ARERA: THE FIGURES OF PUBLIC SERVICES

The volumes of ARERA’s Annual Report are now on-line.
2023 data for electricity, gas, water, waste and district heating

Rome, 09 July 2024

With the **presentation** of the ARERA Board to Parliament and the Government of the **2023** Annual Report, **the two volumes of the Annual Report** on Regulatory Activities and the State of Services in 2023 by the Italian Regulatory Authority for Energy Networks and Environment - were **published on www.arera.it**.
The information given in the two volumes (partly summarised here) regards the **calendar year of 2023**.
In 2023, international markets **showed great responsiveness as a consequence of increased globalisation and the enhanced centrality of LNG, to compensate for the drastic drop in imports from Russia following the war against Ukraine, which combined with the post-pandemic economic recovery had triggered a crisis in 2022.**
In Italy, the focus was on the end of the market with a reference price for **household gas users**.
In particular, price trends, and their comparison between different European countries based on Eurostat data, are also influenced by the **diversity of public interventions by governments** to protect customers in the energy sectors, interventions that have gradually reduced.
In the Italian case, many of the interventions, which have employed substantial public resources, have continued to ensure a **limitation of prices, which, despite the decreases since the peak of 2022, are not returning to pre-crisis levels.**
Despite the end of gas protection service, more requests for information and problems were registered in the electricity sector.
The number of gas and electricity suppliers decreased for the first time and at the same time the level of concentration improved, especially in gas where the first operator was overtaken in market share.
On the environment side, **planned investments continue in water, the tariffs of which, like those for waste, are increasing due to inflation and rising energy costs**.

SECTORAL DATA FOLLOWS
- *ARERA services for consumers*
- *Electricity*
- *Gas*
- *Water*
- *Waste*
- *District heating*

ARERA SERVICES FOR CONSUMERS

SOCIAL BONUSES: OVER 7.5 MILLION BONUSES RECOGNISED. BROADENING THE SCOPE OF BENEFICIARIES TO COUNTERACT HIGH ENERGY PRICES
In 2023, **the raising of the ISEE threshold to € 15,000 made it possible to benefit from the automatic discount mechanism for around 1.5 million households**, who had obtained an ISEE certificate above € 9,530, but below the new threshold of € 15,000. Consequently, **4.6 million electricity bonuses and 3 million gas bonuses were recognised to direct customers**, i.e. holders of

individual natural gas supplies: the estimated amount corresponding to the bonuses recognised is approximately **€ 1,427 million for the former and approximately € 716 million for the latter**.
As of 31 December 2023, there were 64,828 households with an active hardship bonus (+24% compared with 2022).
At the end of 2023, the system of reinforcing the social bonus in force for the last two years, which had extended the number of beneficiaries, came to an end, returning in 2024 to the normal Isee values (albeit updated for inflation) for eligibility. Instead, the **extraordinary contribution increasing with the number of family members** continued and is automatically applied to those who already receive the electricity bonus, as envisaged in the **2024** Budget Law.

SPORTELLO PER IL CONSUMATORE ENERGIA E AMBIENTE (ENERGY AND ENVIRONMENT CONSUMER HELP DESK): € 25.5 MILLION RECOVERED THROUGH CONCILIATION. CALLS INCREASE, 97% RELATED TO ELECTRICITY AND GAS
In 2023, the Desk call centre received 1,546,809 calls during service hours (+23% compared to 2022), with an average call time of 252 seconds (238 in 2022). In line with previous years, **97% of calls** concerned the **electricity and gas sectors, and the social bonus remains the most recurring topic with 67% of contacts (it was 68% in 2022)**. **Written requests for information** totalled 54,750 (slightly fewer than in 2022) with **almost all concerning the energy sectors** (49,930), compared to 4,631 requests for the water sector and 189 requests for district heating. The top five topics covered by requests relating to the energy sectors were: social bonus (45%), billing (14%), market (12%), contracts (11%) and non-payment of bills and suspension (7%). Requests for the activation of special information procedures for the energy sectors amounted to 44,929 in 2023, up from 2022 (+7%).
In 2023, the **Conciliation Service received 32,677 applications (+34% compared with 2022)**. 38% of conciliation applications were submitted by delegates of customers or end-users other than associations representing household and non-household customers, 35% directly by the customers concerned, and 27% by delegates of CNCU associations. Most cases concerned household users (76%); as regards sectors, electricity (16,216) and gas (8,420) prevailed; followed by the water sector and dual fuel (a single bill for electricity and gas) with, respectively, 3,923 and 3,817 applications, and finally practices activated by prosumers (producers-customers of electricity (240) and district heating (61).
The **agreement rate stands at 70%** (+1% compared to 2022) with an **average conclusion time of 56 days**. Looking at the three main sectors by number of applications, it is gas that has the highest rate of agreement (74%), followed by water (70%) and electricity (65%).
In 2023, more than 25.5 million euros were given in compensation, namely the economic charge obtained by final users or customers through the conciliation agreement (in the form of value recovered also with respect to the value of the dispute or reimbursement, indemnities, recalculation of incorrect bills, waiver of expenses and late payment interest, etc.).
Finally, in **2023**, following a multi-year path, **the compulsory attempt at conciliation for end-users in the water and district heating sectors was made operational** (full implementation of the *system of* individual *protections*) and the procedure to gradually extend the services of the Desk to **end-users in the waste sector** was started.

COMPLAINTS: MORE CUSTOMER PROBLEMS ON ELECTRICITY AND BILLING. OVER 500 THOUSAND WRITTEN REQUESTS FOR INFORMATION TO OPERATORS AND € 2.8 MILLION IN COMPENSATION PAID TO CUSTOMERS FOR LATE REPLIES
In 2023, **61.84% of the 526,623 complaints sent to companies were related to electricity customers,** 32.23% to gas customers and 5.93% to dual fuel customers; the main topics were billing **(42.1%),** contracts (16.53%), the market (14.02%) and non-payment of bills (8.7%), while **requests for information mainly concerned billing** and contracts. Bill adjustments decreased compared to the previous year, while there was an **increase in double bill adjustments**. There were 536,870 written requests for information sent by customers to operators during the year (an increase of 5.97% compared to the previous year).
Of these requests, 61.36% were attributable to the electricity sector, 29.62% to the gas sector and 9.02% to dual fuel customers; the main topics of requests for information from customers in the energy

sectors concern billing (42.54%), contracts (17.42%), the market (8.61%), connections, works and technical quality of supply (6.23%). **Most complaints, rectifications and requests for information come from free market customers**.

More than 65 thousand indemnities were paid to customers during the year, mainly for delays in responding to complaints (97%), totalling more than € 2.8 million.

In addition to analysing the data submitted by suppliers, every year ARERA carries out **a survey of customer satisfaction on the quality of responses to written complaints and requests for information** by interviewing customers who have been answered in writing.

57.6% of customers were satisfied with the responses to complaints; non-professional delegates (friends or relatives of the contract holder) were on average more satisfied than holders and professional delegates. Analysing the data by market type, **free market customers scored above average satisfaction levels** (66.9%), while lower percentages were found for customers on the market with a reference price (54.5%). 82.8% of the customers who resolved the complaint were satisfied while only 23.8% were satisfied among those who did not solve the problem. Prior to the complaint, 53.7% of customers had contacted the company call centre and 16.7% had made a previous complaint. The main reasons for complaints concerned billing (57.7%) and contracts (24.8%). **Factors of dissatisfaction included clarity on resolution time (38.5%) and completeness of information (37.7%).**

The Overall Satisfaction Index (ICS) for 2023, for the entire survey sample, is 64.2 out of 100; a value that is almost **three points lower than the value for 2022** (67).

ELECTRICITY

ELECTRICITY: IN 2023 PRICE TENSIONS REMAIN BUT THE DISTANCE FROM EUROPE REDUCES. GERMAN HOUSEHOLDS PAY THE MOST, FOLLOWED BY ITALIAN HOUSEHOLDS

As in 2022, **electricity prices** in Italy and Europe were affected in the **first part of 2023** by **international tensions in the wholesale markets**, albeit without the peaks of the previous year. **The increases were reflected in household bills, despite the extension of public interventions by the governments of many European countries, including Italy.** The trend for the year was, however, a return to a **'new normal'** characterised by **more responsive and globalised markets, where prices settled at higher levels than in the past**.

Average electricity prices for households in 2023 show increases of +6% in Italy (with average final prices of 38.64 c€/kWh), a far cry from the +40% increase of the previous year. By contrast, the **change in the euro area** remained more or less stable, with **+12.6%** (31.45 c€/kWh) in **2023** compared to +13% in 2022.

The increase in the gross price in Italy is mainly due to the charges and taxes component, which, compared to the previous 12 months, changed significantly (+54.4%) due to the **gradual reintroduction of general charges in the bill**; **net prices**, in fact, given by the sum of the price of energy and sales and network costs, recorded a small negative change **(-2%)**, going from 31.74 c€/kWh to 30.98 c€/kWh. By contrast, **in the euro area there was an increase in net prices** (+16.6%, from 22.48 to 26.21 c€/kWh), while there was a slight decrease for charges and taxes (-4%, from 5.46 to 5.24 c€/kWh).

Thanks to the lower increase in Italian gross prices, the **spread** with respect to the euro area, which had reached +30% in 2022, was **reduced to 22.9%**, just as the difference in net prices (i.e. net of charges, taxes and fees) fell from +40% to +18.2%. A comparison with the prices of European countries comparable in size to Italy shows that, in 2023, **German** households are **back in first position with the highest prices** (42.03 c€/kWh) **followed** by Italian households, which had surpassed them last year (38.64 c€/kWh), French (32.65 c€/kWh) and Spanish (26.02 c€/kWh) .

Looking at consumption classes, **the differential between Italian gross prices and those of the euro area is positive for all classes,** highest for the first with lower consumption (+23.7%) and lowest for the last with higher consumption (+5%). The spreads in net prices are also all positive, but with smaller values: +9% and +12 in the DB (consumption from 1,000 to 2,500 kWh/y) and DC (consumption from 2,500 to 5,000 kWh/y) classes, in which the highest consumption in our country is concentrated; +2.4% in the DE class (above 15,000 kWh/y), which represents a residual share of household consumption (about 2%).
In particular, in the intermediate consumption class DC (consumption from 2,500 to 5,000 kWh/y), which is representative of the Italian household, both because it has the greatest weight in terms of energy sold, and because in 2023 it also included the typical customer normally of reference for ARERA, it can be observed that the gross price in Italy increased by only 5.9% compared to higher increases in other countries: 14.5% in France, 22.9% in Germany and 35.4% in the euro area. Considering pre-tax values, Italian households with consumption in this class pay a price of 35.71 c€/kWh, which is +46.5% compared to French households (24.38 c€/kWh) and +49.7% compared to Spanish households (23.86 c€/kWh), while they pay 12.4% less than German households (40.75 c€/kWh).

ELECTRICITY: IN ITALY, CONSUMPTION (-2.9%) AND PRODUCTION (-6.9%) DECLINE, HALF OF ALL GENERATION STILL COMES FROM GAS (45%). RENEWABLES ROSE TO 44%, DRIVEN BY THE STRONG RECOVERY OF HYDROELECTRIC POWER (+42.4%). PHOTOVOLTAICS (+9.2%) AND WIND POWER (+13.7%) STILL GROWING

Electricity consumption fell by 2.9%, the decrease affected almost all sectors, with the largest declines seen in agriculture (-6.5%), industry (-4%) and the tertiary sector (-2.1%), the household sector (-3%), and the residual 'other' sector (-10.5%), while **transport and fishing recorded increases** of 5.6% and 5.2% respectively.
Just under 84% of domestic demand was met by domestic production and 16.8% by the foreign balance (the highest value since the turn of the century). These values compare with those of 2022 (87.2%) and 2021 (87.5%) and confirm the **decline** observed in recent years (in 2020 it was 90.2%).
Gross domestic production fell by 6.9% to 264.3 TWh (284 TWh in 2022), **mainly due to the -19.3% drop in thermoelectric production only partially offset by the +15.6% increase in renewable energy resources**. In detail, the minus sign appears for all thermoelectric production items: solids (-41.5%), petroleum products (-26.9%) and natural gas (-15.9%). Among renewable energy resources, hydroelectric (+42.4%), photovoltaic (+9.2%) and wind power (+13.7%) generation increased, while geothermal (-2.5%) and bioenergy (-9.1%) decreased.
In 2023, **imports** increased from 47.4 to 54.5 TWh (**+15%**, +7.1 TWh compared to the previous year), while **exports decreased** by a higher percentage (-24.6%, from 4.4 to 3.3 TWh); as a result, the increase in the foreign balance was amplified: compared to 2022, in fact, foreign electricity entering the Italian system increased by 19%.
In 2023, the Enel group is confirmed as the leading producer with a 16.9% share (down from 18% in 2022) followed by Eni at 9.5% (stable compared to 2022), which ranks first in terms of thermoelectric generation (16.5% vs 15.2% for Enel).
Enel is also confirmed as the top operator in production from renewable energy resources, with 22.4% of gross generation, with a decline share but one that still remains significant in hydroelectric (37.8%) and all geothermal production. Among the top 15 groups contributing to production from renewable energy, the shares in wind power of Erg (10.6% vs 11.5% in 2022) and Edison (9.4%, unchanged from the previous year) and the share in bioenergy of A2A (14.7% vs 13.3% in 2022) remain significant, although decreasing compared to 2022.
Overall, for the year 2023, the **costs of incentivising renewable energy resources amounted to approximately € 7 billion (they were € 6.4 billion in 2022 and € 10.5 billion in 2021)**, an increase compared to the previous year when, due to high electricity market prices and the incentive mechanisms described, the cost of some incentive instruments was cancelled out. Up until 31 March

2023, moreover, the costs related to the special trade regimes (guaranteed minimum prices and on-the-spot trading) were charged to general taxation.

ELECTRICITY: OVER 76.5% OF HOUSEHOLDS ON THE FREE MARKET. FAMILIES PREFER FIXED-PRICE, DISCOUNT AND GREEN OFFERS. THE PROTECTION REGIME BECOMES CHEAPER THAN FREE. THE NUMBER OF SUPPLIERS IS REDUCED FOR THE FIRST TIME

At end 2023, the number of household withdrawal points was 30.2 million, of which just under 8.9 million were served in the protection regime offer and around 21.4 million in the free market. As of 1 July 2024, there are 3.6 million vulnerable customers in the 'Protection Regime Offer' market and 8.4 million vulnerable customers who have chosen the free market. The non-vulnerable customers automatically switched to the gradual standard offer service are also about 3.6 million, while about 14.7 million are in the free market. Household points served **in the free market had risen to 70.7% at the end of 2023** (**64.8% in 2022**), accounting for 75.5% of the total energy purchased (68.5% in 2022). **As at 1 July 2024, the share of the free market is 76.5%.**

The geographical analysis of consumption reveals that in 2023, the share of households purchasing electricity on the free market exceeded 65% in all regions (only eight in 2022); the number of regions in which more than 70% of household withdrawal points are served in the free market has grown from two to nine.

The fall in prices, although still high compared to pre-crisis levels, and the imminent end of protection for non-vulnerable households are among the likely causes of the increase in switching activity among households, which grew by 1%, both in terms of withdrawal points and volumes: 18.9% of households (approximately 5.7 million withdrawal points, accounting for 24.5% of the energy acquired by the household sector) changed supplier at least once during the year.

In 2023, the number of active suppliers drops for the first time from 806 in 2022 to 765. Volumes sold to the end market amounted to just over 241 TWh (-4.4%) to 37.3 million household and non-households +0.2%).

The Enel group remains, as always, the dominant operator in the Italian electricity market with a share of 33.8%, **slightly down** from 36.3% in 2022, rising to **41.6% for the household sector alone**, followed by A2A (8.4%), Hera (5.9%) and Edison (5.4%). The **level of concentration in the total market has reduced slightly:** the share of the top three operators (corporate groups) went from 48.7% of total supplies in 2022, to 48.2%.

Last year, **66.8% of households signed a fixed-price contract in the free market** while 33.2% opted for a variable-price: in 2022 these percentages were 76.7% and 23.3% respectively, probably also as a consequence of the **decrease throughout 2022 (and for the first part of 2023) in the availability of fixed-price contracts**. Furthermore, on the price front, the drop in 2023 had a significant impact on variable-price contracts: households paid an average of € 227.33/MWh for the energy component, about € 150/MWh less than in 2022.

33.7% of households have signed a contract that includes a discount, while with regard to the presence of additional services there is a confirmed preference for the **purchase of energy produced from renewable resources (51.7%)** and for **ancillary energy services** such as digital and collaborative tools to control consumption and energy costs, tools to increase energy efficiency, professional services such as telephone assistance, plant maintenance, and insurance on energy systems **(37.6%)**.

On the subject of prices for households, however, it should be noted that after the 2022 parenthesis, the free market again presents higher values than the protection regime offer, except for customers with the highest annual consumption (above 5,000 kWh/year).

ELECTRICITY: IN 2023 AFTER SMALL ALSO MICRO ENTERPRISES IN THE GRADUAL STANDARD OFFER SERVICE

As of 1 April 2023, increased protection also ended for the last categories of non-households, micro enterprises and 'other uses' (small enterprises had already transited in 2021). For all customers who had not signed a contract in the free market on that date, the Gradual Standard Offer Service was activated without any interruption of supply. The Service is provided by the companies awarded the tender in the 12 territorial areas into which the country has been divided. **The contractual terms are those of the PLACET (free price offers under uniform contractual conditions) offers, while the economic terms provide for the alignment of the supply price to the PUN and the application of a price component to cover the marketing costs of the service defined on the basis of the tender prices**. **The price of the service is unique nationwide.** In 2023, **1.5 TWh were sold** in the Gradual Standard Offer Service for micro enterprises to **827,000 withdrawal points**.

GAS

GAS: CONSUMPTION STABLE GLOBALLY, FALLS IN EUROPE (-6.9%), WORLD PRODUCTION RETURNS TO 2021 LEVELS. EU PIPE IMPORTS DOWN (-24%) BUT LNG UP (+2.7%). STORAGE FILLING TO MORE THAN DOUBLE BY 2022

2023 saw a contraction of 0.69% in global gas consumption, which fell from 4,109 to around 4,095 billion cubic metres (bln m^3), but **in Europe the drop was more significant (-6.9%, -7.3% if considering the EU alone)**. In Asia Pacific and China, demand rebounded at +2.9% and +7.4%; the US, on the other hand, stopped at +1%. Considering the top five markets of the European Union, **the largest reduction in consumption was observed in France (-11.7%), Italy (-11.2%) and Spain (-10.2%)**, while for the Netherlands the contraction was 4.9% and for Germany 3.5%.

In 2023, world gas production returned to 2021 levels, regaining by +0.36% the modest decline of the previous year, and within this, the **growth of unconventional gas continued, accounting for 32% of the total** (31% in 2022). By contrast, **in Europe, natural gas production decreased significantly** to 215 bln m^3: this decrease was mainly due to the reduction in production from Norway, the Netherlands and the United Kingdom, with decreases of 7 bln m^3, 5.5 bln m^3 and 4.6 bln m^3, respectively.

In 2023, EU countries imported 155 bln m^3 of **gas by pipeline** (-48 bln m^3), a decrease of 24%, mainly driven by the **reduction of imports from Russia and Norway**. The latter, however, remained the main natural gas pipeline supplier for the EU, with 54% of the total supply, while Algeria accounted for 19% and Russia 17%. There were marginal increases in the share of supply from the remaining suppliers: Azerbaijan increased from 6% in 2022 to 7% in 2023 and Libya from 1% to 2%. By contrast, **LNG imports** to Europe **grew**, albeit slightly, to 134.3 bln m^3 (+2.7% compared to 2022), mainly **coming from the Americas (50%)** followed by Africa (19%), Russia (13%) and the Middle East (14%). **Among the largest EU LNG importers**, **only Italy showed an increase compared to 2022: +13.2%**, compared with significant reductions in the **Netherlands (-35.1%), France (-15.5%) and Spain (-13.9%). In Italy, the regasifier in Piombino became operational** and received 1.1 bln m^3 during the year. Overall, in Europe, the utilisation rate of LNG terminals, compared to the maximum input capacity on the networks, fell from 63% in 2022 to 58% in 2023. Finally, at the close of the cold season (end of March - beginning of April), the **volume of gas in European storages** reached the level of 60.8 bln m^3, **more than double the levels of 12 months earlier** (28.5 bln m^3).

GAS: SIGNS OF PRICE REBALANCING GLOBALLY BUT REMAIN ABOVE HISTORICAL AVERAGES. LNG PRICE DIFFERENCE BETWEEN ASIA AND EUROPE REDUCED TO ZERO. ON THE ITALIAN PSV THE HIGHEST PRICES IN EUROPE

In 2023, natural gas markets showed signs of rebalancing after a period of shock, with gas prices rising from lows in 2020, during the COVID-19 pandemic, to record highs in 2022, in the context of the energy crisis in Europe. **Spot gas prices have dropped significantly due mainly to two consecutive mild winters, but the 'new normal' keeps them above historical averages.**

In 2023, the price of natural gas at European borders was € 41.2/MWh (it was € 101/MWh in 2022). **The spread between the price to Europe and Asian LNG was almost reduced to zero, from € 43/MWh last year to 30 cents in 2023**, highlighting a trend towards convergence between macromarkets, first and foremost the European and Asian markets, thanks to the growing weight of LNG in world gas trade. **The price at the European hubs has not deviated from that at the borders:** € 40.5/MWh at TTF (Netherlands), € 42.9/MWh at PSV (Italy) and € 41/MWh at THE (Germany). The price at PSV remains higher than all others, with a differential to TTF of € 2.4/MWh.

GAS: IN 2023 IN ITALY CONSUMPTION STILL DOWN AT -10.4% AND LESS DEPENDENCE ON IMPORTS. FIRST SUPPLIER ALGERIA, RUSSIA FROM 40 TO 4.7% IN 2 YEARS. LNG BOOM

In 2023, **net consumption of natural gas decreased by 7 billion cubic metres to 60.3 billion cubic metres (-10.4% compared to 2022)**, mainly due to a decrease of 5.2 bln m^3 in the thermoelectric sector (-18.5%), as well as a decrease of 2.4 bln m^3 in the household sector (-12.9%), while consumption in the industrial sector fell by 0.6 bln m^3 (-4.6%). Only the trade and services sector bucked the trend, with consumption rising by 1.1 bln m^3 (+18.3%), partially cushioning the overall decline. **Domestic** natural gas **production** recorded **yet another decrease** (-12.2%, significantly higher than the 2.4% decrease recorded in 2022) to 2,728 bln m^3; net imports also declined to 8.8 bln m^3 (-12.9% compared to 2022) due to the drop in gross imports, which fell by 10.8 bln m^3 (-14.8% compared to 2022), only partially offset by the reduction in exports (-2 bln m^3), which were growing in 2022. **The level of foreign dependence has decreased:** in 2023, 96.3% of the gas available in Italy came from abroad (it was 99% in 2022). **The ENI Group controls 62.6% of production (66.3% in 2022).**

As a result of the sanctions imposed by the EU, gas imports from Russia have almost fallen to zero over the past two years: from 29.2 bln m^3 in 2021, they fell to 2.9 bln m^3 in 2023. The share of Russian gas in the coverage of national needs increased from 40% in 2021 to 4.7% in 2023. **The substitution of Russian gas took place partly by increasing the amount of gas arriving in Italy via pipeline from other countries with which Italy is connected (mainly those from Algeria and Azerbaijan) and partly by increasing the share of liquid natural gas arriving in Italy via LNG carriers.** LNG imports, in fact, have increased by almost 70% in two years.

In greater detail, the origin of imported gas in 2023 sees several countries with significant quantities: 25.5 bln m^3 from **Algeria**, 10 bln m^3 from **Azerbaijan**, 6.8 bln m^3 from Qatar, 5.3 bln m^3 from the **United States**, 6.6 bln m^3 from **Norway and the Netherlands**, 2.5 bln m^3 from Libya and the remaining 2 bln m^3 from other countries. In 2023, some 14.5 bln m^3 arrived by ship: 88% of all **LNG** imported came from **Qatar, Algeria and the United States**, which together accounted for 94% in 2021.

Eni retreats considerably, remaining first in importers, with a market share of 32.3% (41.9% in 2022). The top three importers supplied 63.8% of the gas that came into the Italian market (70.1% in 2022). Exports declined (-2 bln m^3), which recorded abnormal growth in 2022.

In the thermal year 2023-2024, 100% of the space offered at auction was allocated. As of 31 October 2023, the filling of the storage facilities amounted to 13.1 bln m^3 and the nominal peak delivery reached in the year was 260 million standard cubic metres/day: 247.5 mln m^3/day in Stogit storage, 9.01 mln m^3/day in Edison storage and 3.47 mln m^3/day in Ital Gas Storage storage.

GAS: 481 ACTIVE ENTERPRISES, FALLING FOR THE FIRST TIME. THE LEVEL OF MARKET CONCENTRATION IS REDUCED WITH THE ENI GROUP OVERTAKEN BY EDISON AND ENEL. MORE THAN 72% OF FAMILIES ARE ON THE FREE MARKET

In 2023, the number of active suppliers in the retail market decreased for the first time since the early 2000s by a substantial amount (-34 compared to 2022) to a total of 481 active companies. Of these, only 26 sold more than 300 million cubic metres, covering 84.1% of all gas purchased in the retail market.

In 2022, the **level of concentration on the final supply market reduced slightly**. The top three groups control 41.9%, while in 2022 the share was 44.3%. Considering the top five groups, the market portion served rose to 54.9% (55.4% in 2022). The Eni Group (13.7%), for the first time, was not in first place,

having been overtaken in overall sales quantities by the two historically trailing groups, Edison (14.3%) and Enel (13.9%).
Considering only the household sector, the share of volumes purchased on the free market in 2023 reached 74.1% for households and 89.6% for condominiums (both values net of fuel gas). In terms of withdrawal points, **in 2023, the share of households that acquired gas in the free market rose to 72.1%; in 2022, it was 66.8%.**
In 2023, the overall switching percentage was 15.2% in terms of customers and 17% in terms of volumes: compared to 2022, the percentages are increasing for all types of customers, **due to the end of protection**.

GAS: IN 2023 ITALIAN CUSTOMERS PAY LESS THAN THE EUROZONE AVERAGE THANKS TO HIGHER TAX CUTS
Contrary to what was observed in 2022, in 2023 Italian natural gas prices for household use became lower than the average price in the euro area. More precisely, while in 2022 Italian customers paid 13% more than the average Eurozone customer, in 2023 **they paid 8% less**. The extension of public interventions, the effects of which on gas bills were almost entirely exhausted at the end of April 2023 (except for the 5% preferential VAT until the end of the year), practically wiped out the item charges, taxes and fees, offsetting the increase in gross prices in Italy, on average +2.3% (from 11.10 c€/kWh to 11.36 c€/kWh). This increase can be attributed to increases in energy prices (from 7.54 to 8.72 c€/kWh), which account for 77% of the total price, and network costs (+30%). Looking at the comparison with the main European countries, i.e. those whose markets are more similar in size to Italy's, **Italy's average gross price (11.36 c€/kWh) was lower than those of Germany (-5%) and France (-1%), but 8% higher than that of Spain, where households in 2023 paid an average price of 10.52 c€/kWh.**
Looking at the spreads with reference to consumption classes: Italian customers in class D1 (up to about 520 m^3/year) paid 4.2% less than those in the Eurozone countries (in 2022 the value was +5.8%); for those in class D2 (520-5,200 m^3/year) the 8.9% disadvantage for Italian customers in 2022 became a 13% advantage in 2023; finally, for the last D3 class (over 5,200 m^3/year) the prices of Italian customers are essentially aligned with those of the Eurozone. When considering energy, Italians pay more in all consumption classes: +20.1% in D1, +5.3% in D2 and +8.8% in D3.
The tax incidence was particularly advantageous in Italy in 2023 and contributed to the reduction of Italian final prices, even for customers with higher consumption; in the first class this component was -139% lower than in the Eurozone, 105% lower in class D2.

WATER SERVICE

WATER: INVESTMENT EXPENDITURE IS CONFIRMED AT AROUND € 13.6 BILLION. THE INTERVENTIONS SCHEDULED HAVE BEEN CARRIED OUT
During 2023, ARERA continued its investigations aimed at approving the two-year (2022-2023) update of tariff preparations. As at 31 December 2023, the acts of tariff determination adopted by ARERA, for the **two-year period 2022-2023, concerned a total of 67 managements, affecting 30,830,746 inhabitants**.
With reference to the sample, made up of 130 managements for which the proposal for the biennial update of tariff arrangements was sent to ARERA (serving a total of 48,736,089 inhabitants), the average variation (compared to the previous year) of the charges applied to users in 2023 is equal to +4.56% with a certain heterogeneity at a geographical level: +3.67% in the South and Islands, +3.97% in the North-East, +4.22% in the Centre and +5.87% in the North-West. On the basis of the PoI transmitted to ARERA for the same sample, **the investments planned for the four-year period 2020-2023** - gross of the forecasts regarding the availability of public financing for the construction of water facilities - are, in *per capita* terms, equal to **€ 275/inhabitant at a national level (corresponding to an annual expenditure for investments of € 69/inhabitant); the highest value is found in the**

Central area, with € 337/inhabitant for the four-year period 2020-2023. Including in the sample also the largest wholesale suppliers and including the data of utilities excluded in the previous analyses due to the presence of some outliers, the investment expenditure related to a panel of 139 utilities serving 49,463,872 inhabitants amounts in total (also considering the availability of public funds) to **€ 13.6 billion for the four-year period, rising from € 2.5 billion in 2020, to € 3.2 billion in 2021 and 2022, and to € 4.6 billion in 2023**.
The verifications carried out with reference to the costs of fixed assets calculated in the tariff confirmed the general improvements already recorded last year in the capacity to **realise planned investments** (albeit with a certain variability among the panel's managements), the rate of which at a national level remains around **100%** (despite the drop recorded in 2021 due to the slowdown of construction sites for COVID), **with lower values in the South where they drop to 77%**.

WATER: € 345/YEAR AVERAGE SPENDING FOR A TYPICAL HOUSEHOLD MADE UP OF 3 PEOPLE. IN SPITE OF IMPROVEMENTS, THERE ARE STILL CRITICAL ISSUES ON OUTAGES AND SEWERAGE NETWORKS, ESPECIALLY IN THE SOUTH AND ISLANDS
In 2023, **the average expenditure of a three-person household with an annual consumption of 150 m^3** is nationwide **€ 345/year** (€ 2.30 per cubic metre consumed). **The figure is lower in the North-West (€ 254.5/year) and higher in the Centre (€ 421.8/year). The value, however, stops at € 367/inhabitant in the South and Islands area.** Looking at **the items that make up the bill of household users**, again with consumption of 150 m^3/year, it appears that about 38.8% of the expenditure is attributable to the water supply network service, for which € 133.7/year is spent nationally, 12% is attributable to the sewerage service (€ 41.4/year) and 29.5% to the water treatment service (€ 101.9/year). Finally, the fixed fee accounts for 10.6% (€ 36.6/year) and taxes for 9.1% (€ 31.4/year). Again in 2023, as already noted in the last version of the Annual Report, compared with the data collected with reference to the base year (2016), there would appear to be progress made in the process of comprehensive improvement in the technical quality indicators identified by ARERA and a slight but stable growth in the number of operators for which facility and quality data is periodically surveyed by the governing Bodies, also with reference to the localised management teams in the geographical area of the South and islands. Specifically, **in 2023, at the national level, the value of water leakage (M1) averages 41.8% or 17.9 m3/km/day, with lower values in the North and higher average values in the Centre and the South and Islands**. The same misalignment at territorial level is also found in the data on **service interruptions, which is strongly influenced by some critical situations at territorial level**. Almost 60% of the population is served by utilities that have ensured good continuity of service, showing a duration of **interruptions** of less than 3 hours/year per user. On average, however, at the national level, the value of the macro-indicator is around 59 hours/year per user. The greatest difficulties in maintaining adequate levels of service continuity are **to be found in the South and Insular area**, where an average value of interruptions per user per year of 227 hours was recorded, while values were on average lower in the North West and North East (both below one hour) and in the Centre (29.4 hours/year per user). It should be noted, however, that compared to the base year data, there was an average reduction in the M2 macro-indicator of 26% (it was 32% last year). Finally, as regards the sewerage system, the average figure for the frequency of flooding and sewerage spills is **5.0 per 100 km of sewerage network** (with a peak of 11 per 100 km in the South and Islands), **22% of the flood drains are still to be adapted** to current regulations and 7% of the flood drains are not controlled. The analysis of the investment needs for the 2022-2023 period at a national level **confirms the weight of the investments aimed at reducing water leakage** (which has been guiding the priorities in the planning of the sector since the first surveys carried out by ARERA), **strengthening it due to the dual effect of the injection of resources allocated for the same purpose by the National Recovery and Resilience Plan (PNRR) and REACT-EU** (already represented in the last Report), **and the greater population of the sample of the South and the Islands (27.5% of the total planned investments)**. This was followed by investments to **improve the quality of purified water at 16.1%**, investments to reduce **water shortages at 14.99%**, and investments to upgrade the **sewerage system at 13.1%**. The share of investments in integrated water

service facilities that cannot be directly attributed to specific technical quality objectives set by ARERA is confirmed at 10.5% as per the previous data. In general service terms, the national framework for the two-year period, also for the reasons explained previously, is more oriented towards planned investments in water supply network facilities (48%), also considering the two prerequisites linked exclusively to water supply network chain profiles) than in sewerage networks and water treatment plants (overall 40.25%), although the differences already reported remain between individual geographical areas: the North-West is the only area with a greater need for sewerage and water treatment facilities, while in Central Italy, Southern Italy and the Islands, the gap between the two phases increases in favour of water supply network facilities, with the latter coming in above the national average.

WASTE: THE NUMBER OF OPERATORS STILL RISING AND NOW AT OVER 8,400. THE TARIFF METHOD COVERS 92% OF THE INHABITANTS. UPWARD TREND (+1%) FOR SEPARATE WASTE COLLECTION AND NORTH AT THE TOP

As of May 2024, **8,419 subjects** were registered in ARERA's Registry of Operators, an increase of 318 new registrations compared to last year. Confirming that the process of **territorial organisation of the service is still incomplete**, the number of entities registered as territorially competent bodies remains high (at 3,389), albeit gradually decreasing. In 2022, **national municipal waste production came to approximately 29.1 million tonnes, down 1.8%** on 2021. The previous year 2021 was characterised by a turnaround, in line with the post-pandemic economic recovery of the domestic economy. In contrast, the production figure for the year 2022 again shows a contraction, in contrast to the increases recorded for the socio-economic indicators, such as gross domestic product and final consumption expenditure on the economic territory, respectively 3.7% and 6.1%. On the other hand, **the upward trend in separate waste collection is confirmed, increasing by more than one percentage point compared to 2021**, from 64% to 65.2% (in terms of quantity, almost 19 million tonnes of sorted waste).

At the territorial level, the North-East and North-West regions maintain high levels of separate waste collection, confirming also for 2022 the exceeding of the 65% target set for 2012 by Legislative Decree No 152/06, with results of 74.3% and 69.8% respectively of the total municipal waste produced, while the Centre stands at 61.5% and the South and Islands at 57.5%.

In addition, during 2023, the transmission to ARERA of tariff preparations for the regulatory period 2022-2025 continued. There has been a **positive increase in the number of parties complying with tariff regulation**: compared to the 5,987 tariff proposals recorded in 2022, **6,202** have now been submitted - of which 6,175 are municipal and 27 multi-municipal - relating to 6,563 municipalities (83% of Italian municipalities), **for a total of 54.5 million inhabitants served, or 92% of the national population**.

The analysis of the Economic and Financial Plans available to ARERA, with particular reference to the year 2023, shows an **average growth** limit of **tariffs** determined by the territorial competent entities (ETCs) of **3.6%**, while the actual change in tariff revenues is more contained and equal to 2.3%, in continuity with the values of 2022. On average, the growth limit was respected and determined to be higher than the actual increase. At the macro-area level, both a growth limit and an actual increase in tariff revenues are observed to be higher in the Central area, at 4.8% and 2.9% respectively, while the lowest value is found in the South, which records a growth limit of 2.6% against an actual increase in revenues of 1.7%.

For the year 2023, a total amount of eligible costs underlying tariff revenues of approximately € 11.4 billion was recorded, resulting in a total validated tariff revenue of € 10.8 billion. **Operating and common costs weigh about 80% of total costs**, while capital costs are worth almost 10%. The remainder consists mainly of non-deductible VAT charged to end users.

DISTRICT HEATING

DISTRICT HEATING: GAS REMAINS THE PRIMARY SOURCE WITH 69.8% OF TOTAL CONSUMPTION. FRAMEWORK OF RULES DEFINED FOR THE NEW TRANSITIONAL TARIFF METHOD IN FORCE FOR 2024

The growth trend of district heating and cooling is confirmed, between 2000 and 2022 the connected volume increased at an average annual rate of 5.7%, from 117.3 to 392.7 million cubic metres. **The 5 regions of the north**, Lombardy, Piedmont, Trentino-Alto Adige, Emilia Romagna and Veneto, **alone represent more than 95% of the thermal energy dispensed**. In 2022, thermal power stations serving district heating networks produced 11,515 thermal GWh, 6,535 electric GWh and 167 refrigeration GWh. **Natural gas remains the clearly predominant energy source with 69.8%** of total energy consumption; of the other sources, a significant contribution comes from waste (16.1%) and bioenergy (biomass, biogas and bioliquids, at 10.7%). The number of companies operating on district heating networks is 255 (258 a year ago). Of these, 86% deal with activities that are strictly linked to the operation of networks and supply of thermal energy to utilities (distribution and/or metering and/or supply), whilst the remaining portion only deal with the production of thermal energy.
The energy distributed by the district heating networks is mainly used for environmental climate control (heating and cooling) and the production of hot water for sanitary use, whilst use in industrial processes is only marginal. A significant share of the market consists of residential (64.0%) and tertiary (33.2%) users, while the demand of the industrial sector remains marginal (2.8%).
As a result of the significant increase in the prices of the service of recorded from the last quarter of 2021 (from € 81/MWh in 2020, to € 93/MWh in 2021, up to € 155/MWh in 2022), ARERA launched a fact-finding investigation, the results of which were transmitted in November 2022 to the Government and Parliament. **In the light of the above data, in 2023 the government has ordered the extension to all district heating networks of tariffs regulated by ARERA** (already envisaged for some types of networks). **ARERA has therefore defined an initial framework of transitional rules for 2024, pending the completion of the definitive tariff method planned from 2025.**