ARERA
Autorità di Regolazione
per Energia Reti e Ambiente

ANNUAL REPORT SUMMARY

2020

**ANNUAL REPORT 2020
ON THE STATE OF SERVICES
AND REGULATORY ACTIVITY**

The facilitate in-depth analysis, the tables in this summary show the numbering an references of the full volumes of the 2019 Annual Report, which can be downloaded from www.arera.it.
The data reported in the Annual Report are updated as at 31 December 2019.

Contents

Note to the 2020 edition
The elements contained in the two volumes of the ARERA Annual Report concern the 12 months of the calendar year 2019. This edition was circulated on the occasion of the Annual Report to Parliament on **17 September 2020**.
The complete volumes are available on the ARERA website https://www.arera.it/it/relaz_ann/20/20.htm

INTRODUCTION

The **Italian Regulatory Authority for Energy, Networks and Environment (ARERA)** carries out regulatory and monitoring activities in the sectors of electricity, natural gas, water services, the waste cycle and district heating. Established by Law no. 481 of 1995, and operational since 1997, the Authority is a collegial body whose five members are chosen among people with high and recognised professionalism and competence.

In order to safeguard independence, the procedure for appointing the Board requires a broad institutional consensus: the members are appointed by decree of the President of the Republic, following a resolution of the Council of Ministers, following a proposal by the Minister for Economic Development and the Minister for the Environment, Land and Sea, and with a binding opinion expressed by a qualified majority of the competent committees of the Chamber of Deputies and the Senate of the Republic.

ARERA operates in full autonomy and with independent judgement within the framework of the general policy guidelines formulated by the Government and Parliament and European Union regulations. The members remain in office for seven years and cannot be re-elected.

With the Presidential decree of 9 August 2018, (from left) Gianni Castelli, Clara Poletti, Stefano Besseghini (Chairman), Stefano Saglia and Andrea Guerrini were appointed as members.

At **international level**, ARERA is involved in the work of the Agency for the Coordination of Energy Regulators (ACER) and is a founding member of the Council of European Energy Regulators (CEER). It is the main promoter of the Association of Mediterranean Energy Regulators (MEDREG), of which it holds the permanent vice- presidency, and plays a leading role in the Energy Community Regulatory Board (ECRB). It also provides support to the International Confederation of Energy Regulators (ICER) and has promoted the launch of the European Water Regulators (WAREG), a network for cooperation between water regulators which it chairs. Having the mandate for the Conciliation Service ADR Body, ARERA is a member of the National Energy Ombudsmen Network (NEON), a non-profit European association network aimed at promoting the dissemination of ADRs and the exchange of best practices with a view to strengthening the protection of end customers.

NATIONAL AND INTERNATIONAL FRAMEWORK

In 2019, global economic growth slowed from +3.6% in 2018 to +2.9%: this is the lowest value in the last ten years, mostly attributable to the trade war between the United States and China and to the uncertainty of the geopolitical context.

International energy markets

International oil market

In 2019, oil prices varied between $60 and $70/b, but remained below the 2018 average and ended the period of price growth that had lasted for three years. The price in euro, after rising from 39.5 €/b in 2016 to 60 €/b in 2018, reached 57 €/b, with a moderate decrease due to the weakness of the euro/dollar exchange rate. Global demand for oil, on the other hand, grew, albeit at a slower pace than in the past, reaching 100 million b/d.

International gas market

Global demand for gas in 2019 was still on the rise (+3.6% compared to +4.6% in 2018), with a significant increase in consumption in the OECD area and a recovery in consumption in the European Union, which grew by about 5% compared to the decline in 2018. The supply of natural gas also rose, thanks above all to the growth in shale gas production in the USA and the consequent increase in exports from the OECD area, specifically LNG.

After three years of increases, 2019 saw a sharp fall in international gas prices due to increased supply (mainly LNG) and falling energy prices. The most marked drops were recorded on the European market (on average around 30%), while on the Asian market prices, although decreasing in 2019, remain at higher levels than in the previous two years, as well as compared to those of other regional markets.

The price at the Virtual Trading Point (VTP) remains higher than at the other hubs: the differential with respect to the Dutch TTF was 2.87 c€/m^3 and 2.38c€/m^3 with respect to the German NCG. Gas prices at the Italian border remain the highest in 2019, almost doubling the differential with respect to the European average, from 0.78 c€/m^3 to 1.59 c€/m^3.

International LNG market

In 2019, the LNG market continued to grow strongly (+13% globally). In the European Union, the drop-in prices led to a strong influx of LNG (+45%) which represented 27% of imports and 22% of total annual consumption.

International coal market

Despite the growth in demand in India and China, in 2019 several concurrent factors (lower economic growth, effective decarbonisation policies and support for renewables) led to a reduction in global demand for coal. On average, only American prices remained stable, while European prices fell by 34% and Asian prices fell by 13% for deliveries to China.

European emissions trading system

In 2019, the Market Stability Reserve, commonly known as MSR, came into operation. The mechanism aims to contain the excess supply generated on the Emission Trading Scheme (ETS) market of EUA (European Allowance) certificates. Last year the activation of the MSR led to a 35% reduction in the allowances offered at auction compared to the previous year, helping to sustain the EUA price, which stabilised at around €25 per tonne; the average annual benchmark gained 56% compared to 2018, when the price of the certificates was around €16 per tonne. Preliminary data published by the European Commission on verified emissions show that emissions from the ETS sectors decreased by 10% overall compared to 2018, with a decrease in absolute terms of 174 Mt.

Electricity and natural gas prices in the EU

2019 was Italy's first year of application of the new Eurostat methodology, which, although it did not affect the final prices but only the distribution criteria between their individual components, provided an opportunity for companies to reclassify their customers according to consumption bands.

Electricity prices for domestic customers

In 2019 there was an upward trend for prices before taxes and charges for domestic consumers throughout Europe, a trend that is also influenced in Italy by an increase in net prices (energy and transport costs).

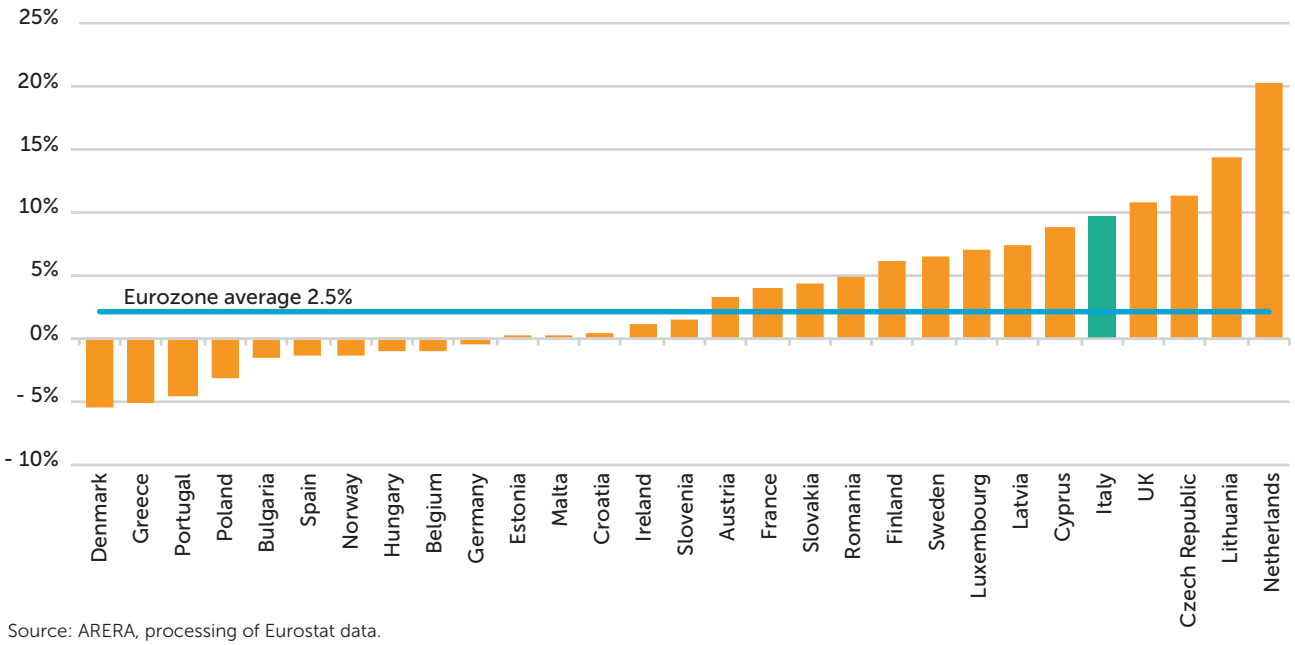
In Italy, the final prices of the two most representative consumption classes (annual consumption between 1,000 kWh and 2,500 kWh/y and between 2,500 kWh/y and 5,000 kWh/y) have reduced the negative differential with respect to the Eurozone, with the former remaining even cheaper (- 5% compared to -10% in 2018) and the latter slightly higher (+2% compared to - 5% in 2018), in both cases net prices are +8% higher than in the Eurozone. Subsequent consumption classes (5,000 kWh/y - 150,000 kWh/y and >150,000 kWh/y) confirm levels above those of the Eurozone, both before and after taxes and charges. Finally, the first class (consumption up to 1,000 kWh/a) saw a reversal of the differential from strong negative differentials to strong positive differences with respect to the Eurozone average, following the introduction of the new Eurostat methodology as well as adjustments due to the entry into force of the two-year duration of invoices.

The changes that occurred in 2019 do not substantially change, net of short-term dynamics for the first class, the process of alignment of Italian prices with European prices in recent years. It should be recalled that, while the net price structure is digressive, the tax component that burdens Italian domestic consumers still has a non-digressive structure, unlike what happens in the rest of the European Union, where this component is higher for the higher consumption classes (up to 20% more) and vice versa lower for the lower classes (up to 25% less).

With the entry into force and completion of the reform of electricity tariffs introduced by ARERA (on January 1, 2016), the progressive realignment of the network fees applied to the different classes of consumption began, which helped bring Italian net prices closer to average European prices, thanks to the gradual phasing out of the previous progressive tariff structure.

Among the European countries, Germany is confirmed as the country with the highest prices for domestic electricity customers for all classes, except the first with consumption below 1,000 kWh/a, where the prices in Spain and Italy are the most expensive. Even though the differential between Italian and German domestic prices has narrowed, domestic customers in Italy pay lower prices than in Germany as the consumer class falls from -10% in the highest band to -26% in the band between 1,000 and 2,500 kWh/a.

Change in final prices of electricity for domestic use: percentage change in 2019 of pre-tax prices for annual consumption between 2,500 and 5,000 kWh **(see Fig. 1.13 Vol. 1)**



Source: ARERA, processing of Eurostat data.

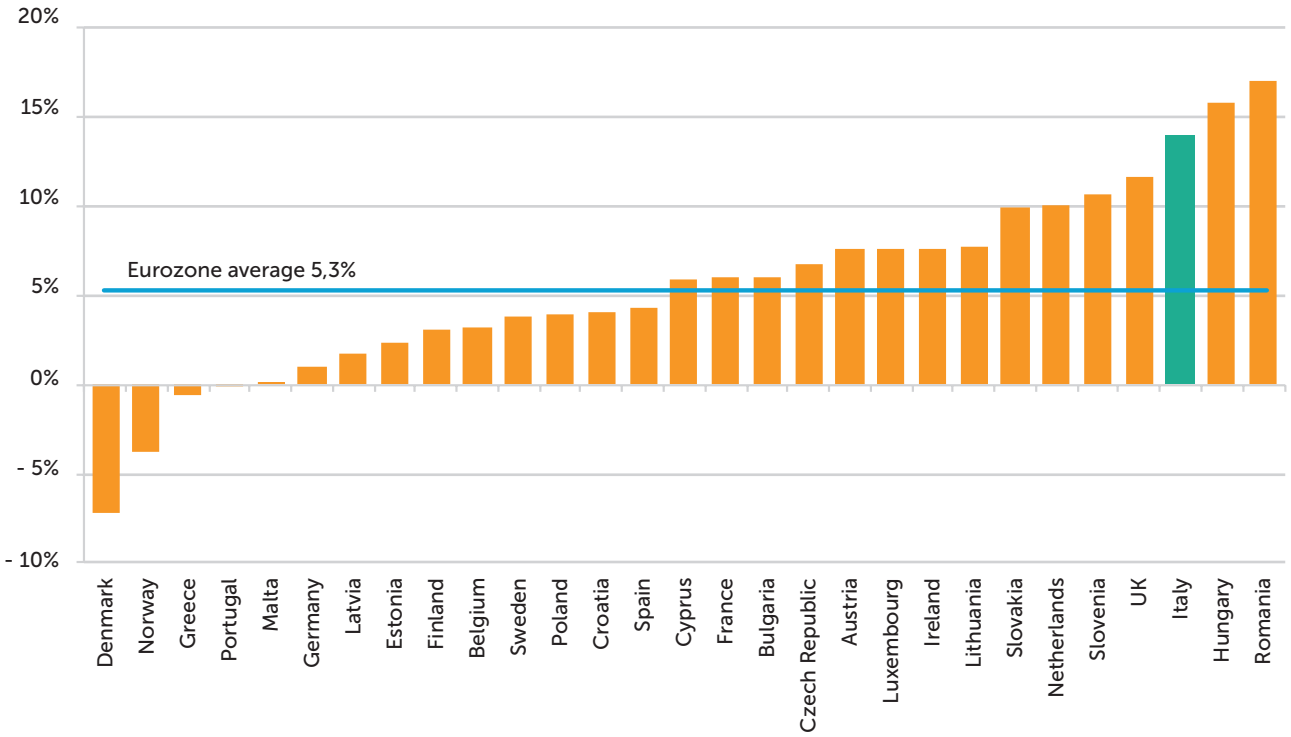
Electricity prices for industrial customers

While over the past two years the gap between the prices paid by industrial customers in our country and the average values paid in the Eurozone has gradually narrowed, in 2019 the positive differentials started to grow significantly again.

For the first consumption class (consumption of less than 20 MWh) it went from +8% in 2018 to +45% in 2019, while for the others (consumption between 20-500, 500-2,000, 2,000-20,000 MWh/y) it went from about +10% in 2018 to values close to 20%. For classes with consumption between 20,000 and 70,000 MWh/y and from 70,000 to 150,000 MWh/y, the figures rise from 6% to 18% and from -12% to -9%. Price differentials seem to have returned to levels close to those recorded in 2016, although they are still well below those of previous years, when they were all close to 30%.

Italian prices, however, remain lower, as usual, than those of German industrial consumers with the exception of the first consumer class, but also those of the UK at least for the last three consumer classes, while Spain maintains lower prices in all consumer classes and increases the gap compared to the lowest prices in France (up to +60% for the higher consumer classes).

Change in final prices of electricity for industrial use: percentage change in 2019 of pre-tax prices for annual consumption between 500 and 2,000 MWh **(see Fig. 1.15 Vol. 1)**



Source: ARERA, processing of Eurostat data.

Natural gas prices for domestic customers

Natural gas prices for Italian domestic consumers before taxes and charges are still higher than the average Eurozone price in 2019 and, for the first time since 2016, the final price is also higher for the first class of consumption (<525.36 m^3, mostly for cooking and hot water): the price differential for this class, almost zero in 2018, is now +7%.

For the 525-5,254 m^3 consumption class, which represents about 72% of all domestic consumption, the differential with the average gross price in the Eurozone returned to 2017 levels (+15% compared to +17% last year); also for the consumption class over 5,254 m^3, the differential returned to the values of two years ago (+18% compared to +22% in 2018). The same relative improvement dynamics were seen for net prices, which returned to lower values compared to the +10% recorded last year, bringing the two consumption classes to +9% and +4% respectively.

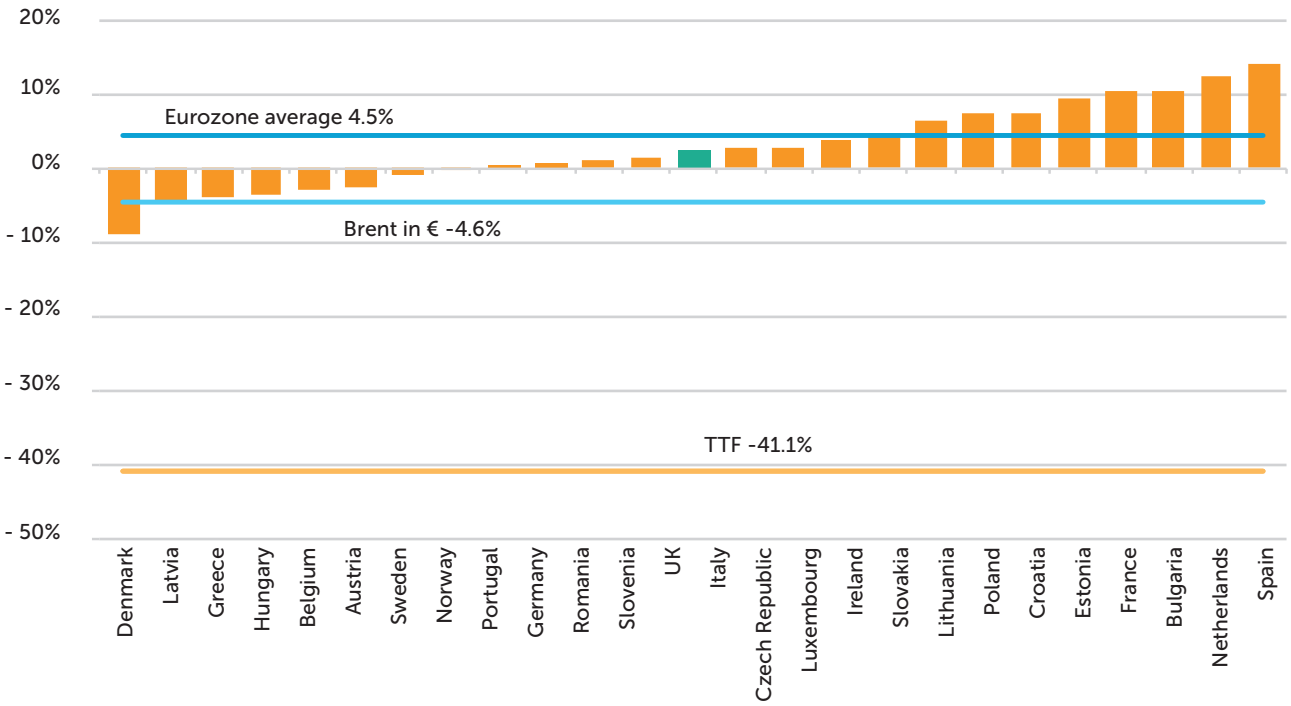
The trend in gross prices in Italy is the result of a combination of differentiated trends regarding net prices and taxes and charges: the former, in fact, saw significant growth for the first class (up 16.6% compared to +0.8% in the euro area), a more modest increase for the second (up 0.6% compared to +2.8%) and a decline for the third

more marked than that of the euro area (down 6.3% compared to -0.3%). On the other hand, as the consumption class grows, charges and taxes fell sharply for the first class (-26.6% compared to -6% in the Euro Area) while the other two classes grew (on average +6%) in line with the growth of the Euro Area (on average +7%).

Considering these differentials and the level of average annual spending on gas (much higher than electricity), despite the fall in prices recorded for the higher consumption classes, the impact of the gas bill on

Italian households' spending continues to be greater than that sustained by other European consumers, at least in the colder areas of the country.

Change in final prices of natural gas for domestic use: percentage change in 2019 of pre-tax prices for customers with annual consumption between 525.36 and 5,253.60 m³ **(see Fig. 1.16 Vol. 1)**



Source: ARERA, processing of Eurostat data.

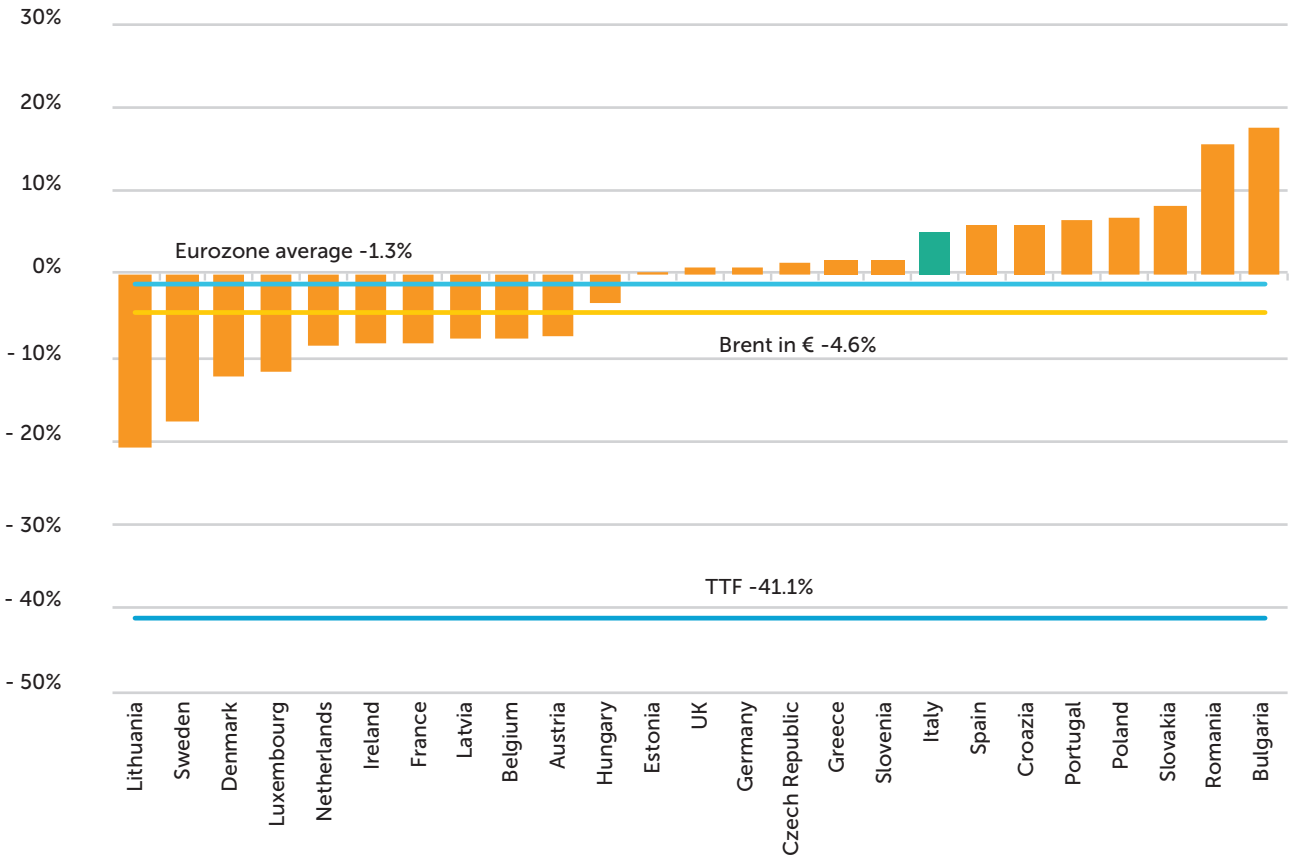
Natural gas prices for industrial customers

In 2019, the trend, outlined in recent years, whereby industrial companies belonging to the three classes with the highest gas consumption benefited from lower gross prices than the average prices in the Eurozone, with falling differentials, while prices for the first classes were higher, with substantially stable differentials, ended. In fact, for the highest consumption class (26-105 million cubic metres per year) the differential has entered positive territory, albeit with a modest + 1% (it was -5% in 2018). For the two lowest consumption classes (up to 263,000 m³/y) the differential shows an increase, rising to +18% (it was +15%) and +6% (it was +4%).

As far as net prices are concerned, differentials are all positive, ranging from +3% in the third class to +14% in the first and last class. They are also slightly up on the previous year for almost all classes.

The differences with other countries remain particularly marked or widen in terms of taxation: in terms of tax incidence there is a 35% rate for the first class compared to 14.5% for the last, with corresponding values for the Euro Area of 32% and 24% respectively. The structure and level of taxation therefore continue to affect the results of the comparison with other countries.

Change in final prices of natural gas for industrial use: percentage change in 2019 of pre-tax prices for customers with annual consumption between 2.63 and 26.27 M(m³) **(see Fig. 1.19 Vol. 1)**



Source: ARERA, processing of Eurostat data.

Energy supply and demand in Italy

In 2019, domestic energy consumption stopped at 169.0 million tonnes of oil equivalent (toe), down by 1.3% compared to the previous year. Moreover, there are clearer signs of a reduction in energy intensity thanks to an improvement in domestic consumption (where the effects of energy efficiency policies seem to be visible) and above all thanks to changes in the production mix in industry (-1%).

Bilancio energetico nazionale nel 2018 e nel 2019 (in Mtep) **(see Table. 1.17 Vol. 1)**

N.	SECTORS	SOLIDS	GAS	OIL	RENEWABLE	ELETTRICITY (A)	TOTALE
YEAR 2019							
1	Production	0.23	3.97	4.28	34.11	-	42.59
2	Imports	6.84	58.08	80.62	1.55	9.68	156.76
3	Exports	0.23	0.27	27.9	0.27	1.28	29.95
4	Change in stocks	0.23	0.92	-0.82	0.12	0	0.45
5	Availability for domestic consumption (1 + 2 - 3 - 4)	6.61	60.87	57.81	35.27	8.4	168.95
6	Consumption and losses in the energy sector	-0.1	-1.97	-3.7	0	-37.52	-43.29
7	Transformation into electricity	-4.26	-21.85	-1.63	-26.42	54.15	-
8	Total final uses (5 + 6 + 7)	2.26	37.05	52.48	8.85	25.03	125.66
	- industry	2.2	12.43	2.92	0.11	9.23	26.88
	- transport	-	0.83	37.16	1.28	1.02	40.29
	- civil uses	-	23.01	2.7	7.42	14.28	47.41
	- agriculture	-	0.14	2.21	0.04	0.49	2.89
	- non-energy uses	0.06	0.64	4.39	-	-	5.09
	- bunkering	-	-	3.11	-	-	3.11

(A) Primary electricity (hydroelectric, geothermal, wind), imports/exports from abroad and losses valued at thermoelectric *input*.

Source: ARERA, processing of data from the Ministry of Economic Development and Terna.

The analysis of consumption by source confirms the decline in coal consumption, which fell to the new historical low of 6.6 million toe, 29.8% lower than in 2018 and half the figure of 10 years earlier. Natural gas remains, albeit only slightly, ahead of oil, the main source in the national energy balance which ensures 34.2% of gross domestic consumption, against 36% for gas. After the heavy decline in 2017 and 2018, natural gas consumption grew again (+ 2.3%) up to 60.9 million toe while oil consumption showed a slight decline (-2%) and fell to 57.8 million toe. Production from renewable sources, on the other hand, recorded a jump of 5%, rising to 35.3 million toe, a new record level that confirms the growth that has been ongoing for two decades.

Despite the strong growth in renewables and the slight reduction in oil production, the increase in gas production has stabilised the dependence on imports from abroad at around 75%, more than 10 points lower than 20 years ago, but still one of the highest among industrialised countries.

Water systems in Europe

European countries or regions with an economic regulator **(see Table 1.18 Vol. 1)**

COUNTRY	AUTHORITY	TYPE	PURPOSE AND COMPETENCES						
			CALCULATES TARIFFS	APPROVES TARIFFS	APPROVES LICENSES	APPROVES BUSINESS PLANS	MONITORS PERFORMANCE INDICATORS	COLLECTS ECONOMIC DATA	COLLECTS TECHNICAL DATA
Albania	ERRA - *Regulatory Authority of the Water Supply and Waste Water Disposal and Treatment Sector*	National independent regulator, single sector (water)	✔	✔	✔	✖	✔	✔	✔
Armenia	PSRC - *Public Services Regulatory Commission*	National independent regulator, multi- sector	✔	✔	✔	✖	✔	✔	✔
Azores (Portugal)	ERSARA - *Water & Waste Services Regulation Commission of Azores*	Independent regional regulator, multi- sector	✖	✔	✖	✔	✔	✔	✔
Belgium (Region of Flanders)	VMM - *Flanders Environment Agency*	Agenzia governativa regionale, monosettore (idrico)	✔	✔	✖	✖	✔	✔	✔
Belgio (Regione Bruxelles)	BRUGEL - *Brussels Commission for Electricity and Gas Regulation*	Regional government agency, single sector (water)	✖	✔	✖	✖	✖	✔	✔
Bulgaria	EWRC - *Energy and Water Regulatory Commission*	National independent regulator, multi- sector	✔	✔	✖	✔	✔	✔	✔
Croatia	VVU - *Council for Water Services*	National government agency, single sector (water)	✔	✖	✖	✖	✖	✔	✖
Denmark	KFST - *Competition & Consumer Authority*	National government agency, multisector	✖	✖	✖	✖	✖	✔	✔
Wales and England	OFWAT - *Water Services Regulation Authority*	Independent regional regulator, single sector (water)	✔	✔	✔	✔	✔	✔	✔
Estonia	ECA - *Estonian Competition Authority*	National government agency, multi-sector	✖	✔	✖	✖	✔	✖	✖
France	*Ministère de la Transition Écologique et Solidaire*	Ministry	Local Regula-tione	Local Regula-tion	Local Regula-tion	Local Regula-tion	Local Regula-ion	Local Regulation	Local Regula-tion
Georgia	GNERC - *Georgian National Energy & Water Supply Regulatory Commission*	National independent regulator, multisector	✔	✔	✔	✔	✔	✔	✔
Greece	*General Secretariat of Natural Environment and Water/ Directorate for Planning and Management of water services*	Ministry	✖	✔	Local Regula-tion	Local Regula-tion	Local Regulation	Local Regulation	Local Regula-tion
Hungary	HEA - *Hungarian Energy and Public Utility Regulatory Authority*	National independent regulator, multisector	✔	✔	✔	✖	✔	✔	✔

continue

COUNTRY	AUTHORITY	TYPE	PURPOSE AND COMPETENCES						
			CALCULATES TARIFFS	APPROVES TARIFFS	APPROVES LICENSES	APPROVES BUSINESS PLANS	MONITORS PERFORMANCE INDICATORS	COLLECTS ECONOMIC DATA	COLLECTS TECHNICAL DATA
Ireland	CRU - *Commission for Regulation of Utilities*	National independent regulator, multisector	✔	✔	✔	✔	✔	✔	✔
Italy	ARERA - *Italian Regulatory Authority for Energy, Networks and Environment*	National independent regulator, multisector	✔	✔	✖	✔	✔	✔	✔
Kosovo	ARRU - *Water Services Regulatory Authority*	National independent regulator, multisector	✔	✔	✔	✔	✔	✔	✔
Latvia	PUC - *Public Utilities Commission*	National independent regulator, multisector	✖	✔	✖	✖	✔	✔	✔
Lithuania	VERT - *National Energy Regulatory Council*	National independent regulator, multisector	✔	✔	✔	✔	✔	✔	✔
Malta	REWS - *Regulator for Energy & Water Services*	National independent regulator, multisector	✖	✔	✔	✖	✔	✔	✔
Moldova	ANRE - *National Agency for Energy Regulation of the Republic of Moldova*	National independent regulator, multisector	✔	✔	✔	✔	✖	✔	✔
Montenegro	REGAGEN - *Energy Regulatory Agency*	National independent regulator, multisector	✔	✖	✔	✖	✔	✔	✔
Northern Ireland	NIUR - *Northern Ireland Utility Regulator*	Independent regional regulator, multisector	✔	✔	✖	✔	✔	✔	✔
Portugal	ERSAR - *Water & Waste Services Regulation Commission*	National independent regulator, multisector	✔	✔	✖	✖	✔	✔	✔
Republic of North Macedonia	ERC - *Energy Regulatory Commission*	National independent regulator, multisector	✔	✖	✖	✖	✔	✔	✔
Romania	ANRSC - *National Romanian Regulator for Public Services*	National independent regulator, multisector	✔	✔	✔	✖	✖	✔	✔
Scotland	WICS - *Water Industry Commission for Scotland*	Independent regional regulator, single sector (water)	✔	✔	✔	✔	✔	✔	✔
Spain	MITES - *Ministerio para la Transicion Ecologica*	Ministry	Local Regulation	Local Regula-tion	Local Regula-tion	Local Regula-tion	Local Regulation	Local Regulation	Local Regula-tion

Source: WAREG.

In Europe, the supply of water services takes place in diverse contexts in regard to institutional structures, service management methods and the geographical characteristics of the territory served. About half of the countries have an independent national or regional economic regulator of water services, although they have different competencies and levels of autonomy.

Concerning the comparison between Italy and the main European countries, some indicators presented last year have been updated.

Per capita withdrawals of fresh water for the public services supply

At European level, the average value in 2017 was 83 m^3/inhabitant, with values ranging from 30 in Malta to 179 in Greece. Italy ranks immediately after Norway with 156.5 m^3/inhabitant.

Consumption by sector

In 2017 agriculture was the sector to which the largest share of resources withdrawn in Europe was destined (58.3%, up from 40% in 2015), followed by electricity production (18.2%, 28% in 2015), industrial use and domestic and service use (9.6%, down from 12%), with an average water supply to European households of about 152 litres of water per person per day (144 in 2015).

Service cost per inhabitant

The annual per capita costs of the integrated service are still very varied across countries. The average rates for Italy and Spain in 2014, the last year available for the Spanish figure, of just over 1.5 €/m^3 and almost 2 €/m^3 respectively, are significantly lower than those of Germany and France, which are over 4 €/m^3.

Production and management of municipal and similar waste in Europe

In Europe, municipal waste represents a largely minority percentage, close to 10%, of the total waste produced and treated. The 28 countries of the European Union produced a total of 250.5 million tons of municipal waste in 2018, with a slight increase compared to the previous year (+ 0.4%), which confirms the trend towards a moderate increase over the medium term (+ 3.2% compared to 2014). The trend is reproduced in the per capita figure, equal to 492 kg in 2018 and an increase of 0.4% on the previous year and 3.1% compared to 2014.
A comparison between Italy and the main European countries is presented below, with the caveat that there are difficulties in finding the data and there may be inconsistent definitions between countries.

Per capita waste production

In 2018, the per capita production of municipal waste in the European Union, equal to 488kg (it was 483 in 2016) is in line with the data recorded in Italy (499kg, it was 497 in 2016) and by the major comparable countries, with the notable exception of Germany (615kg).

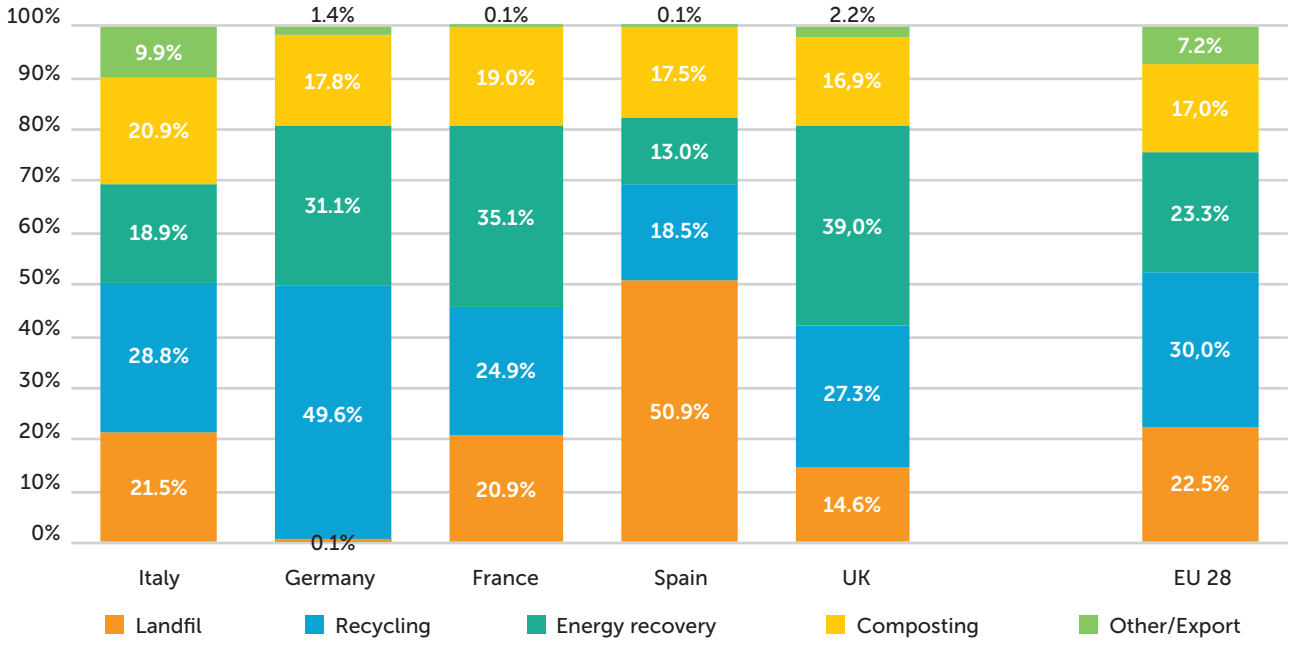
Percentage of landfill waste and share of recycled waste

In 2018, Italy, with a landfill rate of 21.5%, remained in line with the EU average and with France, even if it continues to present much lower levels than the best performing countries (Germany 0.1 %, UK 14.6%). Spain is instead at 50.9%. The mandatory European target for 2035 is 10%.

Cost per inhabitant of the municipal waste management service

Even with the necessary precautions for this comparison, given that in some countries part of the costs are covered by the tax system, in 2018 the cost in our country (149 €/inhabitant, up from 167 in 2016) continues to be higher than that of the others, with Spain at 130 and the United Kingdom at 122, in the former case therefore with costs up compared to 105 in 2014, in the latter in sharp decline (200 €/ inhabitant in 2014).

Municipal waste treatment by technology (year 2018, as a percentage of total municipal and similar waste) **(see Fig. 1.26 Vol. 1)**



Source: ARERA, processing of Eurostat data.

FOCUS ON REGULATORY ACTIVITY IN 2019

International coordination[1]

During 2019, the Authority continued to cooperate with other European regulators, both multilaterally, through the Agency for the Cooperation of Energy Regulators (ACER), the European Energy Regulators Council (CEER) and the regional platforms provided for by the new European regulations for the electricity market, and through bilateral meetings to further discuss issues of common interest, in particular with regulators from neighbouring countries.

ACER - Agency for the Cooperation of Energy Regulators

During 2019, the Authority actively continued its activities within ACER, often taking leading roles in the Working Groups entrusted with preparing the various dossiers falling under the responsibility of the Agency: in particular, about the electricity sector, representatives of the Authority were particularly active both as managers of specific task forces (markets, system operation, balancing and infrastructure) and as contacts for preparing specific methodologies and dossiers.

1 For a complete picture of Relations with Parliament, the Government and other national institutions, see Chapter 2 of the Volume "Regulatory Activity".

Since December 2018, the Board of Regulators, composed of representatives of the regulatory authorities from the 27 European countries, has been led by Clara Poletti, member of the ARERA Board. In this context, it is worth mentioning the close cooperation between the Authority's Board and the French (Commission de régulation de l'énergie - CRE) and German (Bundesnetzagentur - BNetzA) regulators. This collaboration is based on periodic trilateral meetings during which common issues relating to European energy markets are discussed (the new Clean Energy Package for all Europeans, the impact of natural gas transmission tariffs on the functioning of the market and infrastructure development, etc.). Two meetings took place in 2019: 25 March in Bonn and 28 October in Rome.

CEER - Council of European Energy Regulators

ARERA was actively involved in the various activities promoted by the association during 2019, both in the natural gas sector (also regarding the prospects for sector coupling) and in terms of distributors and consumers. The guiding thread that inspired the association was the 3D strategy (digitisation, decarbonisation and dynamic regulation), launched in 2018 and reiterated in 2019 with a call for a specific focus on the role of consumers in the implementation of the CEP Package and future legislative and regulatory interventions on the phase-out of coal.

"The Bridge Beyond 2025" in the gas sector

On 20 November 2019 ACER and CEER presented a joint document entitled "The Bridge Beyond 2025" and a Recommendation to the European Commission containing a series of proposals to update the European gas legislation to facilitate the decarbonisation of the energy sector, to promote an internal energy market and to maximise the opportunities arising from the sector coupling of the electricity and gas sectors.

WAREG - European Water Regulators

During 2019, WAREG strengthened its exchange of best practices for the regulation of water services among its 31 members. The Association has its organisational structure, operating through voluntary participation, under the aegis of the Presidency of the Authority, which hosts its Secretariat.

In the 20th meeting of the WAREG General Assembly, organised by ARERA and hosted by the Ministry of Foreign Affairs and International Cooperation (MAECI) in Rome on 2 December 2019, the amount of the membership fees to cover the association's forecasted budget for the year 2020 was discussed and approved. The Report on the first six years of activity was also approved. On 3 December 2019, the Authority, in coordination with the Secretariat and WAREG members, organised the first "European Forum on Water Regulation" open to the public, to enhance the technical and institutional dialogue between European stakeholders and giving wide international visibility to the role of economic regulation in the water sector. The Forum was attended by over 50 speakers from the main players in the sector at European level (regulators, European and financial institutions, international organisations, academics) and an audience of over 200 people.

On 21 May 2019, alongside the WAREG General Assembly in Vilnius, a first meeting was held between the independent regulators of public utilities in Italy, Portugal and the Azores, Latvia, Lithuania, Romania and Hungary. This was coordinated by the Offices of the Italian Authority, and during the meeting the need to exchange information and share some common objectives in the waste sector was ascertained.

The regulators involved therefore agreed to consider whether it would be appropriate to support a structured networking initiative, and, to this end, they organised a kick-off meeting, hosted by the Authority on 25 and 26 June 2019, in Milan, which was attended by a representative of the Environment Directorate General (ENVI) on behalf of the European Commission.
The network - made up of ARERA (Italy), ANRSC (Romania), ERSAR and ERSARA (Portugal and Azores), MEKH (Hungary), PUC (Latvia), and VERT (Lithuania) - selected the following as key objectives:

- the exchange of information and practices, as well as the analysis of the regulatory frameworks prevailing in the European Union;
- the launch of a debate on the contribution of regulation to the balanced and effective implementation of European legislation (today understandably focused on environmental objectives) on municipal waste.

In the subsequent meeting of 5 September 2019 in Budapest, the members of the network approved a founding document, "*Establishing a network of European municipal waste regulators*".

NEON – National Energy Ombudsmen Network

ARERA has been a full member of NEON since 2016 and has held the vice-presidency since 2019. NEON's work continued in 2019, both from the point of view of representing its members at European level on issues of interest and monitoring the related Community initiatives, especially legislative ones, and about the promotion and dissemination of best practices, also through collaboration with European institutions and sector regulators, as well as the organisation of workshops and participation in technical meetings.

Know Exchange Program (KEP) project "Central European Initiative (CEI): "Support for strengthening energy regulatory authorities in the Western Balkans"

During 2019, the Authority, together with the CEI Technical Secretariat, was responsible for coordinating the project activities and, in collaboration with the Electricity Market Operator (GME) and Terna, implemented capacity building activities divided into four other technical workshops that were held in rotation in the countries involved (on March 29 in Trieste, June 10 in Belgrade, October 3 in Podgorica, November 27 in Rome). All project activities aimed at developing the appropriate technical capabilities related to the integration process and the functioning of the electricity markets, also with a view to better evaluating the proposals of the transmission system operators and exchanges involved in the coupling project.

Concerning the market coupling project between Albania, Italy, Montenegro and Serbia (AIMS project), in 2019 the Authority, in coordination with the regulators of the other three countries involved, monitored the work of the Group made up of the respective network operators and market operators. The Working Group has undertaken to conduct a feasibility analysis of the project in order to identify the risks and obstacles to be removed before moving on to the next stages. The results of the analysis will be officially communicated to the regulators during 2020.

MEDREG - Mediterranean Energy Regulators

In 2019, ARERA continued to play an active role within MEDREG, of which it is the founder, holds the position of permanent vice-president and hosts the General Secretariat.

On 10 December 2019 the first MEDREG Presidents' Meeting was held in Rome, the meeting of the Presidents of the Mediterranean Energy Regulators who met to share best practices on renewable energy development and to analyse the growing role of gas in the area, to improve regulation and foster

international cooperation. It was discussed how energy regulation should take into account the growing importance of renewable energy sources and the development of the gas market (production and trading) in the respective countries. Regarding the three platforms for the Union for the Mediterranean promoted by the European Commission during 2019, whose objectives and aims are being reviewed, MEDREG participated in the customary annual Conference, held on 29 and 30 January 2019 in Barcelona.

FOCUS ON REGULATORY ACTIVITY IN 2019

Strategic Framework 2019 - 2021

The Regulation for the organisation and functioning of Authority[2] provides that the latter establishes the priorities and strategic objectives of its regulatory activity and updates them periodically. The procedure for the adoption of the current Strategic Framework was divided into the following phases:

- April 2019: approval and publication of the Authority's guidelines on the strategic lines and related activities (consultation document);
- May 2019: periodic hearing with stakeholders on the guidelines laid out in the consultation document;
- June 2019: evaluation of the responses and comments received and finalisation of the Strategic Framework.

The consultation process described above concluded with the adoption of the final text of the Strategic Framework 2019-2021 with the resolution of 18 June 2019, 242/2019/A.

The strategic vision identified was inspired by the need to guarantee all citizens energy and environmental services that are accessible, affordable, efficient and provided with increasing and converging levels of quality in the different areas of the country. At the same time, the services themselves should be environmentally sustainable, integrated at the European level and aligned with the principles of the circular economy, and should contribute to the competitiveness of the national system.

The main change consists, in addition to the treatment of the individual regulated sectors, in the identification of three themes that cut across all sectors: Informed consumer, Regulatory approach to system innovation, Consumer awareness and transparency for a better evaluation of the service. The structure and content of the strategic framework are articulated on two levels: the strategic objectives and lines of action.

- The **strategic objectives frame the overall strategy of intervention in the current and medium-term scenario - both for the cross-cutting areas of all regulated sectors and for the specific ones relating to the Environment and Energy Area respectively**;
- The **lines of action** succinctly describe the main measures and actions that the Authority intends to carry out to achieve each strategic objective.

2 Resolution 57/2018/A of 2 February 2018.

ELECTRICITY

Consumption, production, infrastructure and markets

In 2019, **electricity consumption** recorded a slight turnaround (-1%, compared to + 0.5% in 2018), in particular, the agricultural and industrial sectors (-2% each) declined, which was partially offset by the increase in domestic consumption (+ 1%).

88% of national demand was met by national production, which rose from 289.7 TWh in 2018 to 291.7 TWh in 2019 (+1%). Taken together, renewable sources grew by 0.4%, despite the contraction of hydroelectric (-6.2%), and geothermal (-1.2%). **Production** from natural gas - which **alone provided 49.1% of the total** - increased by 11.4%, production **from oil products grew by 2.4%, while production from coal almost halved (- 46.9%)**.

Balance sheet of electricity sector operators in 2019 (in TWh; values referring to industrial groups)
(see Table 2.2 Vol. 1)

	ENEL	10-15 TWh	5-10 TWh	1-5 TWh	0.5-1 TWh	0.1-0.5 TWh	0-0.1 TWh	WITHOUT SALES	TOTAL
Number of groups	1	5	6	15	15	46	414	12,986	13,483
Gross national production	49.5	74.4	15.4	22.8	7.5	0.6	5.6	100.7	276.5
NET NATIONAL PRODUCTION	46.9	72.3	15.0	22.4	7.4	0.6	5.4	97.0	266.9
Energy intended for pumping	2.3	0.0	0.1	0.0	0.0	-	0.0	-	2.4
Imports (A)	-	-	-	-	-	-	-	-	44.0
Exports (A)	-	-	-	-	-	-	-	-	5.8
Network losses (A)	-	-	-	-	-	-	-	-	17.2
Self-consumption (B)	0.0	3.3	0.4	0.6	0.0	0.3	1.8	14.7	21.1
FINAL SALES	92.3	59.2	38.1	38.8	10.1	11.7	6.0	-	256.1
Free market	56.5	54.8	35.2	38.4	10.1	11.5	5.3	-	211.8
Domestic	14.5	7.2	2.7	2.0	0.9	1.6	1.1	-	30.1
Non-domestic	42.0	47.6	32.5	36.3	9.2	9.9	4.2	-	181.7
- Low voltage	16.6	11.0	8.2	12.7	3.4	4.2	2.9	-	59.2
- Medium voltage	20.5	27.2	17.1	20.6	4.6	5.0	1.2	-	96.2
- High and very high voltage	4.9	9.3	7.1	3.0	1.1	0.7	0.1	-	26.3
Standard offer	35.0	1.6	2.8	0.4	0.0	0.2	0.7	-	40.6
Domestic	24.5	1.0	1.7	0.3	0.0	0.1	0.3	-	28.0
Non-domestic	10.5	0.6	1.1	0.1	0.0	0.1	0.3	-	12.7
Safeguarded	0.8	2.8	-	-	-	-	-	-	3.6
- Low voltage	0.5	0.9	-	-	-	-	-	-	1.4
- Medium voltage	0.4	1.8	-	-	-	-	-	-	2.1
- High and very high voltage	0.0	0.2	-	-	-	-	-	-	0.2

(A) Imports, exports and network losses come from Terna.
(B) Includes sales made within ASSPC (Other simple production and consumption systems).

Source: ARERA, Annual Survey on Regulated Sectors.

The amount of electricity incentivised in 2019 was just over 63 TWh (-0.6% compared to 2018), for a cost to the system estimated at just over **11 billion euros out of total general charges of about 15 billion euros**.

The amount of electricity purchased in the Italian System was 295.8 TWh, stable compared to 2018 (+0.1%) and still at the highest level in the last 6 years.

The **volumes traded directly on the stock exchange** (213 TWh) remained unchanged compared to the previous year, equal to 72% of total trades on the MGP (Day Ahead Market). The purchase price of electricity (PUN - Single National Price) fell to € 52.32/MWh (-14.7% compared to 2018), following the drop in the cost of gas raw materials (-34%) partially offset by CO2 emissions allowances (+ 56%). At a zonal level, price growth registered decreases compared to 2018 of between 10 and 16% and values between €50/MWh in the South (which was confirmed as the area with the lowest price for the eleventh year) and €63/MWh in Sicily (which had the highest zonal price for the thirteenth consecutive year). The differential between Sicily and the northern area also increased (11.5 €/MWh against 7-8 in the previous two-year period). The differential between Sardinia and the Northern area remains below one euro.

FOCUS ON REGULATORY ACTIVITY IN 2019

Energy Efficiency Certificates (TEE) Mechanism

The Energy Efficiency Certificates (TEE) mechanism, also known as "white certificates" has been repeatedly subject to regulatory reviews which have also led to a change in governance, which for the first few years was the responsibility of the Authority, then, starting from 2013, it was instead assigned to the GSE.

In 2019, the amount of TEEs actually traded in 2019 (on the market or through bilateral agreements) was approximately 5.7 million TEEs, a further decrease compared to the previous year, when approximately 7.9 million TEEs had been traded.

The Lombardy Regional Administrative Court ruling no. 2538/2019 held that the complaint against the provision of the interministerial decree of 10 May 2018 was well-founded, in that it set a maximum value of the tariff contribution to be paid to distributors fulfilling their energy-saving obligations of €250/TEE. This is because the matter should have fallen within the competence of the Authority, which is responsible for defining the criteria for determining this contribution (leading to the cancellation of Resolutions 487/2018/R/efr and 209/2019/R/efr).

In execution of the ruling, with the resolution of 10 December 2019, the Authority initiated a procedure for redefining the criteria for determining the tariff contribution recognised, to restore a certain regulatory framework, necessary for the proper functioning of the TEE market, for the compulsory years starting from 2018. The resolution immediately confirmed the provisions relating to the procedures for verification and payment of the contribution on account for distributors who had taken advantage of the possibility of complying at least partially with their energy-saving target in November 2019.

There were no significant changes regarding **electricity transmission** concerning the composition of the plants, except for slight expansions of the lines with the entry into operation of the Italy-Montenegro connection and the completion of the first part of the project. The connection between France and Piedmont and the one between the province of Bolzano and Austria are under construction.

On the **distribution side**, at 31 December 2019, 127 operators were registered in the Authority's Registry, three fewer than in 2018, which supplied a total of 268.7 TWh (0.7 TWh more than the previous year). Withdrawals returned to the 2017 level, substantially stable over the last four years. In terms of volumes distributed, e-distribution has a share of 86.2% in the domestic sector and 85% in the non-domestic sector.

In 2019, 36.7 million users were served (-0.2% compared to 2018): 29.5 million households and 7.2 million non-domestic points (-1.1%); in terms of energy withdrawn, the volumes were respectively equal to 58.5 TWh and 210.2 TWh. 80.1% of domestic customers are resident with an average consumption of 2,184 kWh. An analysis of the distribution data shows that the electricity consumption of Italian households is rather low: 54.5% of domestic customers are in the annual consumption class of less than 1,800 kWh and withdraw a quarter of all electricity distributed to domestic customers, while the remaining 46.5% (>1,800 kWh) withdraw 73.8% of the total. Most households (almost 90%) have a contract with a committed power between 1.5 and 3 kW.

Analysing the data of the f**inal sales market**, the free market has reached 52.1% of end customers (it was 46.2% in 2018), thus leaving still about half (47.7%) of the market in the standard offer service.

2019 saw **a marked growth in suppliers, reaching 723 operators** (+88 in the free market), confirming the trend of constant growth that began in 2007. The dominant operator remains the Enel group at 36% (it was 37.6% in 2018) but still far ahead of Edison (5.4%) and Hera (4.9%). Overall, the top five operators hold 82.5% of the domestic sector (84.7% in 2018), although overall, compared to 2018, there is a slight decrease in the level of market concentration, with the share of the top three operators increasing from 46.8% to 46.3% of total sales.

Top twenty groups for sales of electricity to the final market in 2019 (in GWh) **(see Table 2.28 Vol. 1)**

GROUP	DOMESTIC CUSTOMERS	NON DOMESTIC CUSTOMERS			TOTAL	POSITION IN 2018
		LV	MV	HV/VHV		
Enel	38,955	27,602	20,844	4,898	92,299	1st
Edison	1,155	2,344	6,635	3,626	13,760	2nd
Hera	1,760	3,772	6,711	302	12,544	3rd
A2A	1,548	3,293	5,751	792	11,384	6th
Axpo Group	75	1,899	5,196	3,893	11,063	5th
Eni	3,719	1,190	4,682	874	10,465	4th
Green Network	290	1,347	3,041	2,729	7,407	7th
E.ON	462	2,321	3,959	356	7,099	11th
Iren	1,373	1,938	2,778	301	6,389	8th
Acea	1,918	1,773	2,127	275	6,093	10th

segue

GROUP	DOMESTIC CUSTOMERS	NON-DOMESTIC CUSTOMERS			TOTAL	POSITION IN 2018
		LV	MV	HV/VHV		
Duferco	77	799	1,831	3,263	5,970	9th
Alperia	331	1,150	3,394	220	5,094	15th
Egea	78	1,176	3,118	183	4,555	16th
CVA	121	1,290	2,622	99	4,131	12th
RepowerAG	0	2,022	1,997	67	4,086	14th
Engie	437	160	1,387	2,033	4,017	22nd
Dolomiti Energia	641	1,483	1,597	36	3,757	17th
Sorgenia	288	1,356	1,383	32	3,058	19th
Agsm Verona	297	1,003	1,611	101	3,012	23rd
Nova Coop S.C.	147	976	1,658	8	2,790	21st
Other operators	**4,412**	**14,306**	**16,039**	**2,393**	**37,150**	-
TOTAL OPERATORS	58,084	73,198	98,361	26,480	256,123	-

Source: ARERA, Annual Survey on Regulated Sectors.

This year, for the first time, the analysis of ***switching*** activity includes data collected from distributors and data from the Integrated Information System: the use of the new IIS source led to a slightly different switching rate compared to the past. This shows that household switching increased in 2019 compared to 2018 (14.3% compared to 9.1% in 2018 in terms of delivery points and 16.9% compared to 10.2% in 2018 in terms of volumes). Switching by non-domestic customers also recovered again in 2019, from 17.3% to 23.1%. In terms of withdrawal points, total customer switching reached 16.1% in 2019 compared to 10.7% the previous year.

In 2019, 13.4% of domestic customers, more than 1.9 million, have signed a dual fuel contract, slightly down from in percentage terms (13.9%) but up in absolute terms (1.8 million). The preferred contractual mode remained non-time-of-use, chosen by 61.6% of customers on the free market.

The average number of **offers** proposed by suppliers to potential domestic customers remained constant (16.3) while the number of offers for non-domestic customers fell (23.4 from 39.6 in 2018). The number of operators offering a single option also fell, from 24% to 21%. Online offers signed by only 4.4% of customers are still struggling to take off (3.3% in 2018) while the vast majority of domestic customers continue to prefer fixed-price contracts (84.7% from 85.9% in 2018). 37% (42% in 2018) of domestic customers signed a contract that provides a rebate or a discount of one or more free periods or a fixed sum in money or volume, that can be one-off or permanent, and provided when a certain condition is met.

Among the additional services chosen by customers who have signed a fixed-price contract, there is a clear preference for either a guarantee to purchase electricity produced from renewable sources (44%) or a points programme (38.2% of customers); 12.4% chose not to have additional services. Of the customers who signed a variable price contract, more than half chose one without additional services, while 28% opted for the guaranteed purchase of renewable energy.

The contraction of the **standard offer service** continued in 2019 both in terms of customers (-5.6%) and in terms of energy supplied (-14.7%).

Prices and tariffs

At the end of 2019, the Authority updated the tariffs relating to the provision of electricity transmission, distribution and metering services for domestic and non-domestic customers to be applied in 2020. The national average tariff to cover transmission, distribution and metering costs for the year 2020 is equal to 2.757 c€/kWh.

In 2019, the average price of electricity (weighted with quantities sold), net of taxes, charged by sales companies to domestic customers was 21.50 c€/kWh in the standard offer service and 24.21c€/kWh in the free market. The difference between the two markets, which can be explained in part by large differences in the types of contracts available on the two markets was therefore 2.7 €cent, which drops to 2.6 €cent if we only consider the cost component for energy (10.19 €cents/kWh in the standard offer market against 12.81 €cents/kWh in the free market).

General system charges pertaining to 2019 (in millions of euros) **(see Table 2.63 Vol. 1)**

ITEM	DESCRIPTION	ANNUAL REVENUE
A_{SOS}	**Charges relating to support for energy from renewable sources and CIP6 cogeneration**	**11,962.37**
A_{3*SOS} (A)	Support for renewable sources and CIP6 cogeneration	10,492.46
A_{ESOS}	Charges from subsidies for companies with high electricity consumption	1,916.03
$A_{91/14SOS}$ (B)	Discounts provided for by Decree Law no. 91/2014	-446.11
A_{RIM}	**Remaining general charges**	**3,019.34**
A_{2RIM}	Charges for the financing of residual nuclear activities	475.60
A_{3RIM}	Charges relating to production from non-biodegradable waste	10.95
A_{4RIM}	Special tariff schemes for railways	507.54
A_{5RIM}	Research funding	102.37
A_{SRIM}	Social bonus	234.73
A_{uc4RIM}	Minor electricity companies	104.54
A_{uc7RIM}	Energy efficiency in end uses	1,422.74
A_{SVRIM}	Technological development	82.62
A_{mctRIM}	Territorial compensation measures	78.25
TOTAL		14,981.71

(A) (Including discounts to companies with high electricity consumption.
(B) Element A91/14SOS is negative as it concerns discounts granted to low and medium voltage users not included among companies with high electricity consumption.

Source: ARERA, processing on CSEA data.

Technical quality

In 2019, the continuity of the t**ransmission service** confirms the worsening trend that began last year. The average number of long (lasting more than 3 minutes) and short (between one second and three minutes) outages per user due to all causes, including those not under Terna's responsibility, including major accidents on a national basis, was the worst since 2010.

In 2019 the electricity **distribution service** recorded a slight improvement in the duration of outages compared to 2017-2018, but the worsening trend that began in 2017 in relation to the number of outages persisted.

In detail, the duration of unannounced outages for which distributors were responsible was 47 minutes at the national level and the number of long and short unannounced outages for which distributors were responsible stood at 3.53 outages per low voltage user on a national basis. In 2019, the gap between the Center-North and the South persisted for the various detailed indicators.

As regards the **automatic compensation** that distributors paid to low and medium voltage users concerning the outages that occurred in 2019 for exceeding the standards on the maximum duration of the outages, regardless of the causes that caused them, approximately 55 million euros were paid to around 742,000 low voltage users (on average around 74 € per user) and around 6 million euros to around 6,100 medium voltage users (on average just under 1,000 € per user). Approximately 44 million euros (75 in 2018) in compensation were charged to the Exceptional Events Fund, at the CSEA, as they were due to outages for which the operators were not responsible. For 2019, approximately 17 million euros (24 in 2018) in compensation were paid by the companies as a result of the Authority's 2017 provisions, which established that, after 72 hours of outage, the additional cost for the compensation is borne by the distributor and/or Terna, even if the cause of the outage is attributable to force majeure.

Commercial quality

The number of cases of non-compliance with standards subject to automatic reimbursement in 2019 was upon the number of cases recorded in the 2008-2018 period, with a consequent increase in the number and amount of compensation paid to users in 2019, the latter rising to € 4.27 million from € 2.79 million in 2018.

For 2019, due to the epidemiological emergency caused by Covid-19 and due to the extension to 30 June 2020 granted to operators for the communication of data on the commercial quality of the sales service, the data available and illustrated in this Annual Report are partial as they are limited to those provided by suppliers up to 3 April 2020 and refer to 88% of electricity customers.

Based on the data available today, both the actual average response times for electricity suppliers, in the case of complaints and billing corrections, and requests for information were slightly below the minimum standards set by the Authority (30 calendar days).

Overall, companies that communicated data up to 3 April 2020 received a total of 225,853 written complaints (284,507 in 2018): 58.74% came from domestic customers, 35.8% from non-domestic customers, 4.3% from multi-site customers and 1.1% from MV customers. 55.6% of the complaints came from free market customers, while 40.13% from standard offer customers.

As far as the subjects of the complaints are concerned, the first three concerned: billing and everything related to consumption and fees billed, self-reading, billing periodicity, including the closing bill, making payments and refunds (44%); the events of the contract, such as withdrawal, change of name, transfer and take-over (15.56%); the procedures for the conclusion of new contracts, switching timescales and the economic conditions proposed by the supplier at the time of the offer compared to those provided for in the contract and actually applied (10.47%).

FOCUS ON REGULATORY ACTIVITY IN 2019

Portale Consumi (Consumption Portal)

In 2019, the Authority established the Electricity and Gas Consumption Portal (www.consumienergia.it), an institutional website accessible to users from July, 1[3]. Here, consumers can access data on their electricity and natural gas supplies, including historical consumption data and key technical and contractual information in a simple, safe and free mode.

The *Portale* consists of:

- a public area, accessible to any Internet user and aimed at providing general information on the Portal itself, on its potential and its advantages;
- a private area, to allow the customer to access personal, consumption and absorbed power data on their electricity and natural gas supplies, through summary documents, exportable numerical tables and graphs, including with increasing levels of detail; in this area the customer must be authorised to see the consumption data of a delivery or redelivery point starting from the moment in which they take legal ownership.

With regard to the services and data made available by the *Portale Consumi*, the Authority has ordered that the granularity of the data should generally coincide with the maximum available in the Integrated Information Service (excepts for the points equipped with meters meeting the 2G requirements - by nature characterized by a greater scale - for which the available data are initially daily) and that several implementation phases should be envisaged. In the first implementation phase, corresponding to the release on July 1, 2019, the maximum historical reporting period was 12 months, but it is currently progressively increasing and will reach the 36 months planned when fully operational, consistent with the actual availability of data in the IIS. Further upgrades pursued by the Portal during 2020, after the first implementation phase, will allow users to view the power withdrawn with an indication of the maximum value, download technical and contractual information of their supplies, view the historical programming of the bands for 2G meters and, for the points equipped with these meters, provide quarter-hourly data.

The *Portale Consumi* completes the framework of tools to support the consumer together with the Offers Portal and the radio-TV information campaigns produced in collaboration with the Italian Prime Minister's Office and disseminated through the main social platforms.

3 The *Portale* was established with resolution 270/2019/R/com of 25 June 2019, in implementation of Law 205/2017.

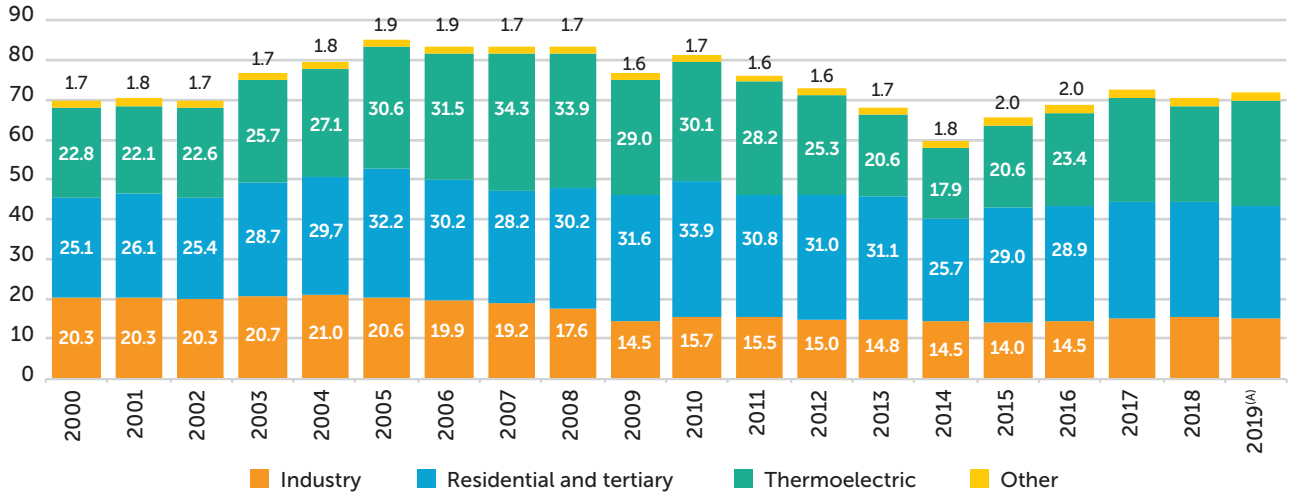
NATURAL GAS

Consumption, production, infrastructure and markets

In 2019, national natural gas consumption rose by 2.2%, reaching 71.9 billion cubic meters (70.3 billion cubic meters in 2018). Thermoelectric consumption recorded a sharp rise of 11%, recovering twice as much as lost the previous year (-11%, -2.2 billion m^3 consumed in 2018 and + 2.7 billion m^3 in 2019); other uses remained stable, especially for motor vehicles, while civil consumption (residential and tertiary) contracted by 3.1%. Industrial consumption, which had risen by 1% in 2018, was instead down by 1.7%.

In 2019, domestic production fell again sharply (-10.9%) compared with 2018, reaching 4.85 billion cubic meters, mainly due to a reduction in production at sea (-13%), while production on land fell by 5%. The degree of foreign dependence has increased again and reached an all-time high of 95.4% (93.4% in 2018).

Natural gas consumption by sector (in G(m^3)) **(see Fig. 3.1 Vol. 1)**



(A) Provisional data.

Source: Ministry of Economic Development, National Energy Budget, various years.

In 2019 **imports** reached 70.9 billion cubic meters, an increase of 4.5% compared to 2018. Except for volumes from Algeria, which decreased by 25.6% compared to the previous year, imports increased from all other countries from which Italy imports gas. Moreover, last year saw the weight of imports from the top three countries fall compared to 2018 - Russia (from 47.7% to 46%), Algeria (from 26.5% to 18.8) and Qatar (from 9.6% to 9.2%) - while the weight of imports from Northern Europe (Norway and the Netherlands) rose significantly to 11.1% (from 6.5% in 2018). Imports from Libya rose from 6.6% to 8%. 6% of the gas provisioned abroad is purchased at the European Exchanges. Eni's share of imports fell from 52.3% to 47.1% (well above the minimum reached in 2010, when, as a result of the antitrust ceilings established by Legislative Decree 164/2000, the portion of foreign gas supplied by Eni fell to 39.2%). The top three importers account for 78.1% (83.5% in 2018) of imported gas.

In line with the previous year, 2019 also saw a clear predominance of long-term import contracts with a duration of over 20 years (72.1% of the total, 76.2% in 2018). The share of short-term contracts (less than 5 years) increased

further and just exceeded 20% (13.9% in 2018), while the share of medium-term contracts (5-10 years) decreased further from 10% to 7.5%.

As for the wholesale market, in 2019, 184 entities operated on the PSV and the sales on the Italian hub amounted to just under 100 billion cubic meters (+15.6%) thanks to the strong increase in LNG volumes with forced delivery to the PSV. Within the markets managed by the GME, total volumes of 79 TWh (corresponding to approximately 7.5 billion cubic meters) were traded, with an increase of 45% compared to 2018. The prices formed in the markets managed by the GME are correlated to the prices of the PSV. In 2019, the day-ahead and intraday markets prices were in line with those of the PSV (around 16 €/MWh), while the gas in storage market showed upward movements (up to +4 € MWh) concurrently with the injection period at the storage sites (July-October).

On the **transmission** side, Snam Rete Gas controls 93.1%. If we consider transmission activity carried out over the last ten years, it can be seen that the total quantity of gas supplied to the various types of customers is slowly recovering from the peak point (100 billion cubic metres) reached in 2010: in 2019 the delta was still 5.8 billion cubic metres (8.2 billion cubic metres in 2018).

Italy stores significant gas capacities: more than 13 billion commercial cubic metres and 4.6 billion cubic metres of the strategic reserve (usable only in case of emergency). For the thermal year, 2020-2021 auctions for the allocation of storage capacity for modulation services (about 70% of system capacity) did not determine significant changes in the average allocation price, which fell by 2% compared to the previous year.

In 2019, there were 199 operators active in **distributio**n (9 fewer than in 2018) with a total volume of 31.3 billion cubic metres (901 million cubic metres less than the previous year) distributed to 23.9 million end customers. The service was managed through 6,514 concessions in 7,211 municipalities. According to the data provided by distributors as part of the Authority's Territorial Gas Distribution Registry, 20 new towns were methanised in 2019 and the length of the networks increased by 1,692 km compared to 2018. 58.2% of the networks (153,220 km) are located in the North, 22.8% in the Center (60,162 km) and the remaining 19% (50,645 km) are located in the South and in Sicily. On average, distributors own 85% of the networks they manage, while the municipalities own 10.7%. Ownership shares vary significantly from region to region.

In 2019 the **domestic sector** was made up of 22 million customers (out of a total of 23.8 million) who withdrew 14.9 billion cubic meters, or 47.6% of all the gas distributed. If the domestic sector volumes in the strict sense are added to the volumes for central heating, consumption in the "extended domestic" sector reaches a significant share of 55.3% of all gas distributed on the city networks in Italy and 93.2% of total customers. Overall average consumption was 1,310 cubic meters/year, down by about 3%. As regards consumption for heating, cooking and hot water (54.7% of customers), the average consumption is 1,084 cubic meters.

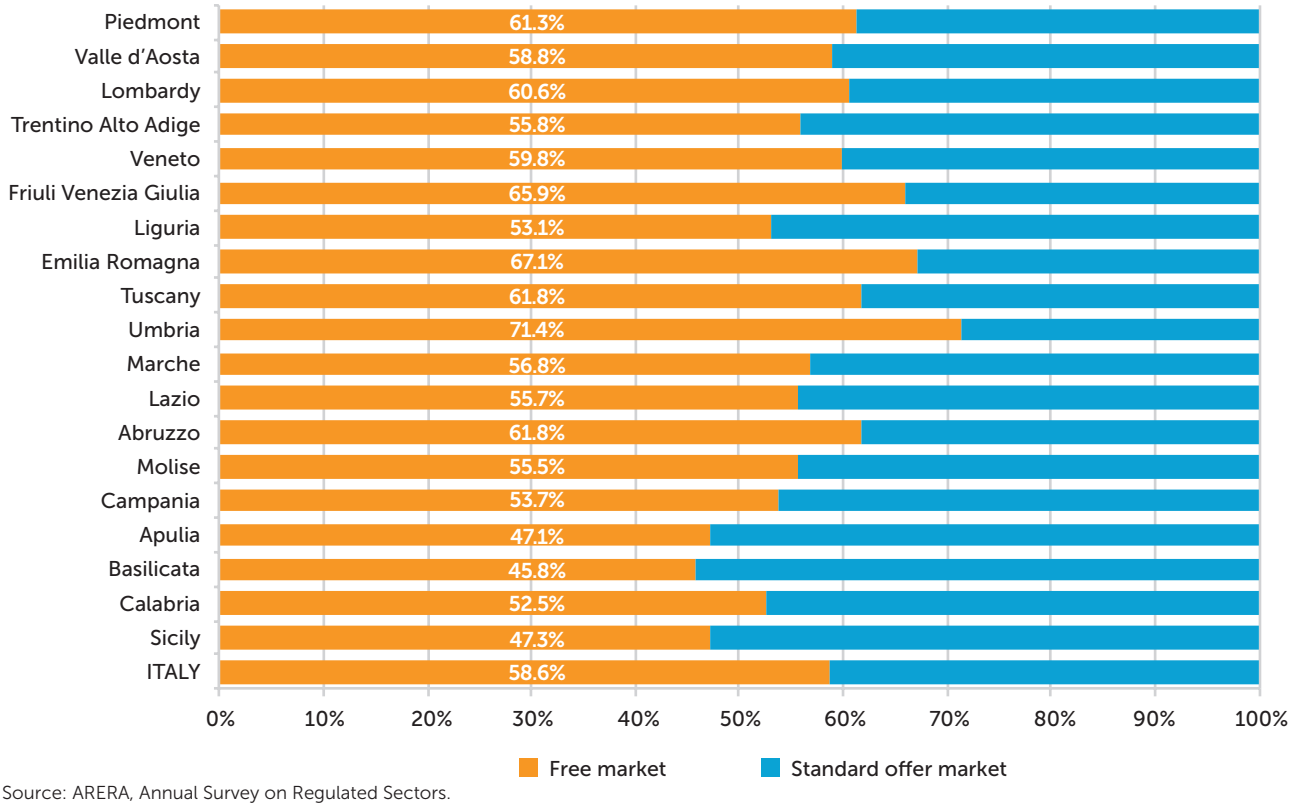
Looking at the **sales** figures, after the break-in 2018, last year the number of active suppliers rose again (+29 operators): out of a total of 446 active companies, only 30 (6.7%) sold more than 300 million cubic metres. The level of concentration in the final market increased slightly: the top 3 corporate groups control 44.4% (43.4% in 2018), the top five groups 54.4% (51.6% in 2018). The weight of the Eni group was stable at 19.4% (19.2% in 2018), followed by Edison at 13.3% (13.2%) and Enel at 11.7% (11%). The class of large operators with sales exceeding one billion cubic meters includes 26 operators, unchanged compared to 2018.

The average price charged to end customers by suppliers on the retail market was 39.18 c€/cubic meters, 0.77c€ lower (-1.9%) than in 2018. In 2019, this price was also higher than the price offered to the final market by wholesalers, which fell from 37.53 c€/cubic meters to 36.54 c€/cubic meters.

The share of volumes sold in the free market is 69.4% (68.3% in 2018), the share sold in the standard offer market is 9.4% (11.3% in 2018), while 21.2% is self-consumed. If we exclude self-consumption, 88% of the gas was purchased on the free market and the remaining 12% on the standard offer market.

2019 is the first year in which the largest share of customers (58.6%) opted for the free market (46.8% in 2018) while 41.4% turned to the standard offer market (53.2% in 2018). Considering only sales to the domestic sector, it can be seen that the share of volumes purchased on the free market in 2019 reached 56% for households (50.6% in 2018) and 81.3% for central heating (78.4%). In terms of delivery points, in 2019 the share of households that purchased gas in the standard offer service fell to 44.1%, after falling below half (49.9%) for the first time in 2018.

Natural gas customers by region and market type in 2019 **(see Fig. 3.18 Vol. 1)**



Source: ARERA, Annual Survey on Regulated Sectors.

The ***switching*** rate in the calendar year 2019 was 9.1% overall (it was 7% in 2018), a value of 30.7% (it was 27.1%) in terms of consumption. In the domestic sector, approximately 1,600,000 customers have switched supplier.

Data collected by the annual survey on regulated sectors show that in 2019 the a**verage number of commercial offers proposed** by suppliers was 10.9 for domestic customers, 6.6 for central heating and 18.2 for non-domestic customers. Compared to the 2018 data, the number of offers available has decreased slightly. However, 16% of suppliers offer a single contract type, while 37% offer up to 3 and the remaining 48% of the suppliers propose a

range that offers 4 or more contract offers to their customers. Households' interest in online offers grew in 2019, but remains, for the time being, a niche phenomenon, as only 6.9% of clients signed a contract offered through this method (in 2018 this share was 2.6%).

With regard to the preferred type of price, 69.9% of domestic customers signed a fixed-price contract in the free market, while only 30.1% chose a variable price contract. These values are essentially identical to those of 2018.

33.1% of domestic customers (39.6% in 2018) have signed a contract with a rebate or discount of one or more free periods or a fixed sum in cash or volume (one-off or ongoing); on average, the discount is applied to 36.2% of customers who have chosen a fixed price contract and 26% of customers who have chosen the variable price.

The presence of additional services is more common in fixed price contracts (47%) than in variable price contracts (less than 24%). In fixed-price contracts that provide an additional service, there is a clear preference (33%) for those contracts that provide for participation in a points programme and a certain appreciation (4%) for contracts that offer an accessory energy service.

Prices and tariffs

Overall, the average unit amount of all **transport charges** applied by the main operator in 2018 was 2.86 c€/S (m^3), slightly up from 2.68 c€/S (m^3) in 2017. In March 2019, the Authority approved the tariff regulation criteria for the gas transmission and metering service for the period 2020-2023 (Regulation of tariffs for the natural gas transmission and dispatching service - RTTG), in line with the relevant EU provisions. The tariff proposals for natural gas transmission fees submitted by companies for the 2020 calendar year were approved in May 2019.

In November 2019, the Authority defined the tariff regulation criteria for the **LNG regasification service for the period 2020-2023**, essentially confirming the criteria for the recognition of service costs followed previously. Subsequently, the tariff proposals for the regasification service for the year 2020, presented by GNL Italia for the Panigaglia terminal, *Terminale GNL Adriatico* for the Rovigo plant and *OLT Offshore LNG Toscana* for the Livorno terminal, were approved.

The criteria for the regulation of the tariffs (**RTSG**) and quality (**RQSG**) of the natural gas storage service for the fifth regulatory period (2020-2025) were, on the other hand, established in October while the **reference revenues for the natural gas storage service** for the year 2020 were approved in December 2019.

In 2019, the **average price of gas** (weighted with the quantities sold), net of taxes, charged by companies selling to end customers, was 39.2 c€/m^3 (39.9 c€/m^3 in 2018). The decrease in the average price (-1.9%) is actually due to the decrease in the price for the largest consumers (over 20 million cubic meters/year), which showed a sharp drop (-6.8 cent €/m^3, -23.3%). The price for all other classes increased.

As of 1 January 2020, 61.6% of the price for the Italian household that consumes 1,400 cubic meters of gas and owns an individual heating system is composed of components to cover costs and the remaining 38.4% consists of taxes on the natural gas sector (excise duty, regional surcharge and VAT). Raw material costs (including sales costs) account for 38% of the overall gas price, costs for the use of transmission, distribution and metering

infrastructure for 19.3%, while system charges (equalisation of retail sales, arrears for last resort services and interventions for energy saving and the development of renewable sources) account for 4.3%.

As for **LPG**[4], on the same date, the price for an Italian household that consumes 200 m^3 of LPG was 353 c€/m^3

(361 c€/m^3 in 2018) and is composed of components to cover costs (71.3%) and taxes (28.7%). The cost of raw materials accounts for 21.1% of the total value of LPG, retail sales account for 5.1%, local distribution accounts for 25.2%, while transmission costs upstream of the distribution plant account for 19.8%.

Technical quality

In 2019, in the **distribution** sector, there was a very slight decrease in the time of arrival at the emergency call site; an increase in the number of leaks detected through scheduled inspections (the number of the most dangerous leaks decreased); an improvement in the leaks reported by third parties, down across the board (-12%, as in the previous year); an increase in the length of the network inspected compared to 2018, with the highest value in the 2014-2019 period.

Commercial quality

Last year saw an improvement due to a downward trend, as in 2017 and 2018, in cases of non-compliance with commercial quality standards in the **distribution** sector, except for certain services, in particular, reactivation in the case of disconnection due to arrears and quotes for complex works, for which there was an increase in cases of non-compliance with standards.

For 2019, due to the epidemiological emergency caused by Covid-19 and due to the extension to 30 June 2020 granted to operators for the communication of data on the commercial quality of the sales service, the data available and illustrated in this Annual Report are partial as they are limited to 64% of end customers.

Overall, the partial data show that in 2019, justified responses to written complaints, billing corrections and average response times for requests for information fell within the Authority's minimum standards, while double-billing corrections were higher than the standard (32 calendar days against 20 calendar days).

4 The values of which are updated on a monthly basis.

FOCUS ON REGULATORY ACTIVITY IN 2019

Wholesale market monitoring

The wholesale market monitoring function is the main tool available to the Authority to assess the structure of the markets and their proper functioning, as well as the behaviour of operators and the adequacy of the system.

The importance of this function, already envisaged for ARERA by the founding law, has also been acknowledged at European level: the Gas Directive 2009/73/EC[5] and the REMIT Regulation[6] have strengthened and extended the monitoring powers of national regulatory authorities. This is aimed at increasing overall market transparency and promoting a more level playing field between operators by intercepting abusive conduct relating to market manipulation and insider dealing, including cross-border and cross-product practices (spot and futures products, physical and financial); this important function is therefore coordinated at European level by the Agency for the Cooperation of Energy Regulators (ACER).

On the operational level, the monitoring function assigned to ARERA under REMIT overlaps with the traditional one, largely sharing information, procedures and analysis tools. In order to strengthen its monitoring function in the sector, in 2018 the Authority approved the Integrated Text on the monitoring of the wholesale natural gas market (TIMMIG)[7] which, among other provisions, provides that each year the Energy Market Operator (GME - in charge of monitoring the competitive dimension) and the largest transmission company (Snam Rete Gas or SRG - in charge of monitoring the structural dimension) send the Authority, for approval, the balance of costs incurred for monitoring activities carried out in the previous year.

In June 2019, in the light of the provisions of the TIMMIG and the subsequent launch of the SRG Monitoring Office, the Authority decided to update the accounting unbundling regulation contained in the TIUC to provide for the segment relating to the monitoring of the wholesale natural gas market. The costs relating to monitoring activities are financed by the Fund to cover the costs associated with the gas system balancing system.

In addition, the TIMMIG requires the largest transmission company to collect and organise data on monitoring activities within a database, called the "core data database". This database is accessible to ARERA and to the GME, who access it according to the procedures envisaged in the Convention signed by the GME itself and by SRG and approved by the Authority.

Finally, at the European level, the Authority continued to coordinate with ACER in the monitoring activities of the wholesale natural gas markets under REMIT.

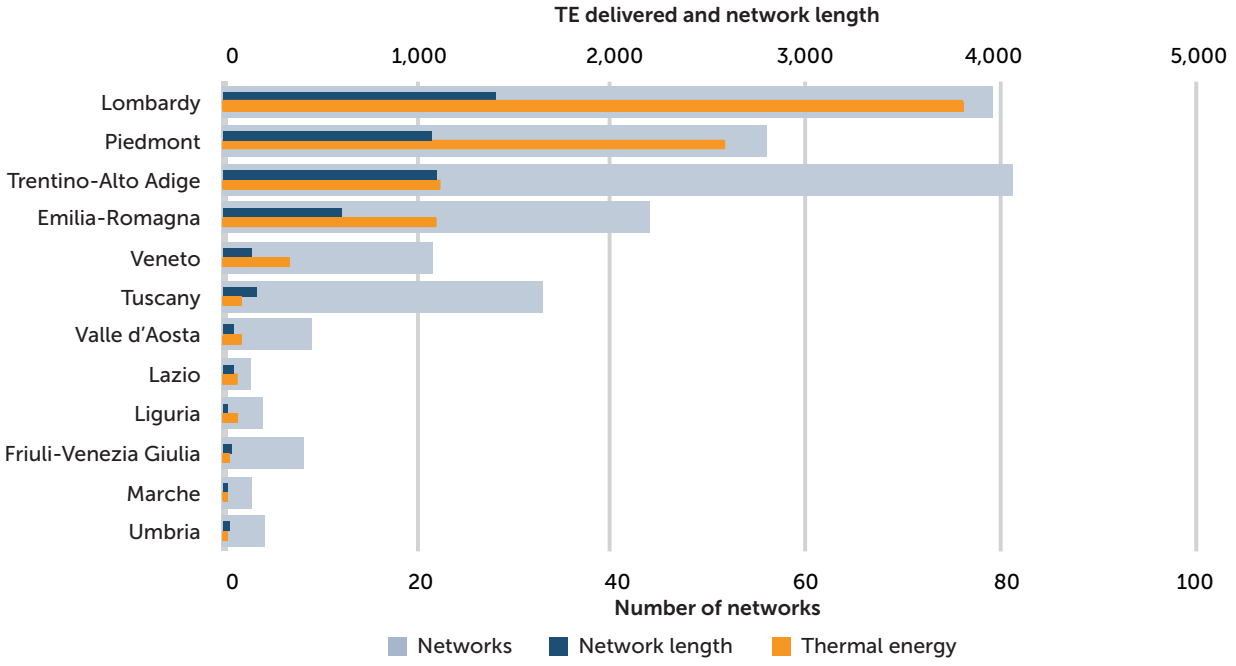
5 Implemented in Italy by Legislative Decree no. 93/2011.
6 (EU) 1227/2011 on the integrity and transparency of the wholesale energy market (REMIT - Regulation on wholesale Energy Market Integrity and Transparency).
7 Resolution 631/2018/R/gas of 5 December 2018.

DISTRICT HEATING

In Italy, heating systems are not very widespread but there is a historically growing trend, starting from the installation of the first systems in the 1970s: between 2000 and 2018 the volume connected increased at an average annual rate of 6.5%, from 117.3 to 358.0 million cubic metres, and the extension of the networks quadrupled, from about 1,091 to 4,446 km.

The spread of the service remains concentrated mainly in northern and central Italy, where the increased demand for heat for heating buildings and the high population density make it possible to justify the significant infrastructure investments required: **Lombardy, Piedmont, Trentino Alto Adige, Emilia-Romagna and Veneto alone represent over 95% of the thermal energy supplied**.

Geographical distribution of district heating networks in 2018 (number of networks, extension in km and thermal energy (TE) supplied in GWh) **(see Fig. 4.2 Vol. 1)**



Source: ARERA, processing based on data sent by operators.

I

n 2018, thermal power plants serving district heating networks produced 11,250 GWh of heat, 6,329 GWh of electricity and 133 GWh of cooling capacity. Compared to 2017, the heat supplied to users grew by 2.3%, while the cooling energy supplied remained substantially unchanged (-0.1%); on the other hand, the electricity exported from the district heating plants to the national electricity grid fell by 6.1%.

Natural gas remained the predominant energy source for the operation of plants (70.3% of total energy consumption), followed by residual municipal waste (14.2%) and bioenergy (9.6%), which drive the growth of renewable sources. With reference to generation technologies, there was still a **clear prevalence of electricity and heat cogeneration plants**, which produced 66% of the thermal energy fed into the networks.

The number of companies operating in the district heating sector registered in the Authority's Registry at the time of the Annual Report is **265**. Of these, 85% deal, usually in an integrated form, with activities closely linked to network operation and the supply of thermal energy to users (distribution, metering or sales), while the remaining part deals only with the production of thermal energy.

The **energy distributed by the district heating networks is mainly used for indoor** heating and cooling and the production of hot water for sanitation purposes, while its use in industrial processes is marginal. A significant share of the market is in fact made up of residential and tertiary users (respectively 63.9% and 33.2% of the total), while the demand from the industrial sector remains marginal (2.8%). 74% of users have a contractual power not exceeding 50 kW, while 21% have a size between 50 and 350 kW and only 5% have a size greater than 350 kW. However, the latter alone account for around 50% of total consumption.
The price determination methods most used by the operators are based on the costs sustained (aimed at ensuring the operator's economic and financial equilibrium and guaranteeing adequate remuneration of the invested capital) or on the avoided cost (aimed at providing the user with an affordable service price with respect to the cost they would have sustained using an alternative heating or cooling technology).

The sector also shows its heterogeneity in tariff forms; the most common price structures used by the operator are monomial rates on thermal energy (typically expressed in €/MWh or €/kWh) and binomial rates on contractual power and thermal energy, in which there is also a fixed component, generally dependent on the committed power (expressed in €/kW).

As of 1 January 2020, according to to the TITT, operators are required to publish on their website the supply prices applied to users (smaller operators who do not have websites use alternative methods, such as public help desks or disclosure on request). An analysis conducted by the Authority at the end of 2019 on a sample of 32 networks managed by 12 larger operators showed that for 50% of the networks the net price (excluding VAT and tax credit), for a central heating user, was between approximately 82 and 92 €/MWh.

FOCUS ON REGULATORY ACTIVITY IN 2019

Regulatory activity in the district heating sector

As part of the regulatory and supervisory functions assigned to the Italian Regulatory Authority for Energy, Networks and Environment in the district heating and cooling sector, work continued during 2019 to define the relative regulatory framework, which focused on the following issues:

- completion of the regulations regarding the procedures for exercising the right of withdrawal;
- regulation of operators' transparency obligations on the main dimensions of the district heating service, including adequate monitoring of sector prices;
- regulation of the technical quality of the district heating service with reference to safety and continuity;
- regulation of the metering service, with reference to the performance characteristics of the meters, the methods for collecting metering data and the procedures for verifying the operation of the meters.

The regulatory framework was defined based on an extensive collection of data and information aimed at providing detailed knowledge on the state of the sector.

WATER SERVICE

FOCUS ON REGULATORY ACTIVITY IN 2019

Monitoring and governance of local configurations

Every year, by 30 June and 31 December, the Authority is required to present a Report to the two Chambers of Parliament on compliance with the requirements established by Legislative Decree no. 152/2006[8], notably borne by:

- the Regions, for the establishment of Local Governing Bodies (EGA);
- the EGA, for the award of the integrated water service (SII);
- local authorities, in relation to participation in EGA and to granting free use of the SII infrastructures to service providers.

The two reports presented in 2019 highlighted both the improvements found in the reorganisation of the sector governance, and the cases (characterised by the persistence of certain critical issues and non-compliance with current regulatory provisions) in which obstacles are found in the path towards streamlining the sector's configurations and, more generally, exploiting economies of scale for the benefit of the water user.

In summary, the state of the local configurations of the integrated water service identified in 2019 was characterised by the following elements:

- completion of the involvement of local authorities in the related EGAs in all areas of the country (in 2015 there were critical issues in 9 Regions);
- consolidation in the process of streamlining the number of local authority water boards (ATO), which has reached 62;
- development of the paths towards the full operationalisation of EGAs in almost all the regions, with except for Molise, where the related institutional building process did not progress significantly throughout the whole of 2019;
- the need for some Regions to use substitutive powers to achieve the objective of fully implementing the organisation of the integrated water service in accordance with current legislation, consolidating the signs detected in recent months in some areas of the country;
- the continuation of the process of streamlining and consolidating the management landscape in accordance with the provisions of current legislation.

Infrastructural aspects of the service, technical quality and investments

A specific regulation on the technical quality of the integrated water service (RQTI) has been in force since 1 January 2018, introduced by the Italian Regulatory Authority for Energy, Networks and Environment with Resolution 27 December 2017, 917/2017/R/idr, which pursues the achievement of minimum service levels through: the **provision of automatic compensation** to end users who experience a disservice in terms of continuity of the aqueduct service, measured based on three indicators to which specific standards are associated; the introduction of a **bonus-penalty mechanism** in the event of failure to achieve the objectives set for some indicators associated with general quality standards, called "**macro-indicators**".

8 See art. 172, paragraph 3-bis, of Legislative Decree no. 1521 of 3 April 2006, as amended by art. 7 of Decree-Law no. 133 of 12 September 2014, (converted with amendments by Law no. 164 of 11 November 2014).

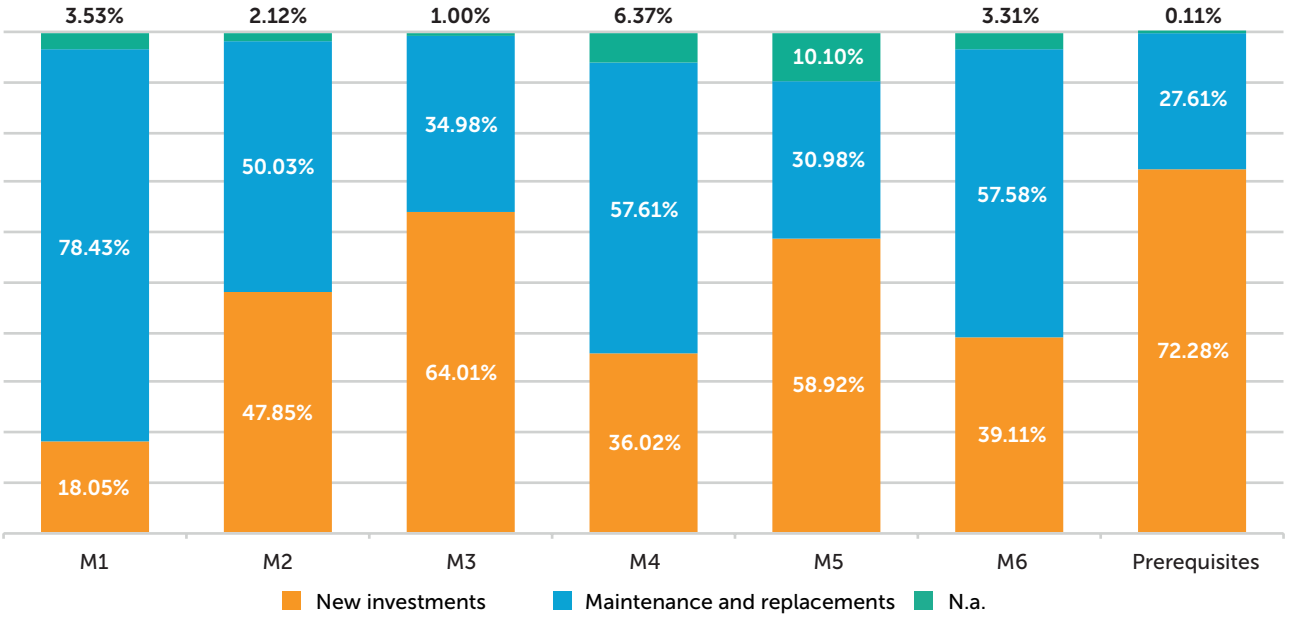
MACRO-INDICATORS DEFINED BY THE RQTI	
M1	Containment of water losses in aqueduct networks and systems
M2	Maintenance of the continuity of the drinking water service, based on the measurement of the frequency of service interruptions
M3	Adequacy of the quality of the water supplied
M4	Minimisation of the environmental impact of the conveyance of waste water, measured on the basis of the degree of adequacy of the sewage system
M5	Minimisation of the environmental impact associated with the disposal of sludge deriving from the purification of waste water
M6	Minimisation of the environmental impact associated with the disposal of waste water from purification treatments

During 2019, as part of the investigations relating to the updating of the regulatory schemes submitted by the Local Governing Bodies for the two-year 2018-2019, actions continued in order to verify the **Programme of Interventions** (PoI) drawn up for each operation, which is one of the instruments of which the regulatory scheme is composed.

From the analysis of the sample (131 operators providing the service to 48,197,590 inhabitants) regarding the distribution of investment needs (gross of contributions) at a national level, the concentration of the operators' efforts to contain the level of water leaks (macro-indicator M1) emerged, which is therefore a priority objective in the planning choices of the Local Governing Bodies.

Overall, the resources allocated to improving M1 constitute about a quarter of the total needs of the sample for the two-year 2018-2019, with peaks of 32% in the South and the Islands. This was followed by investments to improve the quality of purified water (M6) and to upgrade the sewerage system, M4 (particularly to minimising flooding and sewer spills), which amounted to 19.6% and 14.1% respectively.

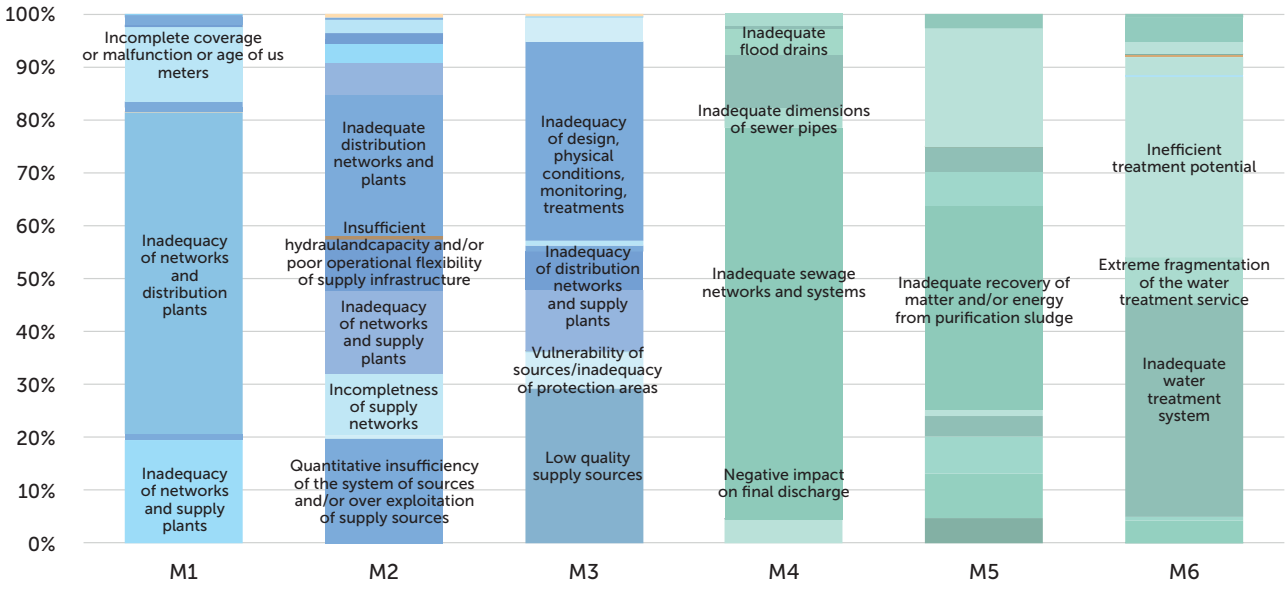
Distribution of investments planned in the 2018-2019 period by type of work and by individual technical quality objectives (in percentage) **(see Fig. 5.40 Vol. 1)**



Source: ARERA, processing of data relating to the tariff update (Resolution 918/2017/R/idr).

About the distribution of **investments for individual technical quality objectives**, the picture remains heterogeneous. A detailed examination of the investments planned to resolve the main critical issues of the integrated water service, as identified and classified by the Authority, shows that the impact of the top ten, equal to 68.7% of the total investment needs expressed in the PoIs, relate to the distribution service (34%), purification (18.9%) and sewerage (15.8%).

Main issues attributable to the macro-indicators of technical quality, by financial needs in the 2018-2019 period (in percentage) **(see Fig. 5.41 Vol. 1)**



Source: ARERA, processing of data relating to the tariff update (Resolution 918/2017/R/idr).

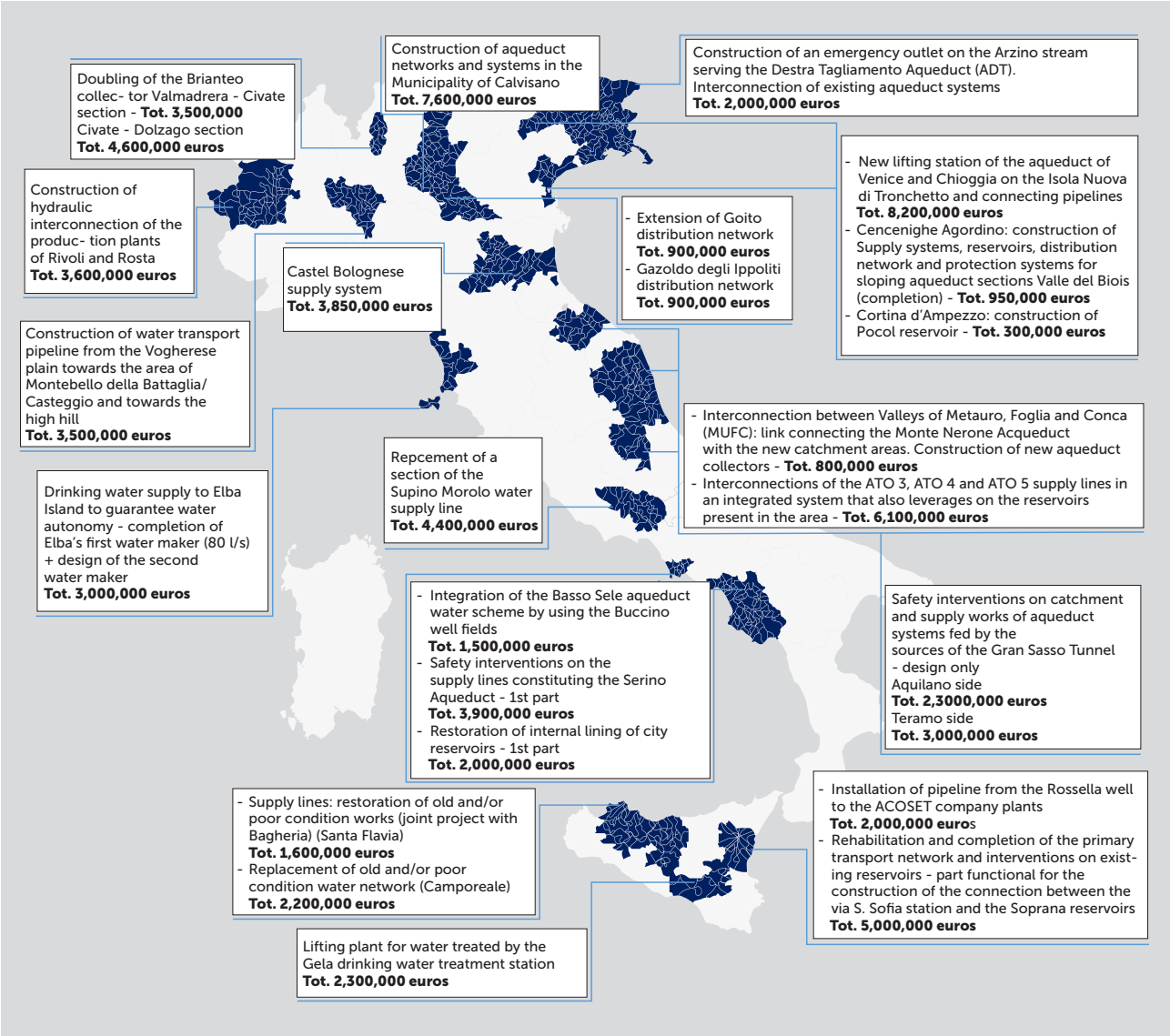
In terms of **operating costs**, the implementation of technical quality obligations has had a limited impact on tariffs: the average additional costs related to compliance with the technical quality standards set by the Authority amounted to €0.63 per hour in 2018 and €1.58 per hour in 2019.

During 2019, the Authority also authorised the disbursement of the first instalments of the resources destined **for the "aqueducts" section of the National Water Sector Interventions Plan**[9], adopted - for the first part - with Prime Ministerial Decree of 1st August 2019.

At the end of last year, the total amount disbursed was 18 million euros, equal to 22.5% of the total funding allocated for the 2019-2020 period (**80 million euros)**.
The 26 projects funded can be traced back to 18 reference bodies - which have entrusted the implementation of the related works to the SII manager for the area of competence or, in the case of interventions relevant to one or more areas, to several managers, identifying a leader - and fall within 5 different river basin districts.

9 See Article 1, paragraph 516 of Law no. 205 of 2017.

Geographical location of the interventions referred to in Annex 1 to the Prime Ministerial Decree of 1 August 2019 **(see Fig. 5.42 Vol. 1)**



Source: ARERA, processing of data provided by the Report 252/2019/R/idr.

The works underlying the selected interventions mainly have the following purposes:

- finding new water resources;
- creating interconnections of the aqueduct schemes;
- increasing water availability;
- improving the quality of the water withdrawn;
- reducing and containing water leaks.

The analysis of the technical and financial schedules of the projects, updated by the reference Bodies[10], shows that the largest share of expenditure is expected in the first eight months of 2021. **In the period between December 2020 and August 2021, an increase in the use of resources is expected from 30% to 70% of the total funding granted.**

10 Pursuant to paragraph 5.3 of Resolution 425/2019/R/idr.

Tariffs and quantification of investments

On 31 December 2019, the Authority approved the proposals for the two-yearly updating of tariffs for the years 2018 and 2019, which concern 98 operators serving 34,097,585 inhabitants (59% of the national population).

Compared to the previous year, the **average change in tariffs** was +1.1% in 2019, with an average increase in tariffs of 2.1% for about 24.51 million inhabitants and a reduction of -1.3% for 9.58 million inhabitants. **The tariffs to users are therefore confirmed to be substantially stable, even though the process of improving the quality of the integrated water service has begun**.

The checks carried out by the Authority with reference to the costs of fixed assets included in the tariff showed **a deviation between the actual expenditure for investments and the planned needs for 2016 and 2017**: however, for the aforementioned two-year period, the **rate of implementation of the planned interventions was 82.8% for 2016 and 85.0% for 2017**, respectively, showing an increase compared to the implementation rates referred to previous years (81.9% for 2014 and 77.6% for 2015).

More generally, for the four-year 2016-2019, the expenditure for investments to be funded through the tariff was 9 billion euros, 178 euros/inhabitant at a national level (corresponding to 44.5 €/in/year), with values equal to 225 €/in in the Centre and 171 €/in in the Northwest. On the other hand, it is worth noting the more limited resources allocated by the tariff to infrastructural interventions in the South and the Islands, areas where, in the four-year period considered, the value stood at 142 €/inhabitant.

Considering also the forecasts regarding the availability of public funding for the construction of water infrastructures, the investments planned for the four-year 2016-2019 are, in per capita terms, 235 €/ inhabitant at a national level, with the highest value in the South and Islands (281 €/inhabitant).

Investment expenditure, in absolute terms, including the availability of public funds, thus amounts to €11.9 billion for the four-year period (€2.2 billion in 2016; €2.8 billion in 2017; €3.5 billion and €3.4 billion in 2018 and 2019 respectively). From the examination of the tariff arrangements disclosed for the purposes of the biennial update, it appears that the implementation of the technical quality regulation has led the LGBs - in agreement with the related operators - to plan, **for the years 2018 and 2019, investments in addition to those envisaged in the first tariff arrangement, effectively restating an increase of approximately 14%** in the initially planned investment expenditure (covered by the tariff).

Annual expenditure for domestic users

With reference to a sample of 103 operators (operating in 72 local authority water boards/sub-areas and serving approximately 40.4 million inhabitants), it is noted that, **for 2019, the average annual expenditure incurred by a typical resident domestic user (family of 3, with annual consumption of 150 cubic meters), amounts to €312/ year nationwide** (€2.08/m^3), with a more contained value in the North-West (€ 244/year; 1.62 €/m^3) and higher in the Centre (389 €/year; 2.59 €/m^3). This expenditure is made up, on average, of fees for the aqueduct **service for 40%, sewerage and water treatment services for 12% and 29%, the fixed portion for 10% and taxes (VAT) for 9%**.

Contractual quality

In May 2020, the first phase (aimed at operators)[11] of the fourth edition of the data collection "**Contractual quality of the integrated water service**" was closed, aimed at allowing the Authority, within its regulatory and supervisory functions, to acquire information on the services rendered in 2019
and to monitor the evolution of the contractual quality levels offered to users following the introduction of the minimum standards, which are homogeneous nationwide[12].

This edition presents an important new element with respect to the previous editions, linked to the introduction of a new incentive mechanism[13] based on two macro-indicators composed of the individual contractual quality indicators already provided for by the regulation, aimed at strengthening the measures to ensure the dissemination, usability and quality of service to users in a homogeneous manner throughout the country.

The analysis of the information sent (by a **panel of 301 operators that provide the service to 48.5 million inhabitants**), relating to 2019, confirms a strong lack of homogeneity between the geographical areas of the country in relation to the fulfilment of contractual quality data communication obligations on the part of operators: the lack of satisfactory responses from operators located in some areas of the South and on the Islands, denoting territorial differences partly attributable to the different starting quality levels as well as to the different organisational and management characteristics of the operators involved.

In general, an analysis of performance in relation to 28 specific standards confirms the generally high-quality levels recorded in 2019, as shown by the percentage of non-compliance with the standard, which fell from 3.8% to 3.4%.

Performance in relation to specific standards in the 2018-2019 period **(see Table 5.12 Vol. 1)**

INDICATOR	TOTAL PERFOR-MANCE IN 2019	% WITHIN 2019 STANDARD	% OUT-SIDE 2019 STAN-DARD	% OUT-SIDE 2018 STANDARD	% OUTSIDE STANDARD FOR CAUSES ATTRIBUTA-BLE TO THE OPERATOR OVER OUT-SIDE 2019 STANDARD	% OUTSIDE STANDARD FOR CAUSES ATTRIBUTA-BLE TO THE OPERATOR OVER OUT-SIDE 2018 STANDARD
Appointment punctuality band	461,775	98.5%	1.5%	2.1%	82.8%	87.2%
Supply activation time	129,500	92.4%	7.6%	8.9%	59.2%	73.6%
Supply deactivation time	214,427	94.2%	5.8%	6.3%	75.1%	55.3%
Supply reactivation time following deactivation for arrears		97,6%	2,4%	2,8%	97,7%	95,8%
Supply reactivation or take over time with changes to the flow rate of the meter	95,353		2,7%	4,9%	27,8%	18,8%

cont.

11 As a result of the deferral of the deadlines for closing data collection70 - ordered by the Authority in light of the epidemiological emergency caused by COVID-19, in order to guarantee maximum safety for all subjects called to participate in data recognition -, the second phase of the investigation is still in progress at the time of drafting this Annual Report, which provides for the validation, by the EGAs, of the information declared by the relevant managers in order to verify its correctness, consistency and congruity and report any need for modification or integration.

9 See Resolution of 23 December 2015, 655/2015/R/idr and the related Annex A, containing the Regulation on the contractual quality of the integrated water service (RQSII), which entered into force on 1 July 2016.

10 See Resolution of 17 December 2019 547/2019/R/idr.

INDICATOR	TOTAL PERFOR-MANCE IN 2019	% WITHIN 2019 STANDARD	% OUT-SIDE 2019 STAN-DARD	% OUT-SIDE 2018 STANDARD	% OUTSIDE STANDARD FOR CAUSES ATTRIBUTA-BLE TO THE OPERATOR OVER OUT-SIDE 2019 STANDARD	% OUTSIDE STANDARD FOR CAUSES ATTRIBUTA-BLE TO THE OPERATOR OVER OUT-SIDE 2018 STANDARD
Supply reactivation or take over time without changes to the flow rate of the meter	172,657	96.8%	3.2%	3.7%	84.0%	74.3%
Transfer execution time	613,740	98.6%	1.4%	1.1%	78.8%	79.3%
Quote time for sewer connection with site inspection	18,929	91.5%	8.5%	8.9%	43.9%	53.3%
Quote time for sewer connection without site inspection	852	95.9%	4.1%	11.9%	45.7%	97.2%
Quote time for water connection with site inspection	104,364	93.3%	6.7%	6.4%	62.4%	70.7%
Quote time for water connection without site inspection	7,225	99.5%	0.5%	0.9%	59.5%	73.8%
Quote time for works with site inspection	26,742	91.5%	8.5%	4.7%	47.1%	60.8%
Quote time for works without site inspection	1,555	98.3%	1.7%	6.6%	88.5%	76.1%
Execution time of sewer connection involving simple work	2,742	96.4%	3.6%	14.9%	58.0%	34.5%
Execution time of water connection involving simple work	24,353	86.4%	13.6%	13.3%	83.9%	75.6%
Execution time of simple works	8,307	90.6%	9.4%	6.2%	64.3%	55.5%
Intervention time for pressure level check	3,358	96.6%	3.4%	4.3%	64.3%	56.3%
Intervention time for meter check	15,760	94.2%	5.8%	7.3%	82.6%	68.2%
Time to replace malfunctioning meter	21,746	92.3%	7.7%	6.9%	30.3%	26.1%
Time to communicate the outcome of the pressure level check	2,553	93.3%	6.7%	4.8%	72.4%	71.3%
Time to communicate the outcome of the laboratory meter check	2,927	78.4%	21.6%	26.9%	96.5%	98.6%
Time to communicate the outcome of the on site meter check	11,742	95.9%	4.1%	4.8%	84.6%	74.0%
Complaint response time	100,351	95.8%	4.2%	6.4%	93.0%	96.7%
Response time to written requests for information	175,339	97.1%	2.9%	3.1%	97.5%	99.2%
Invoice issuance time	59,774,381	99.3%	0.7%	0.5%	36.3%	35.3%
Billing correction time	36,724	97.5%	2.5%	1.6%	65.2%	92.1%
Time to send the end user the communication received from the sewer- age and/or water treatment service operator	265	8.5%	1.5%	53.8%	100.0%	0.0%
Time to send the request received from the end user to the sewerage and/or water treatment service operator	4,119	69.0%	31.0%	60.9%	100.0%	83.3%

Fonte: ARERA, elaborazione su dati comunicati dai gestori ai sensi dell'RQSII.

Furthermore, it can be seen from the declared data that the regulation of contractual quality - and, in particular, the provision for the operator to automatically pay compensation in the bill in the event of non-compliance with specific standards - has strengthened the protection of users in the event of a disservice.

The compliance with the 14 general standards set by the RQSII - or with the improvement standards decided at a local level and reported in the Service Charter - shows lower levels than those found for specific standards; however, in 2019 it should be noted that more than half of the indicators analysed showed at least 90% compliance with the standard.

The improvement in performance related to the start-up, management and termination of the contractual relationship, however, has had a limited impact on tariffs: the average additional costs related to compliance with the contractual quality standards set by the Authority amounted to €0.98 per inhabitant per year for both 2018 and 2019.

FOCUS ON REGULATORY ACTIVITY IN 2019

Tariff method for the third regulatory period 2020-2023 MTI-3

In 2019, the Authority launched a procedure for defining the water tariff method for the third regulatory period 2020-2023, with the aim of preserving the framework of stability and certainty of water regulation developed from 2012, promoting management efficiency in relation to the objectives assigned, as well as pursuing progressive convergence between the various areas of the country, characterised by extremely different management situations and levels of service.

In continuity with the MTI-2 and with a view to regulatory stability and certainty, the MTI-3 confirmed:

i. the general approach aimed at empowering and ensuring the coherence of the decisions taken at a decentralised level by the subjects responsible for preparing tariffs;
ii. the structure of the constraint on operating revenues (VRG);
iii. the presence of a restriction on the annual growth of the tariff multiplier ϑ, to be applied to the fixed and variable portions of the tariff structure adopted by each operator and to the support measures for investment spending;
iv. the valorisation of cost components relating to third party assets or those realised with public grants;
v. the approach aimed at incentivising, in addition to investments, the sustainability of the tariff fees applied to users and the streamlining of operations, through the provision of a sharing factor between operator and consumers (sharing set at 1.5%) to be applied to the price limit based on conditions referring, for the third regulatory period, to all recognised costs;
vi. a four-year regulatory period for the valorisation of the tariff multiplier and the recognised cost components, with a two-yearly update of the tariff proposals and the possibility to review, on justified request, the tariff preparation during the period in the face of extraordinary circumstances that could jeopardise the economic-financial equilibrium of the operations.

Among the changes introduced, it was envisaged that the EGA should draw up a Strategic Works Plan (POS) as an integral and substantial part of the PoI, so as to take into account the long-term effects of any technically complex works spanning multiple years.

The tariff regulation applicable in the third regulatory period is attributable to:

- a matrix consisting of **six different regulatory schemes**, within which each competent body selects the most appropriate scheme regarding the investment needs in relation to the value of existing infrastructures; any changes in the operator's objectives or activities attributable to significant operational aggregation processes or the introduction of new technical processes whose relevance is certified; the extent of the constraint on revenues per inhabitant served by the operator compared to the average per capita VRG value (VRGPM) estimated with reference to 2018 for the entire sector, also taking into account the fluctuating population served;
- a **regulatory convergence scheme**, applicable for a limited and predefined period, in all those situations characterised by a persistent and significant lack of information, regardless of the possible start of operation integration processes, and which allows the competent body to carry out a parametric valuation of the cost components (operating costs and costs of fixed assets) for the purpose of tariff preparation, even if the information requested is incomplete.

MUNICIPAL AND ASSIMILATED WASTE CYCLE

he municipal waste sector is a complex sector, characterised by high service fragmentation along the supply chain and by the absence of homogeneous infrastructural and organisational conditions between the various areas of the country. During 2019 and the first few months of 2020, to acquire information for defining the tariff regulation and the regulation of the quality of the integrated municipal waste management service, the Authority continued its survey and monitoring activities in the sector, aimed at acquiring data and information concerning municipal waste treatment plants - incinerators, landfills and mechanical biological treatment plants - and the quality of the integrated municipal waste management service and the individual services that make it up. Further information regarding the characteristics of sector operators and the activities carried out has been acquired through the declarations sent by the operators themselves when registering with the Authority's Registry of Operators.

FOCUS ON REGULATORY ACTIVITY IN 2019

Monitoring and governance of local configurations

The Authority has highlighted the desirability of establishing a permanent technical-institutional dialogue with all territorial levels of government with competences in the field of integrated management of municipal and assimilated waste, aimed at promoting effective regulatory action on the matter.
For this reason, in 2019, a permanent technical working group on the municipal and assimilated waste cycle was set up with Regions and Local Authorities to which, depending on the issues involved, the most representative associations of local governing bodies may also be invited to participate.

The activity of the Working Group is aimed, in particular:

- to identify and monitor specific critical issues relating to the planning, organisation and administration f the integrated waste management service;
- to strengthen cooperation between territorially competent bodies, also to improving the process of setting up and/or operating the organisational structures of the local governing bodies;

- to identify forms of dialogue with the Regions and Local Authorities, in cases where this is expressly provided for in the above-mentioned legislation;
- to support the definition of the data validation procedures required by the Authority, as well as the procedures for the processing and adoption of the relevant acts by the competent bodies, to promote greater transparency, using third parties;
- to accompany the transition, on the whole national territory, from tax to tariff for the performance of municipal and assimilated waste management services.

Sector structure

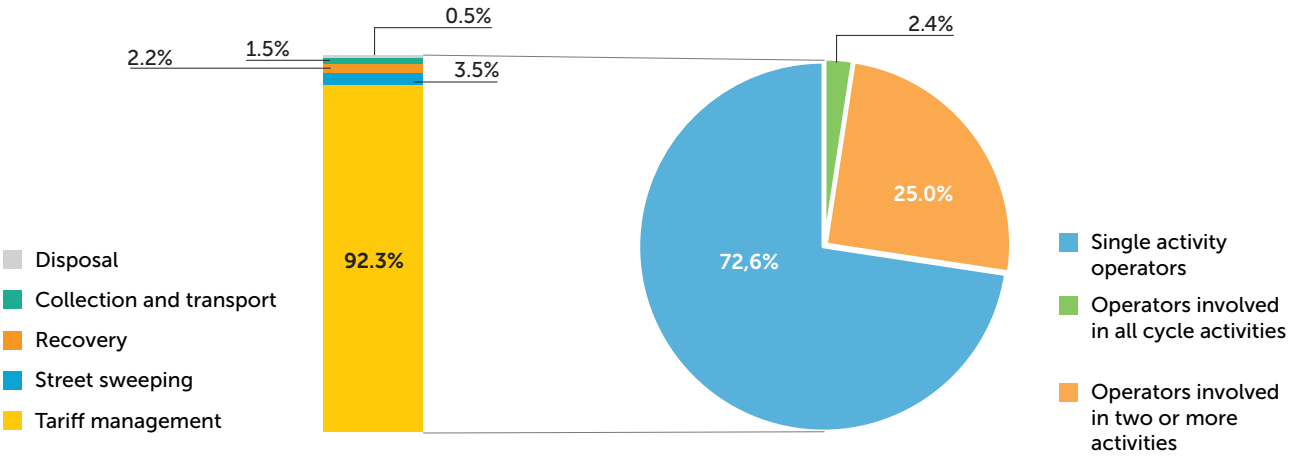
The opening of the Registry of Operators to the municipal waste sector made it possible to map the sector. In just under a year from its inception[14], at the time of drafting the Annual Report, 6,568 entities were registered, of which 6,530 operators. In 88.3% of cases, the operators are Public Bodies (5,767) and in 11.7% of cases, they are operators with different legal status (763).

The Registry has also made it possible to **start an initial mapping of the Territorial Competent Bodies which, according to the Authority's regulation, are the institutional bodies responsible for validating the Economic Financial Plan for the tariff area for which they are responsible**.

To confirm the complex fragmentation of the sector's governance, there is a small number of Local Governing Bodies (45), compared to a very high number (1334) of Territorially Competent Bodies (98% of these Bodies coincide with the Municipalities). A large number of Territorially Competent Bodies are also operators, directly managing tariffs and relations with users (1,270, equal to 19% of operators).

Concerning the **number and type of activities carried out**, the majority of operators (72.6%) are accredited for a single activity (92.3% declared that they manage tariffs and relations with users), followed by those accredited for two or more activities (25%), while a much lower percentage (2.4%) is accredited for all cycle activities.

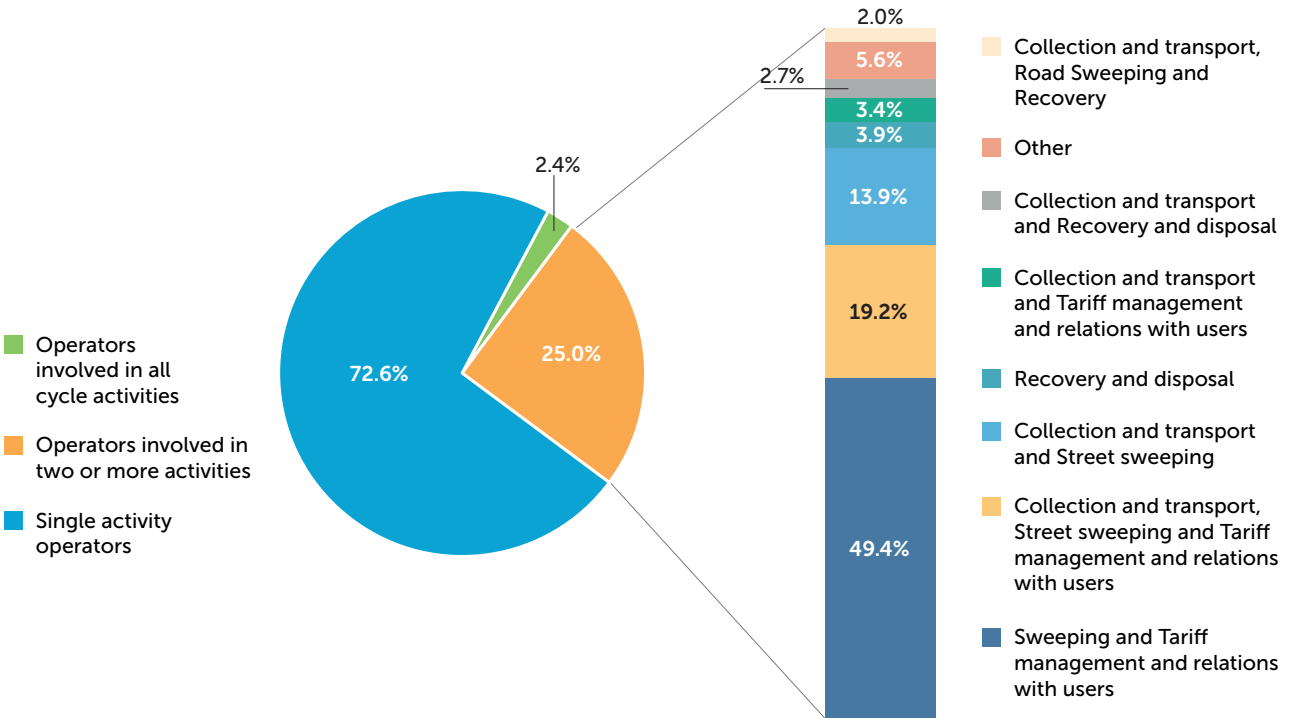
Operators who have declared in the Registry that they carry out only one activity (2019-2020) **(see Fig. 6.2 Vol. 1)**



Source: ARERA, Registry of Operators.

14 3 July 2019.

Operators who have declared in the Registry that they carry out two or more activities **(see Fig. 6.3 Vol. 1)**



Source: ARERA, Registry of Operators.

Waste production and collection

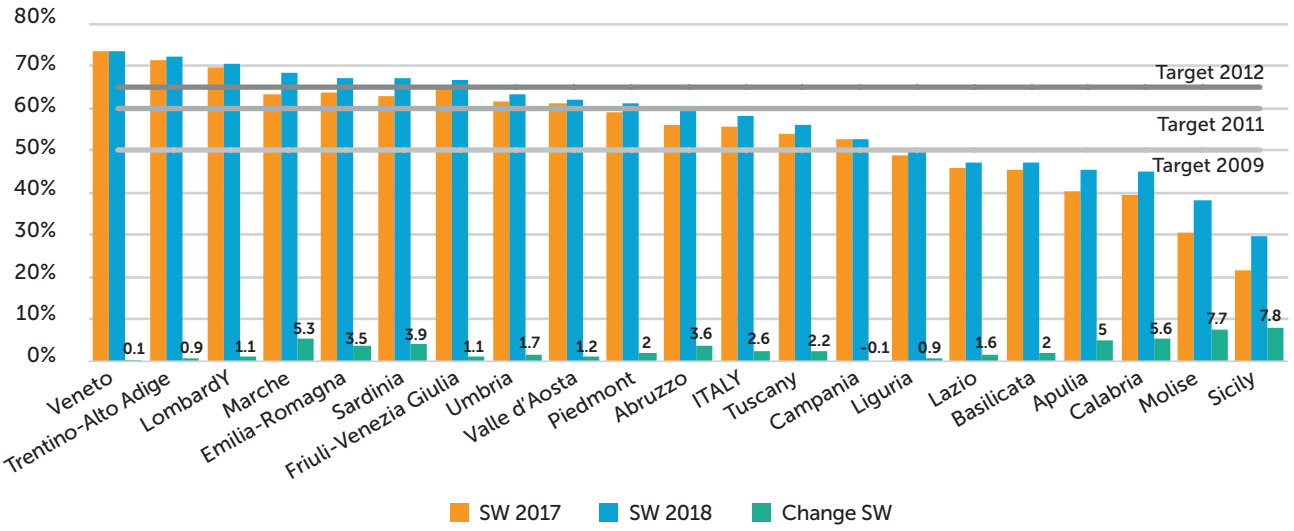
In 2018, national production of municipal waste amounted to approximately 30.2 million, with an increase of 2% compared to 2017[15]. Growth is even higher if we look at the per capita figure, which recorded a growth of 2.2% compared to 2017, equal, in terms of quantity, to just under 500 kilograms per inhabitant. Furthermore, in the year under consideration, waste production was realigned with the trend of socio-economic indicators (GDP, final consumption expenditure of resident and non-resident households), unlike what happened in 2017, when waste generation was misaligned with these indicators.

The growth in municipal waste production affects all Italian regions, except for Marche, Molise and Sicily (respectively -0.8%, -0.2% and -0.5% compared to 2017) while the greatest increases were detected in Piedmont (+5.1%), Trentino-Alto Adige (+4.5%) and Sardinia (+3.7%).

Furthermore, the growth trend of sorted waste collection was confirmed, which in 2018 stood at 58.1% of national production (17.5 million tons of sorted waste in quantitative terms), with a growth of 2.6% compared to 2017. However, despite this growth, high service heterogeneity still persists at a territorial and regional level: there are, in fact, regions that exceed the target of 65%[16] (Veneto 73.8%, Trentino-Alto Adige 72.5%, Lombardy 70.7%, Marche 68.6%, Emilia-Romagna 67.3%, Sardinia 67% and Friuli-Venezia Giulia 66.6%), and regions that, despite an important improvement recorded in 2018, are still far from achieving the target (Sicily 29.5%, Molise 38.4%, Calabria 45.2%, Puglia 45.4%).

15 Data from the Municipal Waste Report 2019, ISPRA.
16 Provided for 2012 by Legislative Decree No. 152 of 3 April 2006.

Trend of sorted collection by region (2017-2018) **(see Fig. 6.7 Vol. 1)**



Source: ISPRA, Municipal Waste Report 2019.

Treatment plants

At the end of 2018. the Authority ordered collection of data and information on municipal and assimilated waste treatment services, in order to define the regulation on tariffs and contractual conditions of access to treatment plants, giving priority to mechanical biological treatment plants, incineration plants and landfills of municipal and assimilated waste on the national territory. The purpose of the data collection was to analyse and monitor the tariffs applied by the treatment plants, in order to understand their price dynamics, benchmark efficiency among operators and make use of the resulting economic and financial data.

The analysis - conducted on data relating to 35 incineration plants, 74 disposal plants and 80 mechanical biological treatment plants - highlighted the heterogeneity of the tariffs applied also in terms of the application of specific additional components (such as environmental, extra-regional or local contributions, special landfill taxes, etc.) that do not make the delivery prices applied by the various plants directly comparable.

In greater detail, for **incineration plants**, in most of the national territory there are tariffs that are administered at a regional level or by the governing body of the plant's area of competence, although in the North of the country, and in particular in Lombardy, where most incineration plants are located, the tariffs are not administered. **The delivery price declared by operators is extremely variable from plant to plant and is indicated from a minimum of 66 €/tonne to a maximum of 193 €/tonne. The average delivery price of all the plants is 100 €/tonne**.

There is also a highly uneven situation for **landfills**: in some areas of the country, administered tariffs are applied which are established at regional level or by the local governing body, at the same time as the widespread application of non-administered tariffs, depending on the type of waste.

The delivery price declared by the operators is highly variable with a minimum value of 9 €/tonne and a maximum value of 187 €/tonne with an average delivery price for all the Panel's plants of around 85 €/tonne (91 €/tonne in the North, 75 €/tonne in the Centre and 82 €/tonne in the South).

The same variability is also seen in the tariffs for access to **mechanical biological treatment plants** which go from **a minimum value of €27/tonne to a maximum value of €169/tonne.** The average delivery price of the Panel's plants is around 126 €/tonne (117 €/tonne in the North, 139 €/tonne in the Centre and 103 €/tonne in the South).

Contractual quality

Data collection on the quality of the integrated municipal waste management service[17] was closed in April 2020, with the participation of more than 700 operators who, as at 31 December 2018, provided waste collection and transport and/or street sweeping services to 57% of the national population (approximately 34 million inhabitants).

Specifically, as part of the data collection, relating to the calendar year 2018, information and data have been requested from interested parties, including the Municipalities that manage economic activities, for each individual operation in order to:

- identify the indicators and quality standards guaranteed by the operators to users and verify how they are applied, including management of cases of non-compliance with the standards for reasons attributable to the operator;
- verify the dissemination of the Service Quality Charters;
- identify any relationships between the service organisation model and the quality actually provided by the operator;
- verify the dissemination of knowledge and transparency of the conditions for the performance of services.

In addition to the highly fragmented management of the service, data collection also revealed a lack of homogeneity between the different areas of the country, in terms of the services guaranteed by the operator to the user.

In general, from the data collection it is possible to ascertain:

- the **modest dissemination of the Quality Charter of the integrated municipal waste management service** adopted by **35% of the Panel's managers**, equivalent to 37% of the national population. Higher percentages than the national average were found in the operators in the North-East of the country (49%); conversely, the Quality Charter is not very widespread in the North-West and in the Islands (26% and 20%);
- the **limited adoption of contractual quality standards**, with the exception of standards relating to the management of complaints, the management of written requests for information, and the collection of bulky waste. 62% of Panel operators have adopted a procedure for managing complaints, corresponding to 51% of the national population, but only in 36% of cases are the instructions and forms for submitting complaints available on the operator's website. The analysis highlighted a greater dissemination of the procedure in Northern Italy and in the Centre. Furthermore, these procedures were adopted in 80% of medium-large-sized operators; the value dropped to 50% in smaller territorial areas (≤ 5,000 inhabitants);
- the **significant dissemination of contact points** (physical help desk and telephone service) which are also active in small operators (≤5,000 inhabitants), highlighting how these communication tools between operator and user are now standard practice. Users are generally provided with a telephone service (80% of operators,

17 Launched as part of Resolution 226/2018/R/RIF.

equivalent to approximately 54% of the national population), in most cases by means of a free toll-free number. A physical help desk is available in 57% of Panel operators (about 38% of the national population);

- the very low dissemination of compensation to users in the event of non-compliance or disservices due to causes attributable to the service operator, which affects less than 10% of the population;
- the **modest dissemination of transparency and knowledge on the methods for provision of the service** (websites and relative minimum content). There is significant dissemination of the website, which is available in 76% of Panel operators, equivalent to 56% of the national population. Such websites are widely available in Northern Italy, so much so that 91% of the inhabitants of the North-East of the country have access to this communication channel. Coverage remains high in the North-West (72%) and in the Center (61%), while it falls below 20% in the South and stands at around 27% in the Islands.
- the **lack of tools for recording the services performed by the operator**. In this regard, the minimum performance levels guaranteed to users are generally estimated;
- with regard to **continuity of service**, the limited availability of the Emergency Response service (less than 10% of operators) and of tools and procedures for recording suspensions (adopted only in 11% of operators). The continuity indicators are seldom adopted in the sample's operations, with percentages below 10%.

FOCUS ON REGULATORY ACTIVITY IN 2019

The new tariff method

The Authority, considering contributions received within the extensive consultation process with stakeholders, with resolution **443/2019/R/rif of 31 October 2019** approved the **Waste Tariff Method (MTR) for the period 2018- 2021**, in line with the multi-level institutional structure that characterises the waste sector and with elements of asymmetry, in consideration of the specific features of the different territorial contexts.

The new method specifically defines the activities of the integrated waste management service subject to regulation, in order to characterise and quantify the costs that must be covered by the tariff revenue as regulated by the Authority, excluding the activities and costs not relevant to the regulated service (such as rodent control, snow sweeping and clearing, etc.) from the scope of tariff regulation.

In particular, the MTR establishes that **the tariff revenue should be determined on the basis of certain, verifiable data inferable from mandatory accounting sources and that the dynamics for its definition should be subject to a growth limit**, mainly determined on the basis of improvements in the quality of the service and/or the extent of the management perimeter. With respect to this limit, the Authority's asymmetric approach has resulted in the identification of four possible schemes that can be selected by the territorially competent bodies on the basis of the objectives for improving the service provided to users.

With the MTR, the Authority intended to adopt efficient cost recognition rules with the aim to:

- clarify some elements relating to the objectives for improving the quality of services and/or extending the management perimeter, in a renewed framework of responsibility and consistency at local level;
- promote the achievement of environmental objectives in line with the EU and national frameworks, such as, for example, increasing levels of re-use and recycling;
- improve the overall efficiency of operations, also through technological and process innovations, containing the possible overall growth in tariff revenues by introducing a limit to the increase in fees;

- define adjustments to the fees anchored in assessments by the territorially competent body on the services to be provided or on the most suitable organisational methods to be implemented, capitalising on the conscious determination of the relevant institutional level;
- encourage operators to achieve revenues by exploiting the potential inherent in the individual stages of the supply chain, with benefits that must be shared between the operators themselves and the users;
- increase focus on the infrastructural profile of the sector, on the one hand promoting an exhaustive representation of it and, on the other hand, a more balanced configuration in terms of possible economic benefits, envisaging ways of recognising costs that incentivise plant development and the diffusion of new technologies within the integrated waste cycle.

CONSUMER PROTECTION

The system of safeguards for handling complaints and the out-of-court settlement of disputes by customers and end users in the regulated sectors (hereinafter simply the protection system) is applied by means of tools that are widespread at national level and consists of two macro-areas and three levels. The first macro-area relates to information and assistance to customers and end users who interact with operators and managers in the areas of competence of the Italian Regulatory Authority for Energy, Networks and Environment (basic level); the second macro-area (first and second level) concerns the resolution of problems and disputes that may arise in the supply relationship.

From a regulatory point of view, in 2019 the Authority adopted two measures regarding the extension of the protection system to sectors other than electricity and gas (for which the system has been in force since 1 January 2017): one for the water sector[18] and the other for the district heating service[19].

Protection system: volumes of requests entering the Help Desk for the electricity, gas and water sectors 2019)
(see Table 9.1 Vol. 2)

ACTIVITIES AND SECTORS			2019
Basic level	Calls to the call center 800.166.654 (received during service hours)		483,082
	Written requests for information		11,356 (*)
	Requests for activation of special information procedures		28,837
	Second level complaints redirected with information on conciliations	from July 2019 (**)	1,690
Second level	Applications to the Conciliation Service	(compulsory conciliation) (optional conciliation) (**)	16,005
	ADR bodies registered in the Authority's List	(compulsory conciliation) (optional conciliation)	1,819 (***)
	Requests for activation of special resolution procedures		9,198
	Second level complaints		3,830

(*) In 2019, 422 written requests for information, classified as complex, were redirected to the Conciliation Service because they were related to potential disputes.
(**) Since July 2019, conciliation is the only second-level tool available to end users served by larger operators.
(***) Including two applications received for the district heating sector.

Source: ARERA, processing of data from the Energy and Environment Consumer Help Desk, Conciliation Service and Annual Reports of ADR bodies.

18 15 Resolution of 16 April 2019, 142/2019/E/idr established that from 1 July 2019, for end users served by larger operators (with at least 300,000 resident inhabitants served), it would be possible to use the Service conciliation for disputes not resolved with the first level complaint; other users, as an alternative to the conciliation service, can contact the Help Desk by means of a second level written complaint. The aforesaid operators are obliged to indicate, on their website, in new contracts and in the responses to first level complaints that do not resolve the problem raised by the user, how to activate the Conciliation Service and any other out-of-court dispute resolution bodies, with free access, in which these operators undertake to participate.

19 With resolution 408/2019/E/tlr of 15 October 2019, ARERA started the procedure to extend the protection system with the definition, for the benefit of users, of a basic level and a second level, also conciliative, for disputes arising with operators, through the use of instruments managed by the Single Buyer. The procedure is expected to close by the end of 2020.

The Authority's conciliation service

In 2019, customers and end users in the energy and water sectors submitted **16,005 requests to the Conciliation Service, +45% compared to 11,034 in 2018**.

The sectoral breakdown of requests received by the Service in 2019 confirms the prevalence of electricity, with a 51% share of requests submitted (8,165 requests); followed by the gas sector, with 32% (5,167 requests). The water sector recorded a growth of seven percentage points compared to 2018 (1,540, 10% of the total).

74% of the applications received concerned domestic users.

Service levels for the Help Desk call centre (2019) **(see Table 9.5 Vol. 2)**

	2019
Service Accessibility (AS) -%	99.9%
Average waiting time (TMA) - sec.	149
Service level (LS) -%	95.6%

Source: Energy and Environment Consumer Help Desk processing on Nextip data.

In 2019, the Conciliation Service, net of waived procedures, recorded an **agreement rate of 69% on concluded procedures**, up 3 percentage points compared to 2018. In 2019, with the disputes resolved by ARERA's Conciliation Service, customers and end users **obtained or saved more than 10.4 million euros** from litigation with electricity, gas and water operators, with an average closure time of 55 days.

Results of customer satisfaction survey for the conciliation service (2019) **(see Fig. 9.13 Vol. 2)**

	Very satisfied (1)	Satisfied (2)	Somewhat satisfied (3)	Not very satisfied (4)	Not at all satisfied (5)
Total	51%	35%	12%	1%	1%
Summary of results	98%			2%	

Source: Conciliation service.

Social bonuses

In May 2019, the Authority implemented the provisions of Decree Law no. 4 of 28 January 2019 on "Urgent provisions on citizenship income and pensions" (converted, with amendments, by Law no. 26 of 28 March 2019) which, among other things, established the extension of the benefits relating to electricity tariffs granted to economically disadvantaged households and those relating to compensation for the supply of natural gas to the beneficiaries of Citizenship Income and Citizenship Pension.

The slow but steady growth in the total number of bonus beneficiaries continued last year. In total, 1,428,791 bonuses were paid in the energy sectors: 870,277 families received the electricity social bonus (829,209 for economic hardship and 41,068 for physical hardship) and 558,514 families the gas bonus.

447,213 families requested and obtained the water social bonus.

The total amount of bonuses paid for the electricity sector (for economic and physical hardship) and for the gas sector was, respectively, approximately 135.5 million euros and 76.2 million euros. For the water sector, bonuses totalling approximately 13.7 million euros were paid out.

The ratio between potential bonus recipient households in terms of economic hardship (i.e. with an ISEE (Equivalent Financial Situation Indicator) under the threshold for access to the bonuses or who are recipients of the citizenship income/pension) and **households actually subsidised, was between 31% and 36% for energy bonuses**, with a similar ratio also found for the most recent social water bonus (effective from 1 January 2018); this despite the measures implemented by the Authority to disseminate information, including the relaunch of information campaigns for the implementation of the water bonus and projects aimed at involving other bodies who work with vulnerable citizens.

For this reason, in June 2019, the Authority submitted a report[20] to Parliament and the Government in which it stressed the need to adopt mechanisms for the automatic allocation of social bonuses to potential recipients. The proposals put forward by the Authority were transposed by the so-called Fiscal Decree[21], which established the automatic recognition of national social bonuses to eligible families, eliminating the need to submit an application to municipalities and/or tax assistance centres from 1 January 2021. The same measure had also established the extension of the water bonus to the costs of sewerage and purification services and the recognition of the water bonus to CI and CP recipients (from 1 January 2020).

The introduction of the automatic system for the recognition of bonuses will make it possible to bridge the gap between potential beneficiaries and the actual recipients of bonuses, amounting to approximately 2.6 million families. The new system for the automatic recognition of benefits to those entitled will be based on the exchange of the necessary information contained in the INPS databases and in the Integrated Information System managed by the company Acquirente Unico S.p.A., in compliance with the regulations on the protection of personal data. The Authority is responsible for defining the implementation methods of the new system.

20 25 June 2019, 280/2019/I/com.

21 Decree-Law No.124 of 26 October 2019, converted, with amendments, by Law No.157 of 19 December 2019.

SUPERVISION AND LITIGATION

As part of enforcement activities, the Authority monitors the behaviour of operators required to comply with regulatory provisions. Monitoring is initiated following reports or evidence in the possession of the Authority's offices or through the identification, from time to time, of a perimeter of intervention, through the definition of a programme of activities covering one year.
For monitoring activities, the Authority makes use of various instruments, such as surveys, inspections and documentary checks on plants, processes and services.

The objectives22 of the **2019-2021 Strategic Framework** include the expansion of supervisory activities, also taking into account the development of structural activities for the analysis and monitoring of the sectors, as well as the promotion of regulatory compliance through the strengthening of tools, including innovative ones, that make it possible to understand the response of operators to regulatory interventions and to introduce possible corrective actions. The objective of expanding supervisory activities will start as a continuous activity as early as 2019, while the development of new instruments is planned for 2020.

In 2019, supervision activities were carried out according to the methods already consolidated in previous years, in collaboration with the Special Goods and Services Unit of the Guardia di Finanza, based on the provisions of the current Memorandum of Understanding between the two institutions. The activity included:

- **fact-finding and reconnaissance**; the last part of the survey on investments declared by companies was completed during the reporting period and a survey of retail electricity and gas sales companies was launched;
- **on-site inspections**, related to a wide range of topics, with particular attention to priority topics such as consumer protection, service quality, correct operation of the markets and control of distributed incentives and the costs items recognised in the tariff;
- **documentary checks**, in particular relating to: the correct application of brand unbundling obligations and communication policies of electricity suppliers; the correct contribution, by regulated companies, of the Authority's operating charges; the correct disbursement of incentives to energy-intensive companies.

As a result of the supervisory activity, sums of approximately € 33 million were contested or recovered in 2019, in addition to the penalties imposed as a result of the inspections.

Again in 2019, the Authority's **sanctioning activities** continued to play an important role in guaranteeing the implementation of regulations. The number of initiations and closures of sanctioning and prescriptive proceedings, respectively 50 and 37 (with the addition of the 20 simplified procedure closures) is in line with that of previous years.

Among the 57 proceedings concluded, including the 20 successfully initiated with the simplified procedure: 47 ended with the ascertainment of responsibility and the consequent imposition of fines (of these, 4 also with the adoption of a mandatory injunction), 3 proceedings ended with archiving and, finally, 7 ended with the approval of commitments.

22 SO.6 Promotion of regulatory compliance and reduction of the timing of sanctioning proceedings.

The **total amount of the 47 penalties imposed**, of which only 5 have been challenged, **is approximately 63 million euros**, which is largely (more than 55 million) the result of the 4 penalties imposed on the companies of a leading world group active in the steelmaking sector for failure to purchase green certificates.

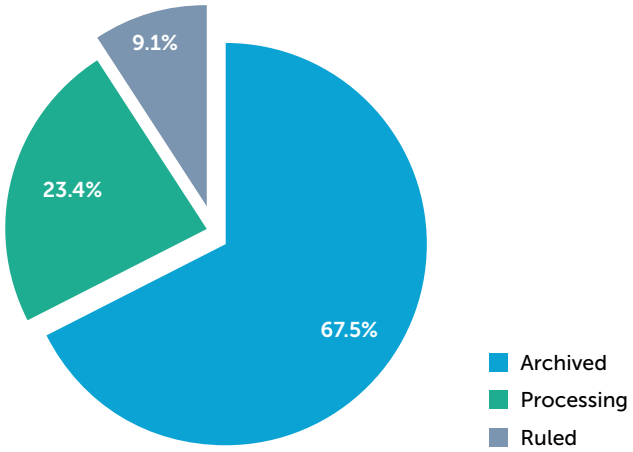
Moreover, also in 2019, the Authority exercised its power to require operators to cease conduct detrimental to users' rights and to pay compensation, for example by ordering a supplier to refund electricity and gas customers the amounts illegally charged to cover so-called "administrative management costs", amounting to approximately 13 million euros.

Finally, in 2019, the Authority approved the **commitment proposals submitted by 7 operators**, as part of the same number of sanction proceedings, **with a total estimated value of the measures contained therein of approximately 14 million euros**.

With regard to the settlement of disputes between regulated parties, in 2019, justice - as an alternative to judicial protection - is once again confirmed as a rapid and easily accessible tool for operators, completely free of charge, to pursue the publicity objectives set out in European legislation and national regulations (primary and regulatory), as well as a fundamental safeguard, widely appreciated by stakeholders, to guarantee the functionality and effectiveness of the energy infrastructure access and use regime. In view of the central role played by this remedy within its enforcement functions, the Authority has included the development and promotion of the out-of-court dispute resolution between operators and the updating of its decision log as part of the strategic objectives of its institutional action in the period 2019-2021, providing for a specific line of action in order to achieve higher levels of regulatory compliance, with a view to reducing litigation.

In 2019, 77 complaints were submitted pursuant to Resolution 188/2012/E/com of which 52 were archived, 18 were being discussed as at 31 December 2019 and 7 were ruled on.

Complaints between operators managed by the Authority pursuant to Resolution 188/2012/E/com (focus on 2019)
(see Fig. 10.6 Vol. 2)



Source: ARERA.

The average time for settling disputes between economic operators pursuant to Resolution 188/2012/E/com, managed by the Authority, is 6 months and 14 days.

The decisions taken by the Authority are respected in almost all cases; in particular, most of the decisions (about 85%) were immediately acknowledged and implemented by the parties, while the remaining (about 15%) were acknowledged and implemented only following reminders from the Authority's Consumer and User Advocacy Department.

Finally, in 2019 the updating of the log of decisions made by the Authority in the exercise of its justice function continued. It is a tool - with no legal value and freely accessible by interested parties from ARERA's institutional website - which aims to promote the widest possible understanding and dissemination of the interpretative guidelines adopted by the Authority in order to meet the need for certainty and uniformity in their application, with a view to regulatory compliance and reducing jurisdictional and legal disputes, as evidenced by the recent increase in the number of cases of archiving complaints.

The analysis of the **outcome of the 2019 disputes** makes it possible to assess the effects of judicial review on the Authority's regulatory acts in the areas within its competence, both with regard to substantive and procedural aspects.

Out of a total of 10,612 resolutions approved by the Authority since its inception (April 1997-31 December 2019), 1,171, equal to 11%, were appealed, and 158, equal to 13.5% of the total number of resolutions appealed and 1.5% of those adopted, were annulled (with final judgement), in whole or in part. **In statistical terms, the resistance index of the Authority's resolutions to judicial review continues to be around 98.5%. In 2019, 31 resolutions were appealed (for 62 appeals), none of which were annulled**.

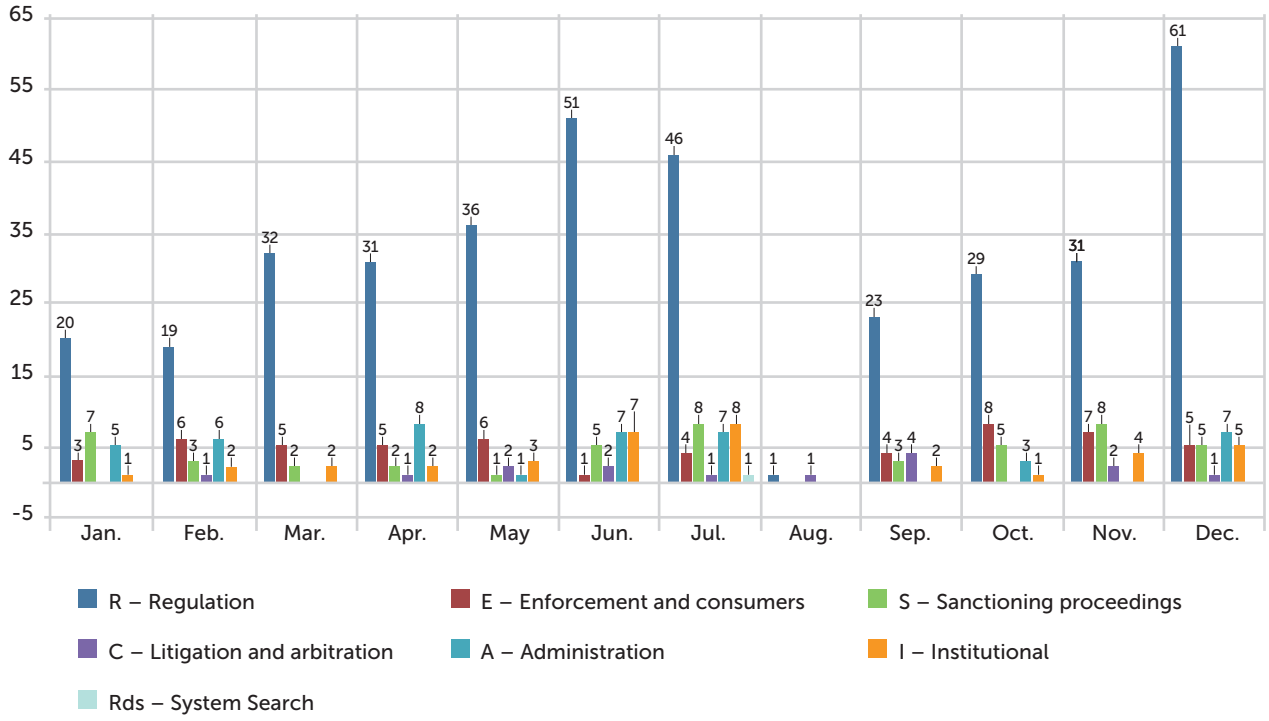
Last year also saw a continued decrease in litigation, already recorded in 2018 in terms of the number of appeals: as mentioned, there were 62 in 2019, compared to 83 in 2018, 180 in 2017 and 199 in 2016. In 2019, compared to 2018, there was also a significant decrease in resolutions appealed on the total of those issued: 31 appealed resolutions, equal to 5.3% of the total of those issued during the year (580); in 2018, on the other hand, the percentage of appealed resolutions was 15.2% of the total issued (715). However, the highest percentage of appealed resolutions remains that of 2017, with 928 appeals, equal to 20.3% of the total resolutions issued in that year.

IMPLEMENTATION OF REGULATIONS, COMMUNICATION, ORGANISATION AND HUMAN RESOURCES

Measures adopted

The measures adopted by the Authority's Board in 2019 amounted to a total of 580 resolutions, consultation documents, briefs, opinions, reports and notifications, with a monthly average of about 50 measures, with significant peaks in the months of June, July and December.

Trend of the measures adopted by the Authority in 2019 **(see Fig. 11.1 Vol. 2)**



Source: ARERA.

The most important macro-areas in numerical terms are those relating to "Regulation" with 380 acts (approximately 65% of the total acts adopted by the Authority in 2019), that concerning "Enforcement and consumers" activities with 54 acts, (9% of the measures produced in 2019) and that relating to "Sanctioning proceedings" with 49 acts (8% of the total). There were lower numbers of measures attributable to the activities of "Administration", "Institutional", "Litigation and arbitration" sector and "System research".

Monthly trend of measures produced for the year 2019 **(see Table 11.2 Vol. 2)**

MACRO-AREAS	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	%
R – Regulation	20	19	32	31	36	51	46	1	23	29	31	61	**380**	***65.52***
E – Enforcement and consumers	3	6	5	5	6	1	4	-	4	8	7	5	**54**	***9.31***
S – Sanctioning proceedings	7	3	2	2	1	5	8	-	3	5	8	5	**49**	***8.45***
C – Litigation and arbitration	-	1	-	1	2	2	1	1	4	-	2	1	**15**	***2.59***
A – Administration	5	6	-	8	1	7	7	-	-	3	-	7	**44**	***7.59***
I – Institutional	1	2	2	2	3	7	8	-	2	1	4	5	**37**	***6.38***
Rds – System research	-	-	-	-	-	-	1	-	-	-	-	-	**1**	***0.17***
TOTAL	36	37	41	49	49	73	75	2	36	46	52	84	580	*100.00*

Source: ARERA.

Communication

The definition of communication objectives is primarily based on the Authority's 2019-2021 Strategic Framework. Communication and information activities are, in fact, considered essential in achieving certain strategic objectives set by the Board.

In the period between 1 March and 31 December 2019, therefore, in addition to the ordinary activities, the following objectives and projects were identified and implemented:

- organisation of the event and the communication campaign linked to the hearings for the Strategic Framework, by supporting the drafting of the document, publication online, drafting of press releases and press sheets;
- with reference to the Annual Report 2019, editing and printing of the volumes, creation of a summary, editing of the President's report, organisation of the presentation event before the Chamber of Deputies, creation of photos and videos of the ceremony, news on social media, in addition to the usual press office activity;
- public presentation of consultation documents for the first waste tariff method and for the transparency rules in the environmental sector;
- creation of a new website layout;
- support to the Institutional External Relations Department (DREI) for the preparation of the technical data sheets relating to the Authority's resolutions;
- launch of the advertising campaign on the Offers Portal and support to customers and users by opening a Facebook page;
- expansion of press office activity by identifying new journalistic targets linked to the new competences (environment/waste) and launching a project involving continuous weekly appearances on radio and television, on Rai channels;
- enhancement of the Authority's international activities, including participation in the WAREG (European Water Regulators) and MEDREG (Mediterranean Energy Regulators) associations, through support for events and coordinated communication, which includes advertising activities on social networks and the creation of photo and video products;

- streamlining of monitoring and management of events by creating a new format for planning, promotion, organisation and related communication activities;
- strengthening of the Authority's presence on social media platforms and proposing a social media strategy;
- design of the "*Fuori dalle Regole*" graphic and organisational format, a cycle of events designed by the Board and reserved for Authority employees;
- strengthening of the involvement of the Authority's Departments in communication activities.

Organisation

The Authority's organisational structure did not undergo any significant changes in 2019, which, in 2018, was revised to take into account the new regulatory and supervisory tasks assigned with reference to the municipal and assimilated waste cycle sector. The organisational model envisages three macro-structures (General Secretariat, Energy Division, Environment Division) and, within these, the Departments (in turn divided into Units) and the Special Offices. Within the Environment Division, a Department dedicated to the Municipal and Assimilated Waste Cycle was set up.

Human resources

The Authority can count on 185 permanent staff. In recent years it has also been possible to activate up to 60 fixed-term contracts. At the end of 2019, there were 166 permanent employees (18 of whom were managers), while 59 employees were hired on fixed-term contracts; there were also 14 workers acquired on secondment or out of office from other public administrations. The Authority can also count on the collaboration of personnel from the Guardia di Finanza aggregated, for inspections, within the scope of a specific Memorandum of Understanding. Employees have an average age of just over 45; over 85% have a university degree.

APPENDIX

ANNUAL REPORT

BEFORE EVERYTHING CHANGED.

2019 DATA FOR PUBLIC SERVICES: ELECTRICITY, GAS, WATER, WASTE AND DISTRICT HEATING.

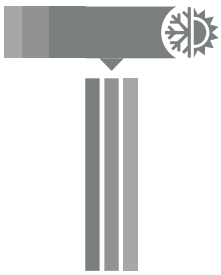
ELECTRICITY

Prices up,
Italy above Eurozone
average

NATURAL GAS

Gas consumption
increases in Italy.
More families
in the free market

Prices, consumption, production and markets. Snapshot of Italy before **Covid-19** in the ARERA Annual Report data: the yardstick to understand what is happening in 2020. To understand the situation of public services before the health emergency.



DISTRICT HEATING

Growth continues in terms of volumes and network extension

WATER

Investments rise while tariffs remain stable

WASTE

New tariff method: transparency and efficient costs. The topic of governance

ARERA
Autorità di Regolazione per Energia Reti e Ambiente

REGULATION

ANNUAL REPORT DATA FOR 2019

PROTECTION FOR CONSUMERS AND ENFORCEMENT

SOCIAL BONUS

226 million euros
for discounts on water, electricity and gas supplies

WHO IS IT FOR?
Families experiencing economic hardship or serious health conditions

ENERGY AND ENVIRONMENT CONSUMER HELP DESK

800 166 654 SPORTELLO PER IL CONSUMATORE ENERGIA E AMBIENTE ARERA

Conciliation Service
16,005 Applications
+ 45% compared to 2018

ELECTRICITY **51%**
GAS **32%**
WATER **10%**

CALLS UP
compared to the previous year

WRITTEN REQUESTS FOR INFORMATION

SPECIAL INFORMATION PROCEDURES ACTIVATED

OPERATOR SANCTIONS

SANZIONE

47 SANCTIONS
for **63 million** euros

CONSUMER COMPENSATION

Electricity Gas Water Waste District heating

1.8 MILLION BONUSES PAID

ELECTRICITY GAS ACQUA

requested by **31%** – **36%** of those potentially entitled

FROM JANUARY 2021 THE BONUS BECOMES AUTOMATIC

Those entitled will no longer need to request it

DOMESTIC USERS 74%

69%
Agreement rate on concluded procedures

10.4 million euros
Savings thanks to conciliation, average procedure duration **55 days**

47% Bonus

21.5% Disputes

9% Rights and regulations

obligation to pay users for a value of **13 million euros**

PROPOSALS FOR COMMITMENTS
for a value of **14 million euros**

ELECTRICITY

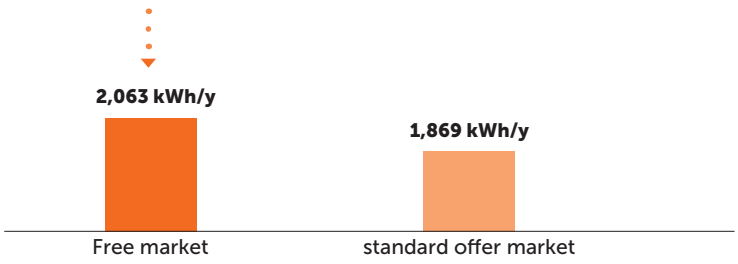
PRICES UP, ITALY ABOVE EUROZONE AVERAGE

THE ENERGY MARKET

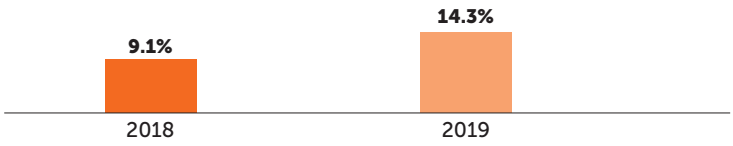
MORE FAMILIES CHOOSE THE FREE MARKET

49.4%
consume more on average

up compared to 46.4% in 2018



SWITCHING ON THE RISE



SUPPLIERS

723

+ 88
compared to 2018

Most important operators (by sales volumes)
- **Enel 36%**
- **Edison 5.4%**
- **Hera 4.9%**

Market concentration down slightly in 2019

AVERAGE NET PRICE OF ENERGY

Free market
euro cents per kWh
24.21

Standard offer
euro cents per kWh
21.50

FAMILIES

GROSS PRICES
Gross prices (energy and transport costs + taxes and charges) are growing for **domestic consumers**

NET PRICES
Marked increase for **net prices** (energy and transport costs)

ANNUAL CONSUMPTION CLASS

Between 1,000 kWh/y and 2,500 kWh/y

Between 2,500 kWh/y and 5,000 kWh/y

ITALY
- **- 5%** eurozone average
- **+ 2%** eurozone average

TAX COMPONENT

ITALY
EQUAL FOR ALL CONSUMPTION CLASSES

EUROPEAN UNION
GROWS AS CONSUMPTION GROWS

ITALIAN DOMESTIC CUSTOMERS PAY LESS THAN GERMANS

€€€

- 26%
Intermediate class between 1,000 and 2,500 kWh/y

- 10%
Highest consumption class

In 2019, on average, Italians paid higher prices than the rest of the Eurozone. Charges and taxes weigh more on domestic and industrial consumers' bills than in other parts of Europe. In Italy, electricity production depends less and less on coal and more and more on natural gas; renewables are stable.
Free market: suppliers and families choosing to leave the standard offer market on the rise.

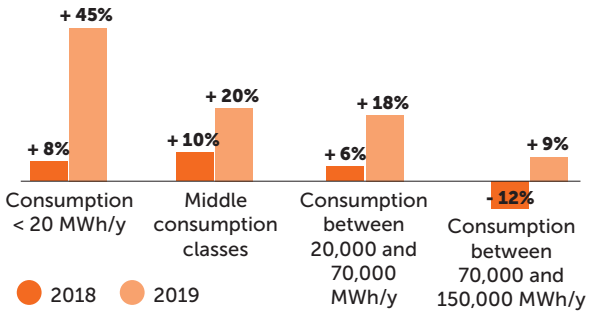
BUSINESSES

ITALY

Increase in net prices (energy and transport costs)

Increase in taxes and charges

Italy - Euro Area: price comparison by class and year



IN 2018, FEWER CHARGES AND TAXES
In 2018, the marked reduction in the charges and taxes component more than offset the greater increases in net Italian prices of almost all classes.

LOWER PRICES THAN IN GERMANY AND THE UNITED KINGDOM

Prices in Italy are lower than those paid by German (except for the first consumer class) and British businesses, but only for the higher consumer classes.

CONSUMPTION: 301.4 TWh

- 1%

- 2% agricultural consumption

- 2% industrial consumption

+ 1% domestic consumption

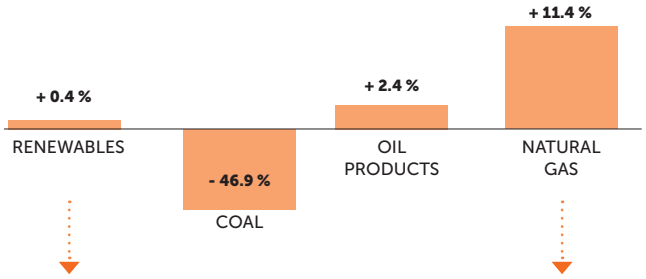
88% of electricity consumed is produced in Italy

- 7% Electricity imports

+ 78% Electricity exports

Gross national production increased by + 0.7%, from 289.7 TWh in 2018 to 291.7 TWh in 2019.

HOW PRODUCTION HAS CHANGED IN ONE YEAR



INCENTIVES

In 2019 it remains unchanged compared to the previous year (63 TWh) with a cost for the system of 11 billion euros.

GAS ACCOUNTS FOR ALMOST HALF OF ALL PRODUCTION (49.1%).

NATURAL GAS

GAS CONSUMPTION INCREASES IN ITALY. MORE FAMILIES IN THE FREE MARKET

THE GAS MARKET

446 suppliers
+ 29 compared to 2018

A CONCENTRATED MARKET

30 companies

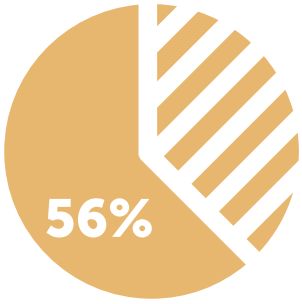
cover **82%** of the gas purchased in the retail market

sell more than **300 million** m^3 per year

ENI 19.4% (+ 0.2%)	ENEL 13.3% (+ 0.1%)	EDISON 11.7% (+ 0.7%)

The top 5 groups control **54.4%** of the market (51.7% in 2018)

FREE MARKET



+ 10.4% CUSTOMERS

+ 2% SWITCHING

WHO SWITCHES MORE?

APARTMENT BUILDINGS

STABLE PRICES
Only the intermediate class records an increase of + 2.8%

HOUSEHOLD AND BUSINESS PRICES HIGHER THAN THE EU AVERAGE
Higher consumer classes are an exception

In Europe natural gas consumption is growing but production is decreasing. The trend is the same in Italy where the growth in consumption (driven by the boom in the electricity sector) is offset by a significant decrease in production.
More Northern Europe and less Algeria under Italian imports from abroad, Russia's share stable.
More and more Italian families are choosing the free market but, like businesses, they pay significantly higher prices than the Eurozone average.

CONSUMPTION: + 1.6 billion m³

PRODUCTION: 4.85 billion m³

IMPORTS: 70.9 billion m³

Volume of imports from abroad
(+ 4.5% compared to 2018)

95.4%
Dependence on Italian imports from abroad (93.4% in 2018)

- 46% Russia
- 18.8% Algeria
- 9.2% Quatar
- 8.7% Norway
- 8% Libya
- 6.8% from other countries

OTHER USES
+ 0.2%
(including automotive)

INDUSTRIAL CONSUMPTION
- 1.7%

GAS CONSUMPTION
71.9 billion m³
+ 2.2%

CIVIL CONSUMPTION
- 3.1%

2019: WARM WINTER

ELECTRICITY PRODUCTION
+ 11%
(- 46.9% coal)

Imports from Northern Europe (Norway and Holland) are growing: from 6.5% in 2018 to 11.1% in 2019

CONSUMPTION: 3,948 billion m³

+ 136 billion m³
(+ 3.6% compared to 2018)

INCREASED GROWTH

+ 5% **495** **billions of m³**

2019
EUROPEAN IMPORTS

+ 86 million
tonnes

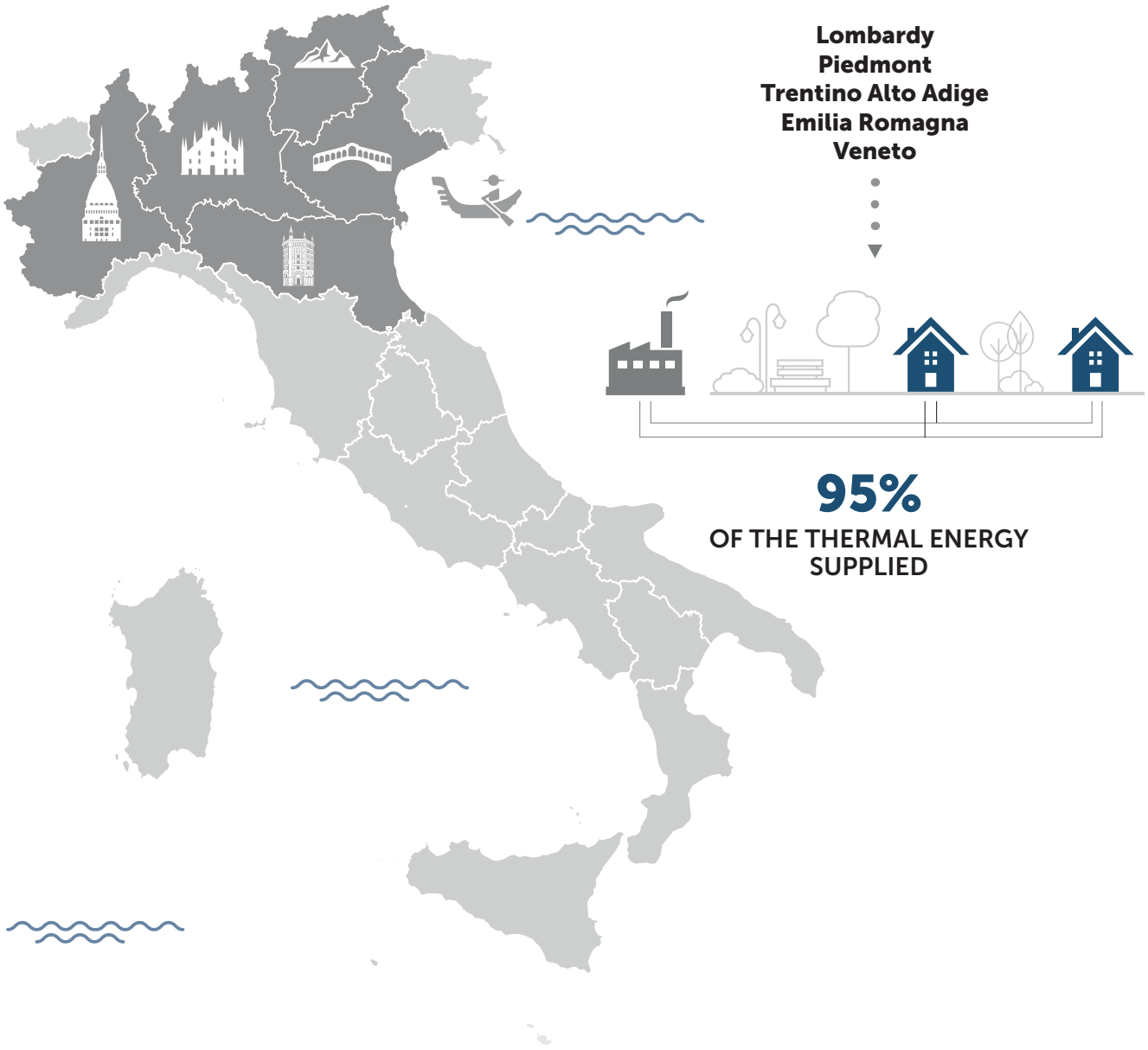
LNG SURGE

World **LNG** trade grows for the sixth consecutive year reaching **354.7 million tonnes**, an increase of 13% compared to 2018.

Double thanks to low prices, caused by the slowdown in demand in the Asian area

GROWTH CONTINUES IN TERMS OF VOLUMES AND NETWORK EXTENSION

THE SERVICE IS PARTICULARLY CONCENTRATED IN NORTHERN AND CENTRAL ITALY



Lombardy
Piedmont
Trentino Alto Adige
Emilia Romagna
Veneto

95%
OF THE THERMAL ENERGY SUPPLIED

The sector continues its growth in terms of volumes and networks extension. In 2019, the definition of the regulatory framework for the district heating and cooling service continued and now is almost complete.

BETWEEN 82 AND 92 EUROS MWh

The net price for a central heating user recorded in the last quarter of 2019

ARERA is completing the regulatory framework of the district heating and cooling service

TOPICS ADDRESSED

exercise of the right of withdrawal

operators 'transparency obligations (price monitoring)

commercial and technical quality regulation (safety and continuity of service)

regulation of the metering service

WATER

INVESTMENTS RISE WHILE TARIFFS REMAIN STABLE

TARIFFS AND INVESTMENTS

2016-2019 FOUR-YEAR PERIOD: TOTAL INVESTMENTS 11.9 billion euros

9 BILLION IN INVESTMENTS THROUGH TARIFFS

Per capita expenditure for investments at national level:

178 euros per inhabitant

in the Center of Italy

250 euros per inhabitant

the average annual expenditure per typical family (3 people with a consumption of 150 m³)

IN CENTRAL ITALY WATER IS MORE EXPENSIVE

A typical family from Central Italy pays

389 euros per year

(2.59 euros per m³ per year)

2.9 BILLION IN INVESTMENTS THROUGH PUBLIC FUNDS

Total per capita expenditure for investments (tariffs + public funds)

Nationally

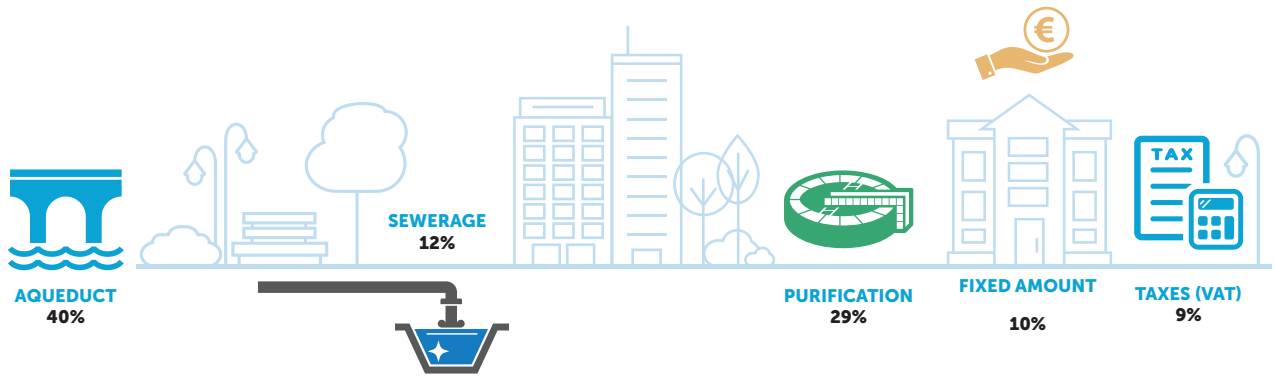
235 euros per inhabitant

In the South and in the Islands

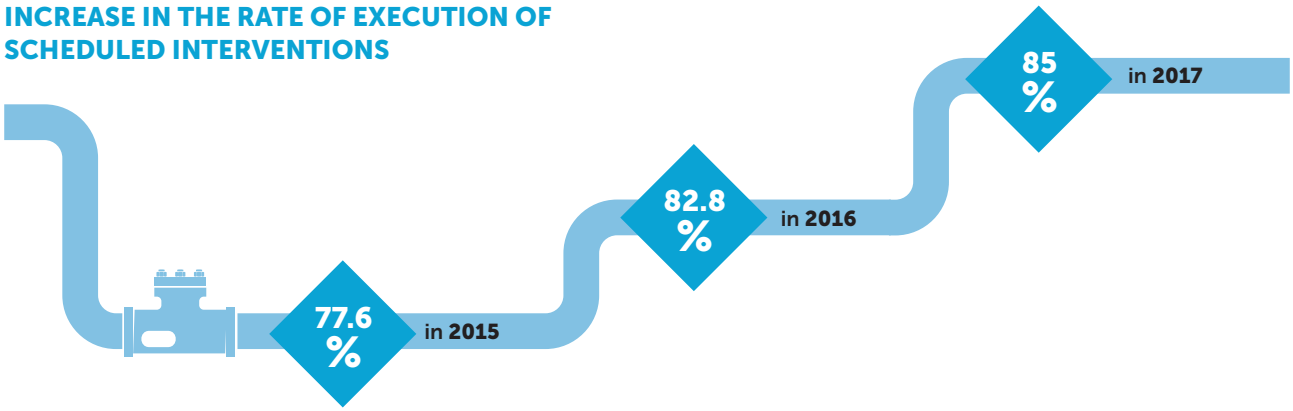
281 euros per inhabitant

Investments made in the water sector amount to almost 12 billion euros, with a significant increase in the percentage of implementation of the planned interventions. Funds for investments come mainly from tariffs which, despite the differences between the various geographical areas, remain stable. There is a "water service divide" which mainly affects Southern Italy and the Islands. Water leaks are the main criticality, which in the south reaches 50% of the water introduced into the aqueduct.

BREAKDOWN OF EXPENDITURE (SERVICE FEES) FOR THE WATER TARIFF



INCREASE IN THE RATE OF EXECUTION OF SCHEDULED INTERVENTIONS



QUALITY **43.7%** **WATER LEAKS**
(total leaks in relation to the total volume of water entering the aqueduct)

ABOUT **50%** **South and Islands**

ABOUT **25%** of investments to contain water leaks in the two-year period 2018-2019 ····▸ **32%** IN THE SOUTH

OTHER INVESTMENTS

14.1% for the adaptation of the sewage system, with the aim of minimising floods and spills

19.6% for improvement of purified water

WASTE

NEW TARIFF METHOD: TRANSPARENCY AND EFFICIENT COSTS. THE TOPIC OF GOVERNANCE

THE INTEGRATED MANAGEMENT SYSTEM

JULY 2019

Launch of **Registry** of Operators

6,530 MANAGERS

88.2%
5,767 Public bodies

11.8%
763 entities of varying legal nature

6,568 OPERATORS

ACTIVITIES PERFORMED

92.3%
Tariff management activities and relations with users

25%
two or more activities

2.4%
all cycle activities

OCTOBER 2019

Tariff method of the integrated waste management service

Transparency obligations towards users

189
PLANTS MONITORED

EXTREME VARIABILITY OF TARIFFS FROM PLANT TO PLANT

35
Incineration plants

TARIFFS PER TONNE
minimum of **66 euros**
maximum of **193 euros**

100 euros per tonne
average rate applied by incinerators

74
Disposal plants (landfills)

TARIFFS PER TONNE
minimum of **9 euros**
maximum of **193 euros**

80
Mechanical biological treatment plants

TARIFFS PER TONNE
minimum of **27 euros**
maximum of **169 euros**

Tariffs and services with significant differences between geographical areas. Attention to quality standards is higher in the North but the South shows due care in relations with the user.
Fragmented governance with a large number of managers, who most of the time coincide with the Municipalities.

FRAGMENTATION OF GOVERNANCE

Only 45 Local Governing Bodies compared to 1,334 Territorially Competent Bodies (98% are Municipalities).

SERVICE QUALITY

700 operators monitored (collection and transport and/or street sweeping)

HIGH FRAGMENTATION IN THE MANAGEMENT OF THE SERVICE

Waste cycle activities carried out by different entities

Multiple managers operating in the same Municipality

Most managers are made up of a single Municipality

UNEVENNESS BETWEEN THE DIFFERENT AREAS OF THE COUNTRY IN TERMS OF SERVICES

Greater diffusion of **quality** standards in the Northern regions

In the South, **relations with service users** are good (contact points and complaints management)


REPVBBLICA ITALIANA