27 Post-employment and other benefits

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

The item "Gas discount" represents annual indemnities provided to Federgasacqua employees, hired prior to January 1980, which may be transferred to their heirs. "Premungas" is a supplementary pension fund for employee members of Federgasacqua hired prior to January 1980. This fund was closed with effect from January 1997, and changes quarterly solely to settle payments made to eligible retirees. The " item "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 December 16	Service cost	Financial expenses	Actuarial profit (losses)	Uses and other operations	Changes in the scope of consolidation	31 December 17
Employee leaving indemnity	129.5	0.8	0.9	2.3	(8.2)	1.0	126.3
Discount rate	7.3	-	0.1	0.2	(0.3)	-	7.3
Premungas	4.8	-	-	0.2	(0.6)	-	4.4
Gas discount	4.2	-	-	0.5	(0.4)	-	4.3
Total	**145.8**	**0.8**	**1.0**	**3.2**	**(9.5)**	**1.0**	**142.3**

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 charges" are calculated by applying a specific discount rate for each company, determined on the basis of the average financial life of the bond. "Actuarial gains/(losses)" reflects the re-measurement of the liabilities for employee benefits arising from changes in actuarial assumptions. These components are recognized directly in the comprehensive income statement.

The item "Uses and other movements" mainly includes the amounts paid to employees over the course of the period, equal to 9.5 million euros.

The main assumptions used in the actuarial estimate of the employee benefits for geographical area:

	Hera Group (central area)	Hera Group (north-east area)
Annual discount rate	0.60%	0.60%
Annual salary increase	2.00%	
Annual employee departure for reasons other than death	1.09%	1.14%
Annual usage rate of employee leaving indemnity	2.43%	2.26%

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

- with reference to the inflation rate, the inflationary scenario was calculated by adopting an HICP index of 1.3% for 2018, 1.4% for 2019 and 1.5% from 2020 onwards;
- for probabilities of death, those relating to ISTAT 2016 tables;
- In the actuarial valuations, account was taken of the new effective dates for pensions under Law Decree no. 38/2005. 6 December 2011, 201 entitled "Urgent measures for growth, equity, and the consolidation of public finances", as amended by Law 22 December 2011 no. 214, 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. 12 of Legislative Decree no. 78 of 31 May 2010, which became effective, with changes, by law 122 of 30 July 2010;

- For the probability of leaving employment for reasons other than death, an average leaving rate of 1.09% per annum was hypothesized, since the analysis differentiated by professional level and sex did not result in statistically significant results;
- in order to take into account the effects that the employers leaving indemnity advances have on the timing of disbursements, and therefore, on the discounting of the company's debt, a number of exit probabilities from part of the volumes accrued has been hypothesised. The frequency of advances, as well as the average percentages of the employers leaving indemnities requested as an advance have been deduced from observing the company data. The percentage of employers leaving indemnity requested as an advance was assumed for all Group companies, equal to 70% of the indemnity, or at the maximum required by current legislation;
- for actuarial valuations, the discount rate adopted was determined with reference to the market yields of bonds issued by primary companies at the valuation date. In relation to this, the valuations were made on the basis of the Euro Composite AA yield curve (source: Bloomberg) for 29 December 2017.

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 2017, 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 Euro 5.5 million. Likewise assuming a reduction of the same rate for the same amount there would be an increase in the present value of the liabilities of about Euro 6 million.

Assuming a 50 bps increase in the in the rate of inflation compared to that actually applied to value the liabilities at 31 December 2017, 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 3.5 million euros. Likewise assuming a reduction of the same rate for the same amount there would be a decrease in the present value of the liabilities of about Euro3.4 million.

Changes in the remaining actuarial assumptions would produce non-significant effects on the present value of the liabilities of the defined-benefit plans reported in the statement of financial position.