identification of the purpose of the derivative instruments, for a higher number of contracts than in the past. This will therefore make it possible to reduce operations classified as "Non-hedge accounting" although they were implemented for the purpose of hedging.

The hedge relationships between the above derivative contracts and their underlying operations resulted in recording net revenues for 85.7 million euro to the income statement (26.9 million euro as at 31 December 2018), divided as follows:

Hedge accounting commodities	31 Dec 19			31 Dec 18		
	Positive components	Negative components	Net effect	Positive components	Negative components	Net effect
Changes to expected cash flows		(128.0)	(128.0)	40.5		40.5
Reserve transferred to the income statement	42.3		42.3		(13.6)	(13.6)
Derivatives effect on statement of comprehensive income cash flow hedge	42.3	(128.0)	(85.7)	40.5	(13.6)	26.9

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 2019 financial year, generated a net income of 44.8 million euro (32.9 million as at 31 December 2018), 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.

Sensitivity Analysis - Commercial transactions

In assuming an instant 10 dollar-per-barrel rise in the Brent price, with no change in the national standard price curve, the potential increase in the fair value of derivative financial instruments held as at 31 December 2019 would amount to approximately 15.3 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 15.3 million euro.

In assuming an instant +5 Euro/MWh change in the national standard price curve, with no change in the Brent price, the potential increase in the fair value of derivative financial instruments held as at 31 December 2019 would amount to approximately 23.4 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 23.4 million euro.

In the organizational model described above, these changes in fair value would mainly affect derivative instruments accounted for as hedges thus the opposite variation would be recorded in the income statement.

22 Inventories

	31 Dec 19	31 Dec 18	Changes
Raw materials and stocks	112.8	95.1	17.7
Materials earmarked for sale and final products	15.9	15.1	0.8
Contract work in progress	47.8	47.1	0.7
Total	176.5	157.3	19.2

"Raw materials and stocks", stated net of an obsolescence provision, mainly comprise gas stocks, for 60.1 million euro (53.6 million euro as at 31 December 2018), spare parts and equipment used for maintenance and running of operating plants and networks, equal to 45.9 million euro (33.8 million euro as at 31 December 2018) and plastic materials earmarked for regeneration in the amount of 7.6 million euro (7.7 million euro as at 31 December 2018). The book value of gas stocks is recoverable on the basis of gas sales made after the end of the financial period and forward sales contracts already signed by the Group at the date of the financial statements. The change in the gas stock values as compared to 31 December 2018, net of the effect of the purchase of "Ascopiave commercial activities" amounting to 1.5 million euro, is mainly due to higher stocked amounts at the end of the period. The change in spare materials and maintenance equipment is mainly due to the increased stocks in the public lighting sector.

"Materials earmarked for sale" mainly consists of:

- GVG system - Steam grid generator and complementary plant components for a total of 9.6 million euro. This machinery, already included in inventories in the previous financial period and earmarked for sale, will be used internally for revamping the second line of the Trieste waste to energy plant;
- plastic products made in the Group's regeneration plants equal to 6 million euro (5.1 million euro as of 31 December 2018).

"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 22.2 million euro, 15.8 million euro and 6.3 million euro), as well as for design activities aimed at acquiring commissions in the national and international markets (2.1 million euro).

23 Trade receivables

	31 Dec 19	31 Dec 18	Changes
Receivables from customers	1,625.8	1,408.6	217.2
Allowance for bad debts	(399.3)	(342.1)	(57.2)
Receivables from customers for bills and invoices not yet issued	838.8	775.7	63.1
Total	2,065.3	1,842.2	223.1

Trade receivables comprise estimated consumption, for the portion pertaining to the period, relating to bills and invoices which will be issued after 31 December 2019, 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.

The value of trade receivables reported in the financial statements at 31 December 2019 represents the Group's maximum exposure to credit risk.

Changes in the provisions for bad debts are as follows:

	Opening balance	Provisions	Changes in scope of consolidation	Uses and other movements	Closing balance
2018 financial year	289.2	89.3	0.8	(37.2)	342.1
2019 financial year	342.1	80.5	26.5	(49.8)	399.3

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 section "credit risk" and paragraph 2.02.04 "Evaluation criteria and consolidation principles".

The change in the scope of consolidation as at 31 December 2019 reflects the acquisition of "Ascopiave commercial activities" for 19.7 million euro, of "CMV Energia&Impianti Srl" for 6.5 million euro and of Cosea Ambiente Spa for 0.4 million euro.

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

	31 Dec 19	Inc. %	31 Dec 18	Inc. %	Changes
Not yet due	754.9	46%	646.9	46%	108.0
Due 0-30 days	104.3	6%	91.4	6%	12.9
Due 31-180 days	106.2	7%	129.7	9%	(23.5)
Due 181-360 days	97.0	6%	118.5	8%	(21.5)
Due beyond 360 days	563.4	35%	422.1	30%	141.3
Total	1,625.8		1,408.6		217.2

24 Current tax assets and liabilities

	31 Dec 19	31 Dec 18	Changes
Income tax receivables	24.0	14.8	9.2
IRES refund receivables	18.1	19.5	(1.4)
Total current tax assets	42.1	34.3	7.8
Income tax payables	15.6	6.0	9.6
Substitute tax payables	71.3	-	71.3
Total current tax liabilities	86.9	6.0	80.9

"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 2011/201. The change from the previous financial year, net of the effects of extraordinary operations, is due to refunds received for 2.2 million euro.

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

"Substitute tax payables", represent the amounts that will be paid to redeem the controlling shareholdings acquired as part of the Hera-Ascopiave partnership operation, as illustrated in detail in paragraph 1.03.01 of the Directors' report.

25 Other current assets

	31 Dec 19	31 Dec 18	Changes
Energy efficiency bonds and emissions trading	83.1	55.1	28.0
Security deposits to suppliers	42.4	53.2	(10.8)
VAT, excise and additional taxes	92.9	38.7	54.2
Incentives from renewable sources	24.2	29.7	(5.5)
Fund for electricity and environmental services for standardisation and continuity income	26.4	24.0	2.4
Prepaid costs	19.8	18.3	1.5
Advances to suppliers and employees	17.0	12.6	4.4
Other receivables	89.9	49.6	40.3
Total	395.7	281.2	114.5

The breakdown and changes in the main items are described compared with 31 December 2018.

"Energy efficiency bonds and emissions trading", includes:

- white certificates, 65.6 million euro (39.6 million euro as at 31 December 2018);
- green certificates, 9.8 million euro, in line with the previous financial year;
- grey certificates, 7.6 million euro (5.7 million euro as at 31 December 2018).

The value increase is mainly due to the different policies adopted by the Group for redeeming the certificates, taking into account the fact that credit transfer option was used less frequently.

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 due to the remarkable increase of the market value of this type of certificates as compared with the previous year.

"Security deposits", mainly include:

- 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 25 million euro;

- deposit paid to the associated company Sinergie Italiane in liquidation, in accordance with the provisions of the natural gas supply contract with the same company, to guarantee the sales that will be made to the Group for 7.6 million euro. This deposit is covered by a security that the Ascopiave Group issued when the partnership agreement was signed;
- security deposits required by Customs amounting to 2.4 million euro.

"VAT, excise and additional taxes", is comprised of tax credits receivables to the treasury for value added tax in the amount of 56.7 million euro and for excise and additional taxes in the amount of 36.2 million euro. The change as compared to 31 December 2018 is attributable to an increase of 26 million euro in receivables for value added tax (30.7 million euro as at 31 December 2018) and a decrease of 28.2 million euro in receivables for excise and additional taxes (8 million euro as at 31 December 2018). These changes should be interpreted together with the same change shown in note 31 "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 4.9 million euro (4.7 million euro as of 31 December 2018), costs incurred for insurance policies, surety, bank fees and charges in the amount of 2.3 million euro (3.8 million as of 31 December 2018).

"Other receivables", the increase is mainly due to the entry of the receivable from Ascopiave Spa, as minority shareholder of EstEnergy Spa, for its portion of the substitute tax, equal to 31.1 million, which will be paid during 2020 to implement a process of tax optimisation strictly related to the acquisition of the energy commercial activities. For further details, reference should be made to paragraph 1.03.01 "Hera-Ascopiave partnership".

26 Share capital and reserves

Compared to 31 December 2018, shareholders' equity increased by 163.3 million euro due to the combination of the following effects:

- overall revenues for the period in the amount of 343.4 million euro;
- distribution of dividends in the amount of 160.5 million euro;
- decrease due to changes in the scope of consolidation, in the amount of 44.7 million euro;
- increase due to operations on treasury shares, in the amount of 31.3 million euro;
- decrease due to the transition to accounting standard IFRS 16, in the amount of 4 million euro;
- decrease due to changes in treasury shares, in the amount of 2.2 million euro.

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

Share capital

The share capital as at 31 December 2019 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 31 December 2019 was 14.1 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 948 million euro, include retained earnings and reserves accrued in previous financial years and in-kind equity injections, or shares, in the amount of 1,016.1 million euro, cumulative losses in the other components of comprehensive income for 71.7 million euro and negative reserves for operations on treasury shares in the amount of 3.6 million euro. These latter items reflect transactions carried out on treasury shares as at 31 December 2019. Changes over the course of the financial year generated an overall capital gain in the amount of 13.5 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. It includes mainly the minority equity interests of the Herambiente Group and the Marche Multiservizi Spa Group. With reference to the Ascopiave Group's equity interest in EstEnergy Spa and any effects on minority interests, please refer to paragraph 1.03.01 "Hera-Ascopiave Partnership".

27 Current and non-current financial liabilities

	31 Dec 19	31 Dec 18	Changes
Bonds and loans	2,882.8	2,651.7	231.1
Minority shareholder' put option	553.3	-	553.3
Payables to acquire controlling shares and potential payments	17.4	17.4	-
Other financial liabilities	2.8	3.3	(0.5)
Total non-current financial liabilities	3,456.3	2,672.4	783.9
Overdrafts and interest expenses	111.5	463.5	(352.0)
Bonds and loans	63.1	70.3	(7.2)
Payables to acquire controlling shares and potential payments	9.9	9.1	0.8
Other financial liabilities	121.0	67.0	54.0
Total current financial liabilities	305.5	609.9	(304.4)
Total financial liabilities	3,761.8	3,282.3	479.5

"Bonds and loans" for the non-current part, increased mainly as a result of the Group subscribing a second bond loan to support environmental sustainability projects. The green bond issuance was carried out as part of a tender offer aimed at partially renegotiating the bond maturing in October 2021 and the green bond maturing in July 2024, both with a face value of 500 million euro. The transaction made it possible to confirm that the average debt duration is homogenous with the duration of the investments and to improve the average debt rate at which the Group is financed. Due to the way it was managed, this operation led to a change in pre-existing bond payables and was accounted for as such, recording income from renegotiations in the amount of 12.7 million euro (as outline in note 10 "Financial income and expenses"). The expenses associated with the renegotiation, since the financial liability failed to be derecognised, were included in the valuation at depreciated cost of the instrument. More specifically, the purchase offer received in the exchange a total of 210.6 million euro in existing securities (40 million euro from the 2021 bond and 170.6 million euro from the 2024 bond). At the same time, the Group issued the new green bond with a nominal value of 500 million euro, on 5 July 2019, with a coupon of 0.875%, and redemption in 2027, listed on the regulated market of the Luxembourg Stock Exchange, the Irish Stock Exchange and the ExtraMot Pro.

The item also includes the value of the sale option related to Ascopiave Spa's minority shareholding in Hera Comm Spa which, as a result of the contractual provisions, is classified as a loan and valued according to the depreciated cost method. The face value of the initial statement of such debt, as well as the value of its repayment, amounted to 54 million euro.

"Bonds and loans" for the current part, decreased mainly as a result of the redemption of the bond expired 3 December 2019, with a residual face value of 394.6 million euro.

"Minority shareholders' put option", which includes the fair value measurement of the sale options that are granted, with specific contractual arrangements, to minority shareholders on their own shares. As at 31 December 2019, this item refers to the sale option on the non-controlling shares in EstEnergy Spa, equal to 48% of the share capital, held by the Ascopiave Group (see paragraph 1.03.01 "Hera-Ascopiave Partnership"). Fair value of this option is determined on the basis of two separate components:

- the present value of the expected price of the non-controlling shares in Estenergy Spa, equal to 396.6 million euro;
- the discounted estimate of any future dividends that are expected to be paid out by Estenergy Spa over the hypothetical life of the option, amounting to 156.7 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 at 31 December 2019, this item refers residual consideration relating to the acquisition of the Aliplast Group carried out in 2017, in the amount of 17.4 million euro.

The item "Other financial liabilities", for the portion due after the current period, includes 2.8 million euro due to the Municipal Pension Fund of the Municipality of Trieste. The current part mainly consists of payables due to:

- collection of receivables factored without recourse still to be transferred to factoring companies at year-end, in the amount of 88.9 million euro;
- collections from customers managed as protected customers, customers for last resort services of the gas sector, amounting to 13.8 million euro;
- RAI licence fee collection for 2.9 million euro;

- payables to the Municipality of Trieste municipal pension for 0.6 million euro.

In "Overdrafts and interest expenses", the significant change compared with the previous financial period is represented by the disbursement of a short-term loan, in the form of hot money, amounting to 40 million euro.

The table below shows the financial liabilities broken down by category as at 31 December 2019, with an indication of the portion expiring within the period, within 5 years and after 5 years:

Type	Residual amount 31 Dec 19	Portion due within the period	Portion due within 5th year	Portion due beyond 5th year
Bonds	2,292.9		770.8	1,522.1
Loans	653.0	63.1	288.3	301.6
Minority shareholder' sale option	553.3			553.3
Payables to acquire controlling shares and potential payments	27.3	9.9	17.4	
Other financial liabilities	123.8	121.0	2.8	
Overdrafts and interest expenses	111.5	111.5		
Total	3,761.8	305.5	1,079.3	2,377.0

The main conditions of the bonds outstanding as of 31 December 2019 are as follows:

Bonds	Negotiation	Duration (years)	Maturity	Nominal value (mln)	Coupon	Annual interest rate
Bond	Listed	8	4 Oct 21	249.9 eur	Annual	3.25%
Bond	Listed	10	22 May 23	68.0 eur	Annual	3.375%
Green bond	Listed	10	4 Jul 24	329.3 eur	Annual	2.375%
Bond	Unlisted	15	5 Aug 24	20,000 jpy	Six monthly	2.93%
Bond	Listed	12	22 May 25	15.0 eur	Annual	3.50%
Bond	Listed	10	14 Oct 26	400.0 eur	Annual	0.875%
Bond	Unlisted	15/20	14 May 27/32	102.5 eur	Annual	5.25%
Bond	Listed	8	5 Jul 27	500.0 eur	Annual	0.875%
Bond	Listed	15	29 Jan 28	700.0 eur	Annual	5.20%

As of 31 December 2019 the outstanding bonds, totalling a face value of e 2,514.6 million euro (2,619.7 as at 31 December 2018) and recorded at discounted cost of 2,292.8 million euro, have a fair value of 2,919.6 million euro (2,890.8 as of 31 December 2018) 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.

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. Reference should be made to chapter 1.01.02 "Strategic approach and management policies" of the Directors' Report for the availability and use of committed and uncommitted credit lines.

Sureties and guarantees

	31 Dec 19	31 Dec 18
Bank sureties and guarantees	644.3	911.6
Insurance sureties and guarantees	412.5	408.0
Total	1,056.8	1,319.6

"Bank sureties and guarantees", the value as at 31 December 2019 comprises the following:

- 644.3 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;

- 571.2 million euro for sureties and comfort letters issued to guarantee timely payment for the sourcing of raw materials

"Insurance sureties and guarantees", as at 31 December 2019, 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.

At 31 December 2019, the Hera Group provided the following security interests for certain bank loans. 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 0.5 million euro.

28 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:

	31 Dec 18	Service cost	Financial expenses	Actuarial profit(losses)	Uses and other movements	Changes scope of consolidation	31 Dec 19
Post-employment	115.3	0.8	0.9	3.5	(10.5)	2.0	112.0
Tariff reduction	6.4	-	0.1	1.7	(0.3)	-	7.9
Premungas	4.0	-	-	-	(0.5)	-	3.5
Gas discount	3.8	-	-	0.4	(0.3)	-	3.9
Total	129.5	0.8	1.0	5.6	(11.6)	2.0	127.3

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 expenses" are calculated by applying a specific discount rate for each company, determined on the basis of the average financial life of the bond. "Actuarial profit(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. The effect for the period, amounting to 5.6 million euro, is due to the decrease of the yield curve as compared to the previous period.

The item "Uses and other movements" mainly includes the amounts paid to employees over the course of the financial period.

The "Changes in the scope of consolidation" mainly reflects the partnership with the Ascopiave Group for 0.7 million euro and the acquisition of Coasea Ambiente Spa for 0.7 million euro and Pistoia Ambiente Srl for 0.2 million euro.

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

	Gruppo Hera (Central area)	Gruppo Hera (north-eastern area)
Technical actuarial yearly rate	0.23%	0.15%
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	1.79%	1.80%

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

- with regard to the inflation rate, the inflation assumption was inferred by adopting the Extended National Consumer Price index of 1% for the year 2020 and 1.10% for the following years;

- for probabilities of death, ISTAT 2018 tables were consulted;
- in the actuarial valuations, account was taken of the new effective dates for pensions under Law Decree of 6 December 2011, no. 201 entitled "Urgent measures for growth, equity, and the consolidation of public finances", as amended by Law 214 of 22 December 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 31 May 2010 as amended by Law 122 of 30 July 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 31 December 2019.

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 31 December 2019, 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 3.5 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 3.8 million euro.

Assuming a 50 bps increase in the in the rate of inflation compared to that actually applied to value the liabilities at 31 December 2019, 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 2.2 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 2.1 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.

29 Provisions for risks and charges

	31 Dec 18	Provisions	Financial expenses	Uses and other movements	Changes scope of consol.	31 Dec 19
Provision for restoration of third-party assets	199.9	9.9	7.5	-	-	217.3
Provision for closure and post-closure landfill expenses	147.6	8.2	11.5	(2.3)	18.6	183.6
Provision for legal cases and disputes brought by personnel	16.3	3.4	-	(3.2)	0.1	16.6
Provision for plants dismantling	7.6	-	0.2	-	-	7.8
Provisions for waste disposal	7.0	7.0	-	(6.8)	-	7.2
Other provisions for risks and charges	80.2	10.0	-	(6.9)	6.0	89.3
Total	458.6	38.5	19.2	(19.2)	24.7	521.8

The "Provision for third-party asset restoration", 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 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 process and provisions due to changes in the assumptions about future outlays, following the change in expert estimates on 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 for landfill closure and post-closure expenses" decreased by 2.3 million euro, as follows:

- decreases in the amount of 17.2 million euro due to current cash outlays for the management of landfills, 7.4 million euro of which refer to internal costs included in "Other operating revenues";
- increases in the amount of 15.1 million euro generated from landfills activated during the period for 12.2 million euro and changes in the assumptions on future outlays following the revision of the estimates of landfills in cultivation for 2.9 million euro;
- removed from provision fund in the amount of 0.2 million euro were due to changes in the assumptions on future outlays, following the change in estimates on closed landfills.

The "Changes in the scope of consolidation" includes the post closure provision for the landfill located in Serravalle Pistoiese, obtained through the acquisition of control of the company Pistoia Ambiente Srl as at 1 July 2019.

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

"Provision for plants dismantling" includes the amounts allocated for the future dismantling of the WTE plants.

"Provision for waste disposal" reports the estimated costs of disposal of the waste already stored at the Group's plants. The provisions, amounting to 7 million euro, reflect the estimated costs of contributions for the year 2019 not yet processed at the end of the financial period, while the uses, amounting to 6.8 million euro, represent the costs incurred over the period for the processing of waste that was residual as at 31 December 2018.

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

- 18.7 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).
- 4.1 million euro, for the risk associated with the enactment of the Decree of the Ministry of Economic Development of 20 November 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 2010, 2011 and 2012;
- 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;
- 6.7 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;
- 3.5 million euro for potential litigations arising from the sale of the gas distribution unit of the Veneto and Friuli Venezia-Giulia regions;
- 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.

The "Reserves" for the period include, in particular, 2.2 million euro for the non-recognition of the CIP6 incentives for the waste to energy plant in Trieste, for the years 2010-2012. This provision supplements the reserve allocated in previous years.

"Uses and other movements" of the item "Other provisions for risks and charges" decreased by 6.9 million euro net. As at 31 December 2019, this item includes funds released from provision for 8.1 million euro related to interpretive uncertainty surrounding the determination of the reimbursement value of the networks when participating in tenders for gas distribution services in relation to certain areas already served by the Group.

"Changes in the scope of consolidation" of the item "Other provisions for risks and charges" reflects the effects of the business combinations carried out during the period. In particular, for 5 million euro it refers to a potential liability for tax risks recorded as part of the valuation of the sales activities acquired from the Ascopiave Group. For further details, reference should be made to paragraph 1.03.01 "Hera-Ascopiave partnership" in the Directors' report.

30 Trade payables

	31 Dec 19	31 Dec 18	Changes
Payables to suppliers	626.9	602.0	24.9
Payables to suppliers for invoices not yet received	764.9	758.4	6.5
Total	1,391.8	1,360.4	31.4

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

31 Other current liabilities

	31 Dec 19	31 Dec 18	Changes
Payables for advances to the fund for energy and environmental services:	382.2	274.1	108.1
Plant investment grants	202.5	190.7	11.8
Security deposits from clients	118.0	101.2	16.8
Fund for components and equalization of the electricity and gas and environmental sectors	81.5	76.6	4.9
Payables to social security institutions	51.6	47.0	4.6
Personnel	50.2	48.7	1.5
VAT, excise and additional taxes	31.8	31.5	0.3
Employee withholding	17.6	16.6	1.0
Payables for damage in customs	14.3	13.6	0.7
Anticipated revenues and other expenses	11.8	9.7	2.1
Environmental damage	10.8	13.7	(2.9)
Other payables	75.6	43.5	32.1
Total	1,047.9	866.9	181.0

"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:

- 322.2 million euro 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; The latest reports concern the years 2009-2018;
- 58 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, Ff and Fdd) until the 2016-2017 thermic year;
- 1.8 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 108.1 million euro as compared to 31 December 2018 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 2017 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. The item includes specifically:

- 42.5 million euro in contributions related to the FoNI fund (new water system investment fund);

- 41.9 million euro in contributions related to purification plants (40.7 million euro for the Servola plant built in the Municipality of Trieste, and 1.2 million euro for the Bastia plant built in the province of Forlì-Cesena);
- 23.1 million euro in contributions for investments earmarked for purification and sewer networks;
- 18.1 million euro in contributions to build rolling basins and underwater pipes in the area of Rimini.

The change as compared to 31 December 2018 is mainly due to the grants received for investments in the water sector, net of the company's share for the period.

"Security deposits from customers" reflect the amount paid by customers for gas, water and electricity provision contracts. The increase as compared to 31 December 2018 is mainly due to the change in the scope of consolidation and the acquisition of the gas and electricity sale companies as part of the partnership operation Hera-Ascopiave.

"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 change as compared to 31 December 2018 is mainly due to a higher debit for certain components of water and electricity distribution and sales amounting to 15.9 million euro, offset 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.

"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.

"Personnel" includes the vacation time accrued and not used, as well as the productivity bonuses accounted for by department, as of 31 December 2019.

"VAT, excise and additional taxes" includes payables for VAT in the amount of 6.6 million euro (0.9 million euro at 31 December 2018), and excise and additional taxes in the amount of 25.2 million euro (30.6 million euro at 31 December 2018). As outlined in note 25, "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.

"Payables for damage in customs", amounting to 14.3 million euro, includes the value of insurance deductibles that the Group must repay directly to damaged third parties or insurance companies.

The item "Anticipated revenues and other expenses", amounting to 11.8 million euro, comprises portions of revenues already invoiced falling due in the following financial period.

"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. The change from the previous financial year is mainly due to the different timing of payments.

The item "Other payables" mainly comprises the following:

- payments on account and specific tariff subsidies payable to customers amounting to 11.1 million euro (3.9 million euro as of 31 December 2018) the increase mainly refers to higher advance payments received from customers in the environment business area for 5 million euro;
- requirement to return energy efficiency certificates for 7.6 million euro, comprising almost entirely grey certificates, to the competent authorities (6 million euro as at 31 December 2018);
- dividends owed to minority shareholders, amounting to 2.9 million euro (3.9 million euro as at 31 December 2018).

32 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 2019 - 2023 business plan approved by the Board of Directors of the parent company at its meeting 10 January 2020.

The impairment test was applied to the following CGUs (Cash generating units): gas, electricity, integrated water management, environmental and other services (Public lighting and telecommunications) 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 2019-2023 Business Plan consistent with those used in previous plans and, on the basis of the final reported values, forecasts were developed 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 570/19 (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 the gas 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 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 planned energy scenario, 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 considered.

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 data for the 2020 - 2023 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, 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 at the level of 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 2024-2039 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 market activities, the cash flow resulting from the application of the perpetuity criterion for the last year (2039) was considered, assuming an average factor growth of 2%;
- for services 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 5.64% was used for the environment and 4.33% for other businesses, while for the gas distribution managed in Bulgaria a WACC of 4.35% 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 has 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 13.7 million euro, 50.7 million euro and 2.8 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 2019 financial year as well, although signs of improvement emerged in recent years confirm 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:

- introduction of significant production capacity in renewable energy in the past few years;
- moderate GDP growth and consumption efficiency (driven by European and national environmental policy objectives) reflected in the low growth in demand for energy;
- European and national policies in relation to CO2 emission reduction targets and targets for renewable energy affecting supply.

On the basis of new scenarios developed, it is believed that the market will evolve towards levels of clean spark spread aligned to the recent historical level, in particular due to:

- new high-efficiency incoming capacity (CCGT) beginning in 2022, which will replace coal-powered plants with a view to phasing out coal by 2025;
- beginning of the end-of-life cycle of the old CCGT plants, which, from the second half of the decade, creates favourable market conditions for highly efficient and flexible retrofits of the old CCGT plants, whose remuneration and return on investment are ensured by the participation in MGP and MSD, additionally ensuring a higher level of suitability of the system in the medium-long term and therefore less room for marginality growth in the absence of such investments;
- resulting unincreased marginality in the MGP market.

That said, future cash flows determined on the basis of the medium/long-term energy scenario the Group considered to be the most likely, formulated on the basis of independent expert assumptions consistent with growth expectations for energy demand, installed power, the demand for combined cycle and the system's expected reserve margin. Especially in the

medium/long term, this scenario differs from that used in the previous year, especially as a result of more analytical information concerning the efficiency levels of the new incoming capacity, which is expected to help maintain the future clean spark spread at lower values. The estimated cash flows were discounted using a 4.35% WACC, calculated in the same way as shown for the cash flow generating units.

The outcome of the test resulted in depreciating the carrying value of the equity investments and related financial assets in Calenia Energia Spa, Set Spa and Tamarete Energia Srl. Specifically, the financial statements include a writedown of the investment in Calenia Energia Spa for 5.2 million euro, a writedown of the investment in Set Spa for 9.1 million euro and an additional adjustment of the value of the loan to Tamarete Energia Srl for 10.9 million euro, recorded under non-current financial assets and 0.8 million euro under current financial assets.

A sensitivity analysis that was developed, hypothesizing a 5% decrease of the marginality deriving from energy generation, producing a reduction in the cash flows developed in the years of activity of the plants. This scenario would produce a further writedown of the carrying amounts of the three corporate vehicles by a total of 4.9 million euro.

33 Investment activities

Investments in companies and business operations

Over the course of the 2019 financial year, the Group gained control of a number of businesses and companies; for further details, reference should be made to paragraph 2.02.03 "Scope of consolidation". The table below details the main cash outlays, fees payables and cash holdings acquired:

31 Dec 19	CMV distribution activities	CMV distribution activities	Cosea Ambiente	Pistoia Ambiente	Ascopiave commercial activities	Total investments
Cash outlays leading to the acquisition of control	(1.8)		(1.5)	(35.0)	-166.3	(204.6)
Fees payables				-8.4		(8.4)
Cash holdings acquired		0.2	0.7		16.4	17.3
Investments in equity holdings, net of liquid assets	(1.8)	0.2	(0.8)	(43.4)	(149.9)	(195.7)

The cash outlay leading to the acquisition of control of "Ascopiave commercial activities" should be read as part of a wider leadership agreement. Specifically, this value comprises several closely related exchanges of cash flows:

- cash outlay for the acquisition of control over sales companies for 616.2 million euro;
- cash inflow from the sale of the equity interest held in EstEnergy Spa for a total of 395.9 million euro (broken down between the portion arising from the acquisition of control of 319.6 million euro and the portion relating to the transfer operation under common control of Hera Comm Nord Est Srl for 76.3 million euro);
- inflow from the sale of Hera Comm Spa shares for 54 million euro.

Divestments in consolidated companies and contingent consideration

The item mainly includes the transfer of the scope of gas distribution concessions included in the operation involving an asset exchange of equal value between the Hera Group and the Ascopiave Group, amounting to 168 million euro.

For further details regarding the operation carried out with the Ascopiave Group, reference should be made to paragraph 1.03.01 "Hera-Ascopiave partnership" in the Directors' report.

34 Investment activities

Changes in liabilities generated by financing activities

The following is a breakdown of information on changes in financial liabilities during the 2019 financial year, differentiating between cash flows and non-cash flows.

Type	31 Dec 19	31 Dec 18	Changes	Non-cash flows				Cash flows
				Acquisitions Divestitures	Income Evaluation expenses	Changes in fair value	Other changes	
Banks, loans and non-current options	3,456.3	2,672.4	783.9	611.3	(13.3)	5.2	(33.6)	214.3
Banks, loans and current options	305.5	609.9	(304.4)	25.5			47.1	(377.0)

Lease liabilities	95.5	13.9	81.6	4.0		96.6	(19.0)
Liabilities generated by financing activities	3,857.3	3,296.2	561.1	640.8	(13.3)	5.2	110.1

The "Acquisitions divestitures" related to the item "Banks, loans and non-current options" include:

- the fair value of the put option granted to the Ascopiave Group for the non-controlling shares in Estenergy Spa, equal to 553.3 million euro;
- liability due to the repurchase the parent company Hera Comm Srl shares for 54 million euro.

The outcomes listed above are part of the overall framework of the partnership operation with the Ascopiave Group.

"Income Charges from evaluation", includes income related to the partial renegotiation, carried out during the financial period, of two bonds maturing in 2021 and 2024.

"Other changes" relating to the item "Lease liabilities" include the financial liability recorded as at 1 January 2019 in relation to the first application of the IFRS 16 standard, as described in paragraph 2.02.02 "Adoption of IFRS 16".

Finally, it should be noted that non-monetary flows due to exchange rate differences were absent in 2019.

Acquisition of Interests in consolidated companies

The amount refers to the cash outlays related to the purchase of non-controlling shares in the companies Acantho Spa and Marche Multiservizi Spa, as described in section 2.02.03 "Scope of consolidation"

35 Classification of financial assets and liabilities pursuant to IFRS 7

The table below illustrates the composition of the Group's assets, using the current and non-current distinction. Details of the fair value of derivatives are provided instead in note 21.

31 Dec 19	Fair value recognised to income statement	Depreciated cost	Fair value recognised to statement of comprehensive income	Total
Other Equity investments	-	-	7.7	7.7
Non-current financial assets	-	132.8	2.5	135.3
Non-current assets	-	132.8	10.2	143.0
Trade receivables	-	2,065.3	-	2,065.3
Current financial assets	-	70.0	0.1	70.1
Other assets	19.3	418.5	-	437.8
Current assets	19.3	2,553.8	0.1	2,573.2

31 Dec 18	Fair value recognised to income statement	Depreciated cost	Fair value recognised to statement of comprehensive income	Total
Other Equity investments	-	-	13.1	13.1
Non-current financial assets	-	115.9	2.5	118.4
Non-current financial assets	-	115.9	15.6	131.5
Trade receivables	-	1,842.2	-	1,842.2
Current financial assets	-	37.2	0.1	37.3
Other assets	20.3	295.2	-	315.5
Current assets	20.3	2,174.6	0.1	2,195.0

With respect to "Other equity investments" reference is made to note 18. Please note that "Other equity investments", after the initial assessment, are measured at fair value through other comprehensive income components, in compliance with what set forth by the IFRS 9 accounting standard.

With respect to "Non-current financial assets" reference is made to note 19.

With respect to "Current assets" reference is made to notes 19, 23, 24 and 25.

The table below illustrates the composition of the Group's liabilities, using the current and non-current distinction. Details of the fair value of derivatives are provided instead in note 21.

31 Dec 19	Fair value recognised to income statement	Fair value hedges	Depreciated cost	Total
Non-current financial liabilities	-	149.6	3,306.7	3,456.3
Non-current lease liabilities	-	-	76.1	76.1
Non-current liabilities	-	149.6	3,382.8	3,532.4
Trade payables	-	-	1,391.8	1,391.8
Current financial liabilities	-	-	305.5	305.5
Current lease liabilities	-	-	19.4	19.4
Other liabilities	7.6	-	1,127.2	1,134.8
Current liabilities	7.6	-	2,843.9	2,851.5

31 Dec 18	Fair value recognised to income statement	Fair value hedges	Depreciated cost	Total
Non-current financial liabilities	-	144.4	2,528.0	2,672.4
Non-current lease liabilities	-	-	12.2	12.2
Non-current liabilities	-	144.4	2,540.2	2,684.6
Trade payables	-	-	1,360.4	1,360.4
Current financial liabilities	-	-	609.9	609.9
Current lease liabilities	-	-	1.7	1.7
Other liabilities	6.0	-	866.9	872.9
Current liabilities	6.0	-	2,838.9	2,844.9

With respect to "Non-current liabilities" reference is made to note 15 and 27.
With respect to "Current liabilities" reference is made to notes 15, 24, 27, 30 and 31.

2.02.07

Reporting by operational sector

Reporting by operational sectors is based on the approach management uses to monitor the performance of the Group by homogeneous business areas. The net costs and assets for business support functions, in keeping with the internal control model, are entirely associated to operational businesses.

At 31 December 2019, the Hera Group was organised into the following business lines:

- **Gas:** includes the costs of distributing and selling methane gas as well as district heating and heating management;
- **Electricity:** includes the costs of producing, distributing and selling electricity;
- **Water Cycle:** includes aqueduct, purification and sewage services;
- **Environment:** includes waste collection, treatment and recycling services;
- **Other services:** includes public lighting, telecommunications and other minor services.