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EUROPEAN UNION AGENCY FOR THE COOPERATION OF
ENERGY REGULATORS AND THE EUROPEAN COMMISSION
ON THE REGULATORY ACTIVITIES AND FULFILMENT
OF DUTIES OF THE ITALIAN REGULATORY AUTHORITY FOR
ENERGY, NETWORKS AND ENVIRONMENT
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SUMMARY

31 July 2022

MAIN DEVELOPMENTS IN THE ELECTRICITY AND NATURAL GAS MARKETS

Evaluation of market development and regulation

Main changes in Italian legislation

The year 2021 was also characterised by intense legislative activity, caused by the continuation of the Covid-19 epidemiological emergency and the need to cope with its negative effects, as well as the sudden increase in energy prices. The main measures of the year relating to the energy sectors are summarised below.

From a legislative point of view, the year began with Law No. 21 of 26 February 2021 converting (with amendments) Decree-Law No. 183 of 31 December 2020, which, first of all, **further postponed to 1 January 2023 the termination of price protection regimes** for household customers and micro-companies in the natural gas and electricity sectors. The measure also regulated the timing and procedures for the consultation of the territories involved in the National Map of Areas Potentially Suitable for the Location of the National Repository for Radioactive Waste and Technology Park¹, and set 30 September 2021 as the deadline for the adoption of the Plan for the Sustainable Energy Transition of Suitable Areas (PiTESAI), which aims to identify the areas for the conduct of hydrocarbon prospection, exploration and production activities on national territory, enhancing their environmental, social and economic sustainability.

Decree-Law No. 22 of 1 March 2021 on 'Urgent provisions on the reorganisation of the functions of the Ministries', converted, with amendments, into Law No. 55 of 22 April 2021, **established the Ministry for Ecological Transition**, to which energy-environmental competences were transferred, which were previously divided between the Ministry of Economic Development and the Ministry of Environment and the Protection of Land and Sea. Among others, the following functions are assigned to this Ministry: definition of the objectives and lines of national energy and mining policy (authorisation of energy production plants under state jurisdiction, including those from renewable sources, relations with international organisations and relations with the European Union in the energy sector, including the transposition and implementation of programmes and directives on the single European energy market); implementation of the processes of liberalisation of the energy markets and promotion of competition in the energy markets and protection of the cost-effectiveness and safety of the system; identification and development of national electricity and natural gas transportation networks and definition of guidelines for their management; management of energy stocks as well as preparation and implementation of energy emergency plans; nuclear safety and regulation of storage systems for irradiated fuel and radioactive waste; agro-energy; collection, processing, analysis and dissemination of statistical data on energy and mining; plans and measures relating to alternative fuels and related distribution networks and facilities for recharging electric vehicles; environmental conservation, including through technologies for reducing greenhouse gas emissions.

Decree-Law No. 41 of 22 March 2021, on 'Urgent measures in support of businesses and economic

¹ According to Italian law, a Technology Park will be built along with the National Repository. It will include a centre for applied research and training, open to international collaboration, where studies in the field of decommissioning nuclear installations, radioactive waste management, radiation protection and environmental protection will be carried out.

operators, labour, health and territorial services, connected to the Covid-19 emergency' (so-called DL Sostegni), converted, with amendments, into Law No. 69 of 21 May 2021, represents the **first legislative intervention** taken to contain the consequences of the upward trend in commodity prices on energy bills.

Article 6 of the measure under review provided for a reduction in the expenditure incurred by electricity users connected to low-voltage grids other than those for household use, for the months of April, May and June 2021, up to a maximum limit of Euro 600 million. In detail, the regulation provided for the reduction of the bill items 'transport and meter management' and 'general system charges' so that:

- a saving was foreseen, benchmarked to the value in force in the first quarter of the year, of the fixed tariff components applied per withdrawal point;
- for only those customers with an available power output of more than 3.3 kW, the actual expenditure relating to the two items does not exceed that which, under the tariffs applied in the first quarter of the year, would have been obtained by assuming a volume of energy withdrawn equal to that actually recorded and a committed power level conventionally set at 3 kW.

As part of the conversion into law of Decree-Law No. 52 of 22 April 2021, setting forth 'Urgent measures for the gradual resumption of economic and social activities in compliance with the needs to contain the spread of the Covid-19 epidemic' (converted, with amendments, by Law No. 87 of 17 June 2021), **the temporary regime on the exercise of special powers was extended to 31 December 2021** (so-called golden power²), in order to safeguard the ownership structures of companies operating in sectors deemed strategic and of national interest, including energy. In particular, the scope of the obligation to notify the purchase of investments and the related powers exercisable by the government (imposition of commitments and conditions and opposition to the purchase) has been extended.

Decree-Law No. 73 of 25 May 2021, entitled 'Urgent measures related to the Covid-19 emergency, for companies, work, young people, health and territorial services', converted, with amendments, by Law No. 106 of 23 July 2021, constitutes the **second legislative intervention** taken to contain the consequences of the upward trend in commodity prices on energy bills. The decree, in fact, **extended** (article 5) **until July 2021 the reduction, within the spending limit of Euro 200 million, of the expenditure incurred by electricity users connected to low voltage lines**, other than households, with reference to the bill items 'transport and meter management' and 'general system charges', provided for by article 6 of the so-called DL Sostegni.

Article 5-bis, paragraph 1, also contains a limitation of the adjustments to the electricity sector tariffs set by the Authority for the third quarter of 2021:

- **earmarked Euro 609 million** (share of the proceeds from the auctioning of CO₂ emission quotas under the responsibility of the Ministry for Ecological Transition and the Ministry of Economic

² The term 'golden power' refers to a set of special powers exercisable by the government in order to safeguard the ownership structures of companies operating in areas deemed strategic and of public and national interest. In the event of a 'potential threat of serious prejudice' to public interests, the Government, taking into account the principles of proportionality and reasonableness, may therefore intervene, through: opposition to the acquisition of investments; vetoing the adoption of company resolutions; imposing specific requirements and conditions. The aim is to counter any speculative operations in particularly difficult times for Italian public and private companies, always in compliance with European regulations to protect competition.

Development) **to support measures to encourage renewable energy and energy efficiency**, which are covered by energy tariffs;

- transferred Euro 591 million to the Energy and Environmental Services Fund (CSEA).

On 13 October 2021, **the Parliamentary Commission of Inquiry on Consumer and User Protection was established.**

With Decree-Law No. 130 of 27 September 2021 on 'Urgent measures to mitigate the effects of price increases in the electricity and natural gas sector', converted, with amendments, by Law No. 171 of 25 November 2021, the Government and Parliament adopted **measures, totalling Euro 3.5 billion (including a reduction in VAT on gas), to mitigate the effects of price increases for electricity and natural gas for 29 million households, as well as for 6 million 'non-household' electricity users**, mostly micro and small companies, but also **to completely neutralise price increases for social bonus holders**. In the electricity sector, the allocation, also for the fourth quarter of 2021, of additional resources, amounting to Euro 2 billion, allowed the Authority to completely cancel the rates of general system charges for all households and for non-households, for other uses, with available power up to 16.5 kW, as well as to confirm the level of the tariff components relating to general system charges, already practically halved in the third quarter of 2021, for all other electricity users (article 1, paragraphs 1 and 2). In the natural gas sector, the extraordinary allocation of Euro 480 million allowed the Authority to cancel, for the fourth quarter of 2021, for all users, the rates of the components relating to general system charges in the gas sector, to cover the promotion of energy efficiency (RE/RE_T components), equalisation recoveries for operators of services of last resort (UG₃ component) and the social gas bonus (GS/GS_T components) (article 2, paragraph 2). Added to this is the intervention on VAT rates for natural gas (article 2, paragraph 1), both of which were lowered to 5% for all types of users. Lastly, by virtue of the provisions of article 3 of the measure under analysis, the Authority has extraordinarily redetermined, for the fourth quarter of 2021, the facilitations on electricity and gas tariffs granted to households in a situation of economic hardship and to those in serious health conditions, in addition to those already defined for the year 2021, thanks to the allocation of an additional Euro 450 million. As already noted, with this allocation it was possible to completely neutralise, for social bonus customers, the fourth quarter increases for both electricity and natural gas.

As part of the conversion into law of Decree-Law No. 152 of 6 November 2021, setting forth 'Urgent provisions for the implementation of the National Recovery and Resilience Plan (PNRR) and for the prevention of Mafia infiltration' (converted into Law No. 233 of 29 December 2021), art. 16-ter, par. 1 was adopted, which established that, **starting from the date of termination of the enhanced protection service for households (1 January 2023), on a transitional basis and pending the performance of the competitive procedures for the assignment of the gradual standard offer sales service, households continue to be supplied with electricity by the enhanced protection service**, in accordance with the guidelines defined by decree of the Minister for Ecological Transition. Paragraph 2 of the same article **entrusted the Authority with the task of adopting provisions** to ensure the assignment of the gradual standard offer service for households, through **competitive procedures to be concluded by 10 January 2024**, guaranteeing the continuity of electricity supply. Paragraph 3 provided that, in the **event that on 1 January 2023 the measures have not been adopted** as provided for in Legislative Decree No. 210/2021 on the internal electricity market with respect **to vulnerable customers and customers in energy poverty, the enhanced protection service would continue to apply** to the aforementioned customers in accordance with the guidelines defined in the decree of the Minister for Ecological Transition. Paragraph 4 removed the

subordination of the obligation on the part of suppliers to offer the supply of electricity at a price reflecting the cost of energy in the wholesale market, the efficient costs of the marketing service and the contractual conditions and quality of service, as defined by the Authority, to the request of the eligible vulnerable customer. Paragraph 5, for the purpose of identifying vulnerable customers, also entrusted the Authority with the task of defining with its own measures, in agreement with the Italian Data Protection Authority, the procedures for acquiring consent for the processing of sensitive data and for the transmission of information by INPS³ to the Integrated Information System managed by the Single Buyer. Again, article 19-bis provided for urgent measures to support the production of energy from renewable sources.

Law No. 234 of 30 December 2021, 'Forecast State Budget for the financial year 2022 and Multi-annual Budget for the three-year period 2022-2024', introduced numerous provisions concerning the sectors in which the Authority carries out its regulatory and supervisory activities. Paragraphs 503 to 512 provided for **measures to contain the increase in energy bills in the first quarter of 2022**. The allocation of approximately Euro 3.8 billion was distributed as follows: Euro 1.8 billion for measures on general system charges for electricity use of households and non-households (with available power up to 16.5 kW); VAT at 5% on methane gas supplies for household and industrial use, resulting in an estimated revenue loss of Euro 608 million; a reduction of Euro 480 million, again for the first quarter, in general gas charges; an increase in the social bonus amounting to Euro 912 million. **The possibility is provided for household customers to pay in instalments the amounts invoiced in bills issued between 1 January and 30 April 2022**, over a period of 10 months, without interest. The Authority, within the limit of Euro 1 billion, also defines a mechanism for the advance payment of the instalment amounts (disbursed by CSEA) in favour of sellers, if the amount of the instalment bills represents more than 3% of the amount of those issued to those entitled to the instalment plan. The Authority must also define the terms for the settlement or repayment by sales operators of the advance received, so as to allow the recovery by CSEA of 70% of the advance by December 2022 and the remainder by 2023.

Paragraph 514 amended the regulation of the **National Energy Efficiency Fund**, providing for a reserve of resources for the disbursement of non-repayable grants, up to a total limit of Euro 8 million per year, starting from the year 2022. Paragraph 392 **established the Fund for Sustainable Mobility Strategy** with an endowment of Euro 2 billion for actions needed to combat climate change and reduce emissions for the implementation of the European 'Fit for 55' strategy.

Also approved was Decree-Law No. 228 of 30 December 2021, containing 'Urgent provisions on legislative deadlines', converted into Law No. 15 of 25 February 2022, which, in art. 11, par. 4, **extends to 31 December 2026 the benefits recognised to energy-intensive companies for the commitment to finance the construction of certain interconnection lines with foreign countries**, and delegates to the Authority the updating of the resolutions containing the list of foreign countries in whose markets the assignees may purchase electricity subject to the virtual import service.

Lastly, it is necessary to highlight the approval by the Council of Ministers, on 4 November 2021, of the bill on the "Annual Law for the Market and Competition 2021", which contains a number of provisions of relevant interest for the Authority's activity, such as: art. 4, on natural gas distribution concessions; art. 5, on the subject of concessions for large-scale hydroelectric derivation; art. 6, which delegates the Government to adopt a legislative decree to reorganise the subject of local public services, also through the adoption of a special single text, defining the principles and guiding

³ In Italy, the National Social Security Institute (INPS) manages the database of the Equivalent Economic Situation Economic Indicator (ISEE), which is the indicator that allows the granting of bonuses for electricity and gas.

criteria.

Developments in the electricity market

Main changes in regulation

In May 2021, the Authority ended the trial of self-auditing procedures on functional unbundling for 10 companies that had been introduced in June 2015⁴. Closing the trial phase, the Authority provided that possible updates to the self-auditing procedures and permissible control forms may be ordered by the Authority from 2022 onwards on the basis of future regulatory developments in this area and the Authority's enforcement needs.

In Italy, **electricity transmission** is carried out by approximately 5,250 km of power lines and circuits and 910 switching and conversion stations. The operator of the National Transmission Grid (TSO) is the company Terna, 29.85% owned by the Italian state (through CDP Reti). The remaining 70.15% of the capital belongs to the market. In 2021, the number of companies owning National Transmission Grid (RTN) assets became 8, compared to 11 the previous year, due to the incorporation of the assets of some companies into those of the Terna Group. Considering the assets of all the companies belonging to the corporate group, in 2021, the Terna Group will own 99.9% of the national power lines.

In August 2021, the Authority launched the **consultation on the outline of the 2021 Development Plan** of the National Transmission Grid, which expired on 19 October 2021. Among the documents submitted for public consultation, a Terna report with a cost-benefit analysis and other insights on the Sicily-Campania HVDC link (East Link) was made available. Eleven parties (business associations and major national operators) submitted comments on the draft Plan, which have been made publicly available, together with Terna replies and counter-observations.

The Authority monitored the implementation of the previous Development Plans and carried out consistency checks between the National Development Plan and the Ten Year Network Development Plan 2020 of ENTSO-E, also sending its own contributions to ACER opinions no. 4-2021 of 3 May 2021 on the projects contained in the ENTSO-E 2020 Ten Year Network Development Plan and No. 5-2021 of 19 July 2021 on the National Development Plans. Furthermore, in line with the provisions of the European Trans-European Networks for Energy regulation, the Authority provided its assessments of candidate projects of common interest. Following the selection process, the European Commission published the fifth list of projects of common interest on 19 November 2021, which includes three interconnection projects in Italy between Italy and neighbouring countries (Corsica, Switzerland and Tunisia).

As at 31 December 2020, 125 **electricity distribution** companies were registered in the Authority Operators Registry, of which only 10 serve a number of customers exceeding 100,000. There are four companies with more than 500,000 withdrawal points: e-distribuzione (Enel group), Unareti (A2A

⁴ Resolution No. 296/2015/R/com of 22 June 2015 had provided, as a supplement to the regulation on functional unbundling, for the possibility for companies required to comply with said regulation to adopt, on a voluntary basis, self-auditing models, consisting of protocols of verifications and controls in addition to those required by the regulation, aimed at certifying the adherence of the vertically integrated company's management result to the purposes pursued by the functional unbundling obligations; the adoption of these models entails the possibility for the company to obtain from the Authority exemptions from one or more of the specific obligations provided for by the unbundling regulation.

group), Areti (Acea group) and Ireti (Iren group). Overall, electricity distribution in Italy takes place through 1,280,000 km of grids, most of which (69%) are low voltage. The company e-distribuzione (Enel Group) is the leading operator, with the dominant share of 85.5% of the distributed energy.

In terms of **distribution quality**, there was a slight improvement in 2021 compared to 2020 for the average duration of outages per user and a slight deterioration for the average number of outages per user. However, the marked improvement in the duration and number of outages is confirmed compared to the three-year period 2017-2019, years in which the impact of exceptional weather events contributed substantially to the increase in the duration and number of outages. The duration of unannounced outages stands at 41 minutes nationwide, and the number of long and short unannounced outages (lasting between one second and three minutes) stands at 3.23 outages per low-voltage customer nationwide.

In implementation of the Integrated Text on output-based regulation of electricity distribution and metering services, in November 2021, the proceedings for the determination of premiums and penalties for the year 2020 for output-based regulation of the electricity distribution service were closed. With regard to the **regulation of the duration and number of unannounced outages, Euro 38.4 million in net premiums were paid out** (determined as the balance of premium and penalty amounts).

Based on the 2019 and 2020 electricity service continuity data, the Authority published in February and November 2021, respectively, the eighth and ninth national rankings of electricity distribution companies regarding the number and duration of outages; both rankings are available on the Authority's website. The published data confirms that the households and small electricity consumers benefiting from the improved service continuity are mainly located in northern Italy, in urban areas, and are served by distribution companies with mostly underground networks. Even for medium voltage industrial customers, the data show that the lowest number of outages occurs in the provinces of Northern Italy. The Authority's commitment to promoting, through a variety of initiatives, including incentives, the reduction of the gap between electricity service quality levels in Northern Italy and those in Southern Italy remains unchanged.

With regard to **requests for connection to high or extra-high voltage**, in the year 2021, Terna received a total of 1,945 connection requests for electricity production plants, corresponding to a total capacity of 150 GW. In relation to the requests received, it made available 952 quotations (corresponding to a total capacity of 56.6 GW), of which 495 were accepted; for two of these, corresponding to a capacity of 46.8 MW, a request was made to make available the Minimum Technical Solution of Detail (STMD). However, as at 31 December 2021, neither had been accepted. Therefore, the corresponding connections were neither realised nor activated during the year. As far as active connection requests to medium- and low-voltage grids are concerned, in 2021, the distribution companies received just under 143,000 connection requests for power generation plants, corresponding to a total capacity of about 13.5 GW, in relation to which they made available just over 124,200 quotations during the year, for a total capacity of about 7.8 GW. In relation to the requests received in 2021, almost 63,900 connections were made in the year, corresponding to about 0.6 GW, with average connection times, net of permitted interruptions, of: 23 working days, in the case of simple works, and 65 working days, in the case of complex works, while the average time for connection activation, net of permitted outages, was 9 working days. As far as the connections of passive users are concerned, the data collected show that 226,825 connections were made to the distribution networks in 2021, almost all of them in low voltage. For 70% of them, the supply was activated during the year. The average time to connect customers was 7.8 working days.

In November 2020, amendments were finalised to the **regulation of leakages on electricity**

distribution networks. In December 2021, the Authority placed for consultation the main proposals for further amendments to the framework for the years 2022 and 2023. The responses to the consultation showed in particular that in the period 2015-2020, the average percentage value of actual leakages in relation to the electricity withdrawn by all distribution companies was in constant decline, falling from 7.23% in 2015 to 7.01% in 2020; in 2020, for 78% of the main distribution companies (which distributed 99% of the total electricity withdrawn in that year), actual leakages were lower than those conventionally recognised. On the basis of this evidence, the Authority prefigured the reduction, as of 2022, of the conventional coefficients applied for equalisation purposes for commercial losses on low-voltage networks and the revision, as of 1 January 2023, of the conventional percentage leakage factor for low-voltage withdrawal points (currently 10.2%), setting it at 10%. In March 2022, the Authority, taking into account the comments of stakeholders in the consultation, made some changes to what was originally proposed. In particular, a more cautious path of containment of commercial losses was adopted, providing for a reduction from the values in force in 2021 for both 2022 and 2023. Additional measures were also introduced to mitigate the effects of the upward dynamic in energy prices.

The charges placed on the A₃ account for the year 2021, in connection with the **incentivisation of assimilated and renewable sources**, were significantly lower than in the previous year, falling from Euro 11,962 million to Euro 10,685 million. The reduction is largely attributable to the drastic increase in the Single National Price (PUN) recorded in the second half of the year, as a result of the strongly bullish trend in energy commodity prices. In fact, the increase in the PUN has a positive effect on the charges in the A₃ account pertaining to the same year, both because the revenues from the sale of subsidised energy increase and because certain types of subsidies decrease as the PUN increases. This increase has a positive impact, in perspective, also for the following year, especially in connection with the incentive update mechanism that replaced green certificates.

According to Regulation (EU) 943/2019, the implementation of capacity remuneration mechanisms presupposes, among other things, that there is an adequacy standard with regard to the value of the energy not supplied and the cost of the new entrant. Following ACER decision no. 23-2020 of 2 October, whereby the methodologies proposed by ENTSO-E in relation to the adequacy standard, the value of non-supplied energy and the cost of new entrants were approved with modifications, in December 2020, the Authority initiated proceedings to prepare a proposal to the Minister for Economic Development regarding the adequacy standard, requesting Terna to prepare a study on the values of the standard and the relative determining variables. With the decree of 28 October 2021, pursuant to Regulation (EU) 943/2019, the Minister for Ecological Transition **established the adequacy standard of the Italian electricity system** in line with the Authority's proposal, setting the target value for the electricity system adequacy indicator, expressed in terms of expected hours of load shedding, at **three hours/year**.

The final version of the National Integrated Energy and Climate Plan (PNIEC) confirmed the **relevance of the Capacity Market**, considering it a useful tool to preserve the adequacy conditions of the electricity system and to promote efficient, flexible and less polluting investments, with a view to decarbonising the sector and accelerating the penetration of renewables. In June 2021, the Minister for Ecological Transition expressed, among other things, the need to conduct Capacity Market auctions for the years 2024 and 2025 within predefined deadlines. In order to enable the capacity auctions for the delivery periods 2024 and 2025 to take place, the Authority adopted several measures.

During 2021, the **implementation of market codes** saw the adoption of different methodologies within the Forward Capacity Allocation (FCA), Capacity allocation and congestion management

(CACM) and Electricity balancing (EB) regulations, as well as the monitoring and improvement of methodologies adopted in previous years. At the end of 2021, the implementation of the FCA, DC (Demand Connection) and HVDC (High voltage direct current network code) regulations is now complete, while some CACM, EB and SO (System operation) methodologies remain to be completed, just as the methodology with cost-benefit analysis criteria for retrofitting existing generation plants under the RfG (Requirements for generators network code) remains to be defined at national level.

Regulation 943/2019, part of the more general Clean Energy Package, significantly revised the core principles of the electricity market, providing, in particular: a minimum capacity level of 70% between market zones to be offered on the markets; new criteria for the review of market zones; specific rules for system adequacy; the strengthening of cooperation between TSO with the creation of Regional Coordination Centres (RCC) instead of Regional Security Coordinators (RSC) introduced with the SO Regulation; new criteria for the use by TSO of congestion rents collected on the boundaries between market zones. The Authority is directly involved in the implementation of the aspects listed above, both through participation in working groups within ACER and through the adoption of specific measures at national level.

Wholesale and retail markets

According to provisional data released by Terna, **electricity demand** in 2021 (300.6 TWh) increased by 5.9%; the increase was recorded in all consumption sectors. The national demand for electricity was met 86.5% by net domestic production (minus energy for pumping), which increased by 2.2%, and the remaining 13.5% by the balance from abroad.

Gross **domestic production** reached 286.9 TWh, an increase of 2.3%. The growth was seen, in particular, in thermoelectric production, which rose from around 161.7 TWh to 170 TWh (+5.2%), due mainly to higher production from natural gas (142 TWh), while that from renewable sources (114,7 TWh) decreased slightly overall (-1.9%), due to lower production from bioenergy (-6.9%), hydroelectric (-5.9%) and geothermal (-2.1%), while production from wind power increased considerably (10.8%) and photovoltaic production rose by 0.5%. The contribution of the two sources to the total sees a weight of 59.3% for thermoelectric production and 40% for renewable production (41% including pumped storage hydro). The share of gross generation of the top three corporate groups (Enel, Eni and A2A) increased to 33.1% from 31.8% in 2020. In 2021, total net power stands at 116.6 GW (provisional figure), which is split between 49.6% renewables and 50.4% thermoelectric. The peak demand occurred on 8 July, when power demand at peak reached 55 GW (down -0.7% from the previous year's peak). Even the summer peak of 2021 remained far from the absolute peak for the Italian electricity system, recorded in the summer of 2015 (equal to 60.5 GW). There are four groups with a net installed capacity share of more than 5%: Enel (22%), A2A (8%), Eni (5.4%) and Edison (5.2%); in 2020, there were three (Enel, A2A and Edison).

The **quantity of incentivised electricity** in 2021 amounted to slightly more than 62 TWh (preliminary figure), i.e. about 0.4 TWh more than the quantity incentivised in 2020.

Consistent with the higher overall demand for electricity in 2021, the **foreign balance** also increased sharply: net imports rose to 42.8 TWh from 32.2 TWh in the previous year (+33%). As a result, the share of domestic demand covered by the external balance rose to 13.5% from last year's low of 10.6%. The increase in the external balance was achieved by both an increase in imports (17%) and a simultaneous reduction in exports (-50%). The increased reliance on imports is due to the need to cover rising demand, in a year of lower penetration of renewable energy resources caused by insufficient hydroelectric production in a context of low hydraulicity.

In 2021, in an economic context characterised by a growing aggregate demand and a supply that is trying to stabilise after the easing of the pandemic containment measures, there was an increase in the amount of **electricity traded on the Italian system's PGM**, amounting to 290.4 TWh (+3.6% compared to 2020). This increase was due to higher domestic purchases (286.1 TWh; +5.4%), only partly offset by lower exports (4.3 TWh; -50%). On the other hand, the volumes offered in the Italian System decreased (472.4 TWh; -5%).

The share of volumes traded directly on the exchange was up (221.3 TWh; +5.5%) and reached 76.2% of total trade on the MGP; the significant growth in liquidity was favoured by an increase in imports (48 TWh; +14.6%), partially contained by the halving of exports (4.3 TWh; -50%); the Acquirente Unico's (Single Buyer) volumes, equal to 14% of total purchases and fully supplied on the exchange, fell by almost 2%. The programmes derived from the ECP registrations of bilateral over-the-counter trade also continued to lose share (69.1 TWh, -1.7%).

After the all-time low in 2020 (38.92 €/MWh), the **average annual energy purchase price (PUN)** in 2021 reached a record high of 125.46 €/MWh, a sharp increase over 2020 (+222%) and in line with the prices on the main European power exchanges. The increase was supported not only by the recovery in electricity demand, but also by the rise in thermoelectric generation costs, fuelled by record high prices of natural gas, coal and CO₂.

On the **futures market**, with regard to standardised products with physical delivery, in 2021, there were only 7 pairings for a total of 22 GWh, which is a sharp decrease compared to last year (-97%). The total volumes traded in 2021 on the **Intraday Market** (26 TWh) showed an increase over the previous year (+1.1 TWh; +4%), signalling the need for operators to adjust their schedules more.

Against a global backdrop of sharply rising fuel prices, **electricity prices in other European countries** also recorded unprecedented increases, reaching three times those of 2020. Prices in the day-ahead markets averaged 110 €/MWh in France and Spain and 97 €/MWh in Germany. On a yearly average, prices rose by 239% in France, 230% in Spain, 218% in Germany and 475% in Scandinavia. Although market coupling mechanisms have enabled efficient management of cross-border flows, a reduction in price convergence between countries has been observed, driven by differences in the cost and availability of the capacity of their generation parks. For Italy, France and Germany, prices were perfectly aligned with each other in 18% of the hours, while the Italian price was higher than the French price in 66% of the hours, the Austrian price in 75% of the hours and the Slovenian price in 52% of the hours. This growth in the differential between Italian and foreign prices led to an increase in imports (48 TWh, +15%) and a decrease in exports (4.3 TWh, -51%). In addition, exports to Greece (0.5 TWh; -81% compared to 2020) were affected by the unavailability of transit for a significant number of hours (around 30%).

The results of the Annual Survey (provisional) show that in 2021, the economic recovery, made possible by the massive vaccination campaign that eased the restrictive measures imposed in 2020 to counter the Covid-19 epidemic, brought electricity consumption back up: according to the data collected, 253 TWh were **sold in the retail market** last year to around 37 million customers, of which 29.9 million households and 7.1 million non-households. Compared to 2020, total electricity consumption increased by almost 5%, while consumers decreased by 0.1%. The increase in non-household consumption was significant due to the recovery of the industrial sector and even more so of the construction sector, while the recovery of the tertiary sector remained limited by the nonetheless high trend of contagions during the year. However, consumption in the household sector, thanks also to the spread of remote work in homes and a hotter summer than in 2020 that pushed up the use of air conditioners, also grew quite a bit. Withdrawal points in the household sector remained essentially unchanged (+0.2%), while those in the non-household sector decreased

(-2%), as in the previous year. More precisely, households purchased a total of 60.7 TWh compared to 59.8 TWh in 2020, thus registering an increase of 1.5%, while energy purchased by the non-household sector rose from 181.2 to 191.9 TWh, marking an increase of 5.9%, insufficient to fully recover pre-Covid levels (198 TWh in 2019).

In 2021, the number of **household customers** was 29.9 million, of which 12.4 million served under greater protection and 17.5 million on the free market: the surpassing by the free market of the enhanced protection service, which had begun in 2020, therefore continued. The percentage of household points served on the free market rose to 58.5%, as compared with 54.3% in 2020. If we then look at the volumes, the free market is even wider: in 2021, in fact, energy purchased by the household sector in this market rose to 60.7% from 57.1% the previous year. The average unit consumption of households in the reference price market is slightly lower than that of households purchasing energy in the free market: 1.925 kWh/year versus 2,111 kWh/year, but the values still show that the electricity consumption of Italian households is rather low.

For the supply of electricity of small companies⁵ and micro-companies with a committed capacity of more than 15 kW⁶, price protection ended on 1 January 2021; therefore, the total volumes sold under price protection in 2021 still include those to industry low-voltage customers for whom price protection is still allowed, i.e. those of micro-companies with a committed capacity of less than 15 kW. If the consumption of the household sector is added to the consumption of these micro-companies, the share of electricity sold in the enhanced **protection service** is now however very small, amounting to only 11.2% of the volumes of the entire Italian electricity market (corresponding to 38.4% of the total withdrawal points).

As of January 2021, small and micro-companies obliged to leave the enhanced protection service, which have not opted for a supply in the free market, will be supplied under the **gradual standard offer service** by a supplier selected by public tender. In 2021, the service served 226,000 withdrawal points, or 0.6% of all customers in the electricity market, to which it supplied 4.6 TWh, or 1.8% of the energy sold in the total market.

With 216.5 TWh sold, the share of electricity intermediated by the **free market** rose to 85.7% (60.7% of withdrawal points) in 2021, partly because the portion of electricity purchased in the **standard offer service** remained unchanged at 1.3% (0.2% of withdrawal points).

In 2021, the **switching** of households grew again, whether measured in terms of withdrawal points or in terms of volumes. 15.7% of households - about 4.7 million withdrawal points - changed supplier at least once during the year. The volumes corresponding to this portion of customers amounted to about 17.9% of the total energy purchased by the household sector, while the volumes corresponding to the 13.1% of households who changed supplier in 2020 corresponded to 14.2% of the energy withdrawn. The exclusion from the enhanced protection service, as of 1 January 2021, for small companies and micro-companies (with a committed power of more than 15 kW) certainly had an impact on the switching activity of industry low-voltage customers, which showed a rather high pace in 2021: 18.7% in terms of customers and almost 30% in terms of volume. However, 2021 was a year of economic recovery, and the increased demand for energy provides an incentive to seek new and more favourable supply conditions. The increases in international commodity prices, which

⁵ Companies with between 10 and 50 employees and/or annual turnover of between Euro 2 and 10 million, owners of 'low voltage' withdrawal points.

⁶ Companies with fewer than 10 employees and an annual turnover not exceeding Euro 2 million owning at least one withdrawal point with a contractually committed power exceeding 15 kW.

have driven up electricity and gas prices in Italy as well, are to be seen as a further stimulus for switching activity. During 2021, other non-household customers also showed a significant rate of switching: 19.4% of customers connected to medium voltage (for a total of 20.5%) and 26.1% of customers connected to high or very high voltage, for a volume of approximately 14%, changed supplier. In total, just under 1.3 million industry withdrawal points changed supplier in 2021. In terms of underlying volumes, about 43.2 TWh, corresponding to 21.3% of the volumes purchased by non-households.

On the supply side, the **number of suppliers on the retail market** once again grew strongly in 2021, confirming a trend of expansion that has continued uninterrupted since liberalisation in 2007. Regardless of the trend in electricity consumption, in fact, each year sees an increase in the number of companies with sales of less than 1 TWh, whose overall market share, however, has been stagnating at around 15% for years.

The **average number of commercial offers** that each sales company is able to propose to its potential household customers was 16.9 for households and 25.5 for non-households. Of the 16.9 offers made available on average to the household customer, 5.8 are **only available online** (4.5 in 2020), i.e. only through the Internet. The success of online offers among households remains limited, but it is growing: in 2021, 9.7% of household customers (corresponding to 10.5% of electricity purchased in the free market) signed a contract offered through this modality. Looking at non-household customers, on the other hand, of the 25.5 offers on average offered to customers, only 4.3 are subscribed through the network and only 4.9% of customers have subscribed to an offer online. With regard to the preferred **type of price**, it was found that 81.4% of households signed a fixed-price contract in the free market (i.e. with the price not changing for at least one year from the time of signing), while 18.6% chose a variable-price contract, i.e. with the price changing at a time and in a manner determined by the contract itself. The preference for variable price is low, but tends to grow over time, albeit at a moderate rate; last year, the variable price contract was chosen by 16% of households. Variable price contracts are more popular among non-household customers: 54.9% of them chose the variable price, while the fixed price contract was chosen by 45.1% of the non-household points. The data collected in the Survey also showed that in fixed-price contracts valid in 2021, the price paid for the procurement component was at least 30% cheaper than in variable-price contracts.

In variable price contracts, **indexation** to the trend of the average PUN is the most frequent in both contracts to households (67.2%) and those to non-households (51.6%). The second most popular price indexation method chosen by households is that of a discount on one of the components set by the Authority for the enhanced protection offer, which concerns 27.7% of customers. Household customers who signed a dynamically priced contract accounted for 3.9% of the variable-price household customers, while contracts with limited indexation gathered only 0.5% of households. Dynamic price contracts, on the other hand, represent the second most important method of indexation among non-households, who chose them in 6.4% of the cases; a small share (2.7%) of non-households chose a contract indexed to some external, controllable variable (which sometimes also refers to gas prices at TTF).

About 20% of households have signed a contract that provides a rebate or discount of one or more free periods or a fixed sum in cash or volume.

Regarding the presence of **additional services** in electricity purchase contracts in force in 2021, a clear propensity emerged, as in the past, for fixed-price households to purchase energy with a contract that includes an additional service; among the additional services, the greatest preference is for contracts with a guarantee to purchase electricity produced from renewable sources (41.5%)

and for participation in a points collection programme (30.2%). As regards households who have signed a variable price contract, on the other hand, in 2021, the share of those who have chosen one without additional services decreased slightly to 50.9% (it was 53.2% in 2020). Even among customers purchasing variable price contracts that also include additional services, the greatest interest is in the guarantee of purchasing electricity produced from renewable energy resources (27.8% of cases). The second preference goes to the possibility of obtaining, together with electricity, ancillary energy services (11.7%). The results for non-households⁷ show a significant lack of interest in additional services among those who have chosen a fixed-price contract: almost three quarters of these customers have signed a contract without them; the remaining part of these customers show appreciation for the guarantee of energy from renewable energy resources (22.9%).

The provision of ancillary energy services (3.3%) also attracts some interest, as does the guarantee to purchase electricity produced in Italy (2.3%). Of the fixed-price contracts purchased, 20% did not include any additional services; among customers who signed a variable-price contract, however, the share of those who chose one without additional services rose to 53.2%. Among these customers, there is also a high interest in the guarantee of purchasing electricity from renewable energy resources (25.7% of cases). The second preference goes to the possibility of obtaining, together with electricity, ancillary energy services (12.2%). A substantial indifference towards additional services also emerges for non-households who have signed a variable price contract, where 67.8% are without them. A third of these customers, on the other hand, chose a contract with at least one additional service, and here again the guarantee of energy from renewable sources (27.3% of withdrawal points) and the presence of ancillary energy services (3%) received the highest approval.

Using the concentration measures calculated on the energy sold, it can be seen that in 2021, the level of **concentration in the retail market** decreased slightly. C3, i.e. the share of the top three operators (corporate groups), fell to 46.1% of total sales, whilst it had been 46.9% in 2020. The HHI dropped to 1,379 from 1,446 in 2020. The number of corporate groups with a share of more than 5% remained unchanged at 4: these are the Enel group (this year with a share of 34.5%, in 2020 35.6%), A2A (with a share of 6.3%), Edison (5.3%) and Axpo (5%). However, the concentration in the Italian electricity market has two opposing sides: in the household segment it is high, albeit steadily decreasing, while in the non-household segment it is very low and stable. Using the indicators calculated on the withdrawal points, the concentration values are higher than those indicated by the volumes of energy sold, except for those relating to non-households served at high and extra-high voltage.

In 2021, the average value of the procurement cost component of the **electricity price** was 14.27 c€/kWh in the enhanced protection offer and 14.03 c€/kWh in the free market. Therefore, with regard to the component covering procurement costs and marketing services, the free market was on average 1.7% less expensive. The convenience of the free market is mostly explained by the presence of fixed-price contracts, which have stemmed the strong increases that occurred in the wholesale markets during 2021, particularly in the final part. Proof of this is the fact that the cost of supply in the enhanced protection service increased on average by 75% compared to the previous year, while in the free market the increase was only 9%; this marked difference is the basis for the reversal of the convenience assessment compared to the previous year.

⁷ The incidence of answers concerning 'a combination of additional services' for non-households is lower than for households. More specifically, the presence of contracts that include a combination of additional services was indicated for 3.9% of customers with a fixed-price contract and 2.8% of customers with a variable-price contract. As for households, these customers were reallocated *pro rata* to the additional services indicated by the sellers.

Overall, in 2021, there were 25,335 cases of non-compliance with **the commercial quality** standards of the sales service that resulted in the right to compensation in the electricity sector, 95.8% of which related to failure to meet response times to written complaints. Of this, 68.8% was accrued by households and non-households in the free market, 23.8% by customers in the reference price market and the remaining 7.4% by other customers. A similar situation to that concerning accrued indemnities can be seen for the indemnities actually paid out, which are more concentrated in the free market: in 2021, in fact, 70.4% of the total indemnities paid out, exceeding Euro 1.1 million, were to free market customers.

As part of the **measures on final sale prices**, the Authority, in implementation of Law No. 234 of 30 December 2021 (Budget Law 2022), has defined the terms for the payment in instalments of the amounts relating to invoices issued in the period between 1 January 2022 and 30 April 2022 that all suppliers (both of protection services and of the free market) are required to offer to household electricity and natural gas customers who are in default of payment of the invoices issued in that period. As part of the **investigation and inspection** activities on the sales market in 2021, the Authority's control activities were carried out by means of documentary checks (in particular relating to the control of the costs to be recognised in the tariff, compliance with the regulation by electricity and gas retail sales companies, the correct disbursement of incentives to energy-intensive companies as well as the correct contribution, by regulated companies, of the Authority's operating costs) and on-site inspections, concerning priority issues such as service safety, consumer protection, the correct functioning of the markets and the control of the incentives provided and the cost items recognised or to be recognised in the tariff.

Among the **measures for the effective promotion of competition**, also in 2021, there were several communication initiatives for overcoming greater protection. In particular, the Authority defined and communicated to suppliers, on a six-monthly basis, the content of the notices to be shown on their invoices to inform end customers that changing contract or supplier is simple and free of charge and that continuity of service is guaranteed; the notices also provided the elements that should encourage customers to take advantage of the Authority's tools aimed at making an informed and aware choice, such as the Electricity and Gas Offers Portal and the PLACET offers. Moreover, in consideration of the entry into force of the gradual standard offer service, in the first half of 2021, the operators of protection regime, with reference only to the end customers supplied in the gradual standard offer service for the period of provisional assignment, sent a specific notice in their bills that informed the customers concerned of the end of the protection regime offer, directing them, for further information, to a dedicated page of the Authority's website or to the toll-free number of the Energy and Environment Consumer Help Desk.

Developments in the gas market

Main changes in regulation

In August 2021, the Authority initiated a review of the **criteria for determining the x-factor for the natural gas storage service** for the tariff updates for the years 2023-2025; the Authority's guidelines, which were placed for consultation, are for the determination of a level of x-factor that guarantees the transfer to the service users of any higher (or lower) productivity recoveries realised in the early years of the regulatory period within the regulatory period itself.

In November 2021, the Authority approved the **regulation of the metering service on the natural gas transportation network** (RMTG), which defines the reorganisation of the service and the related

responsibilities, defining in particular the responsibilities and scope of metering and meter reading activities; the minimum and optimal requirements of a plant, performance and maintenance nature; the predefined levels of service quality and the incentive to comply with these levels of service quality; the system for monitoring requirements and quality levels.

Regarding **gas infrastructure**, in Italy there are nine companies operating the National (10,316 km) and Regional (24,937 km) Gas Transmission Network: three for the National Network and eight for the Regional Network. The largest gas transport company is Snam Rete Gas. The Snam group owns 92.9% of the networks. Liquefied natural gas is fed into the Italian national transport network through the interconnection with the three terminals in operation in Panigaglia (in Liguria), Cavarzere (in Veneto) and Livorno (in Tuscany). The Panigaglia plant is owned by the company GNL Italia belonging to the Snam group, has a maximum regasification capacity of 13 M(m³)/day and the maximum annual quantity of gas it can feed into the transport network is 3.5 G(m³). The Cavarzere terminal is an off-shore facility located in the Adriatic Sea off the coast of Rovigo with an annual regasification capacity of 8 G(m³) and approximately 26.4 M(m³)/day. Of the maximum regasification capacity, 80%, i.e. 21 M(m³)/day, is reserved for the terminal operator, the company Terminale GNL Adriatico, which has been exempted from third-party access for 25 years, i.e. until the thermal year 2032-2033; the remaining 20%, together with any unused capacity, is offered on the market through capacity subscription procedures. The Livorno terminal, owned by the company OLT Offshore LNG Toscana, results from the conversion of an LNG carrier into a floating regasification terminal anchored about 22 km off the coast between Livorno and Pisa. Its maximum daily regasification capacity is 15 M(m³)/day, its annual capacity is 3.75 G(m³).

Natural gas storage is carried out on the basis of 15 concessions held by five companies: Stogit, Edison Stoccaggio, Ital Gas Storage, Geogastock, Blugas Infrastrutture. All active storage sites are built at depleted gas fields. Stogit, which belongs to the Snam group, is the main storage company owning 10 of the 15 concessions. The Italian gas storage system is of significant size: in the 2021-2022 thermal year, which ended on 31 March 2022, the system offered an overall availability for storage in terms of total space for active reserve (so-called working gas) amounting to 17.7 G(m³), of which 4.6 G(m³) is for strategic storage. The space offered at auction was 90%. The nominal peak delivery achieved during the year was 259.5 million standard cubic metres/day.

Natural gas distribution in Italy takes place through 268,138 km of network. There were 188 companies active in gas distribution in 2020 (five fewer than in 2020), of which 6 were very large (with more than 500,000 customers), 42 with between 50,000 and 500,000 customers and 140 with less than 50,000 customers. The number of companies with more than 100,000 redelivery points has fallen in recent years (28 units, down from 33 in 2013). However, their share in terms of gas distributed has remained stable at around 82% and, indeed, has risen to 85% in the last three years. In total, the 188 operators active in 2021 distributed 32.3 G(m³), 2.2 G(m³) more than the previous year, to 24 million consumers. The service was operated through 6,495 concessions in 7,298 municipalities.

The regulation of the **quality of gas distribution and metering services** has the aim of minimising the risk of explosions, outbreaks and fires caused by distributed gas and, therefore, has as its ultimate goal the safeguarding of persons and property from damage resulting from accidents caused by distributed gas. For 2021, there is a slight increase in the inspected network compared to 2020 and still a stable share of the inspected network at 75%. The inspection of the network generally aims at intercepting the phenomenon of leakage and thus enhancing the safety of citizens. With regard to emergency response obligations, the time series of the arrival time at the place of (telephone) call, updated to 2021, shows a national average value of approximately 36 minutes, slightly decreased

compared to 2020. With regard to the number of dispersions localised in the networks as a result of third-party reports per thousand customers (for distribution plants subject to the premium-penalty regulation), there is a slight increase both for dispersions localised on underground networks, which are usually the most dangerous, and for those on overhead networks.

Data on connections are distinguished according to whether they are connections to transport pipelines or to distribution networks. In 2021, 92 **connections to transport networks** were made, of which 72 were high-pressure pipelines and 20 medium-pressure pipelines. On average, a wait of 83.6 working days was recorded for high-pressure pipelines and 32.4 days for medium-pressure pipelines. Compared to the previous year, there was a slight deterioration for high-pressure connections and, conversely, an improvement for medium-pressure connections. Of the total connections made, 41% activated supply during the year. In the case of **local distribution networks**, a **slight decrease in the number of realised connections** was observed: 104,960 in 2021 compared to 106,996 in 2020 (-2%). As always, most of the connections involved low-pressure pipelines (92.7%) and the remainder medium-pressure pipelines. There was a lengthening of waiting times for connections to low-pressure networks (from 18.5 to 26.1 working days), while for connections to medium-pressure networks the lead time remained the same as in 2020 and amounted to 8 working days.

In the course of 2021, a number of changes were adopted to the **settlement discipline** approved in 2018 and which came into force on 1 January 2020; these included: changes to optimise the timing of the activities required for the definition of the final gas balances; and changes to the way in which the deviation fees discipline is applied. In August 2021, the Authority also proposed the introduction of a **mechanism to make distribution companies responsible** for the volumes to cover the difference between the quantities injected at the exit points of the transmission network interconnected with distribution networks (city gates) and those withdrawn from end customers supplied through the same points. In addition, the Authority proposed an integration of the regulatory framework on the subject of fraudulent withdrawals and localised leakages (gas leaked in cases of service emergencies or in cases of damage to plants or pipelines of the distribution network).

Regarding **access and development of the transmission system**, it is worth mentioning that in May 2021, the Authority, jointly with the regulators of Greece (RAE) and Albania (ERE), approved the proposal for the **capacity increase for the TAP pipeline** concerning the Market Test carried out in 2019. Furthermore, in June 2021, the Authority, again in agreement with the regulators ERE and RAE, approved the document Guidelines for the 2021 Market Test of Trans Adriatic Pipeline with which a new Market Test for 2021 was initiated. Finally, during the course of the year, the Authority made a number of changes to the rules governing access to transmission networks, and stipulated that deviations at entry and exit points interconnected with foreign countries should be evaluated in kWh, i.e. in the same unit of measurement used for user nominations, and that at points interconnected with foreign countries other than Switzerland and European Union countries, i.e. the Mazara del Vallo (connection with Algeria) and Gela (connection with Libya) points, there should be the possibility (under certain conditions) to submit a request for annual capacity allocation even when the thermal year has started, on a first come first served basis.

As part of the proceedings for the **evaluation of the ten-year plans for the development of the 2019 and 2020 natural gas transmission networks**, in December 2021, the Authority presented guidelines on incentives to keep the networks in operation, on efficiency criteria in the case of the development of the transmission network in newly methanised areas, and on criteria for the return of revenues from the operation of dual-fuel power plants to the system. In June 2021, it **launched the public consultation on the Plans for development of the natural gas transmission network**

for the year 2021, within the scope of which an online public session was organised by the largest transmission company on behalf of the Authority for the purpose of presenting and exploring specific aspects of the Plans. The assessment procedure of the Plans for development of the natural gas transmission network 2021 is still ongoing and will be conducted jointly with the assessment procedure of the 2022 Plans.

The regulation of access and provision of natural gas transportation, storage and regasification services requires that the companies providing the aforementioned services define their own service codes in accordance with the criteria established by the Authority, which approves them once it has verified their consistency with these criteria. In the course of 2021, **several codes for transport, storage and regasification services were approved and/or updated**, in order to incorporate new regulatory provisions, provisions of the Authority or management methods aimed at improving service provision.

Wholesale and retail markets

According to provisional data released by the Ministry of Economic Development, gross natural gas consumption in 2021 increased by 5.2 G(m³) to 76.4 G(m³) from 71.2 G(m³) in 2020.

With consumption back on the rise and **domestic production** at an all-time low (3.3 G(m³), down 16.7% compared to 2020), **imported gas volumes** consistently showed an increase of 9.9%, approaching 73 G(m³), almost 2 G(m³) higher than in 2019. In 2021, imports also included gas from Azerbaijan that arrived in Italy via TAP, the pipeline that landed in Apulia and started operation at the end of 2020. In 2021, however, **exports** also grew significantly. Volumes of gas exported have multiplied five times as compared with 2020, rising from 316 M(m³) to 1.5 G(m³). The increase in exports, which was seen in particular in the last quarter of the year, was fostered by the abundance of gas that made Italian gas better value for money than that available for purchase at the TTF. The volumes in storage at the end of the year were 1.6 G(m³) less than at the beginning of the year. Therefore, part of the consumption was covered with gas in storage. Thus, as mentioned, gross domestic consumption in 2021 was 76.4 G(m³), 7.3% higher than in 2020, however also 2.6% higher than pre-pandemic levels in 2019. The level of **foreign dependence**, measured as the ratio of net imports to the gross value of domestic consumption, has risen again; 93.5% of the gas available in Italy comes from abroad (in 2020, this share was 92.8%). Taking system consumption and network losses into account, net consumption in 2021 was 74.1 G(m³), 8.3% higher than in 2020.

The main change in gas imports in 2021 is the amount of Azerbaijan gas that arrived in Italy via the TAP pipeline. The pipeline came into operation at the end of 2020 and in its first full year of operation, it delivered 7.2 G(m³) of gas to Italy, bringing Azerbaijan to third place in the ranking of countries from which we import natural gas. A notable increase was recorded in imports from Algeria, which, at 7.3 G(m³) more than in 2020, almost doubled. Also from Russia, 0.7 G(m³) more arrived in Italy than in 2020, a growth of 2.4%. On the contrary, in 2021, there was a decline, albeit of different magnitude, from all other countries from which gas is historically purchased. In 2021, therefore, the weight of Russia amongst the countries exporting to Italy reduced by 40% (42.9% in 2020), while Algeria's share rose from 22.8% to 30.8%. In third place in terms of importance, as just mentioned, comes Azerbaijan, with a 9.9% share. The ranking then continues with: Qatar, from which 9.4% of all gas imported into Italy comes (10.5% in 2020), followed by Libya, whose share is at 4.4% and Norway, which is at 2.7% (10.4% in 2020). The share of US LNG fell from 2.6% to 1.5%, while the share of Dutch gas practically fell to zero, which has been decreasing over time and now stands at 0.4%; the share of imports from Northern Europe (i.e. from Norway and the Netherlands together) thus fell sharply

from 11.8% to 3.1%.

The corporate groups that each own more than 5% of the total gas supplied (i.e. produced or imported) became five: Eni, Edison, Enel and Royal Dutch Shell, as in 2020, joined by Azerbaijan Gas Supply Company, the company that imports Azeri gas into Italy. Considering also the quantities produced within national borders, the five groups account for 87.3% of all gas supplied. The five groups are also the only ones that each have a share of more than 5% of the available gas (which in addition to imports and production also includes gas in storage), with an overall share for the four (85%) slightly lower than the share of gas supplied. The analysis of import contracts (annual and multi-year) active in 2021 in terms of **residual life** shows that 23.1% of the contracts will expire within the next five years (the same share was 28% in 2020) and 52.2% will expire within the next ten years. Of the contracts in force today, 40% have a residual life of more than 15 years. This share, which had been on the rise since 2014, also declined sharply in 2019, however then rose steadily; in 2021 it reached 40% and concerned a total quantity of 33 G(m³).

In 2020, **total demand in the gas sector**, understood as the sum of gas volumes sold in the wholesale market (including resales) and in the retail market plus self-consumption, decreased for the first time by 6.7% to 360.6 from 386.4 G(m³) in 2020. Overall, marketed gas in the total sales market (wholesale and end market) fell to 342.1 G(m³), a reduction of 7.5% compared to the same figure for 2020, which should be assessed taking into account the impact of the pandemic emergency on 2020, which had caused wholesale sales to rise significantly. The **wholesale market** handled 285.1 G(m³), a decrease of 9.3% compared to 2020, the retail market handled 57 G(m³), an increase of 3.1% compared to 2020, and self-consumption amounted to 18.4 G(m³), also a sharp increase (11.3%). The industrial groups serving a share of total demand of more than 5% in 2021 are 5 as in 2020. More precisely, the industrial groups and their respective shares, in brackets, are: Eni (18.2%), Engie (13.3%), Alpiq (7.7%), Enel (7.3%) and Edison (7.1%). The first three groups together cover 39.2% of the total demand, a share that is down from last year (42%). In 2021, the number of companies operating in the wholesale market decreased, as did the volume of gas sold. In fact, 190 sellers (10 less than 2020) sold a total of 29 G(m³) less than 2020; thus, the average unit volume dropped by almost 5%, from 1,572 to 1,501 M(m³). This is the first decrease since 2012. In 2021, the level of concentration in this market decreased further: the share of the top three companies (Eni, Engie Global Markets and Alpiq) was 28%, below the already low 29.7% calculated in 2020.

The main trading platform in the wholesale market in Italy is the **Virtual Trading Point (PSV)**, operated by the transmission network operator, Snam Rete Gas. Disposals that can be registered are both those that take place through bilateral contracts and those that take place within the regulated markets managed by the GME. In 2021, the number of PSV subscribers increased by two to 233. The number of traders, among subscribers, who transacted increased significantly from 137 in 2020 to 199 in 2021 (+45%), while the number of pure traders (i.e. subscribers who are not users of the transmission system) decreased slightly from 53 to 49. Over-the-counter volumes traded at the PSV increased by 2.1%, from 105 to 107 G(m³). By contrast, volumes with forced delivery to the PSV fell sharply (-68%; from 3.6 to 1.2 G(m³)). Therefore, total deliveries to the PSV remained essentially unchanged at around 108 G(m³). By contrast, volumes traded in the markets increased significantly, as always, by 19%, albeit less than in the previous two years (77% and 58% respectively). The volumes traded on the exchange reached 26 G(m³) from 22 the previous year, thanks to a high increase in volumes handled in the centralised markets (+16%), which was accompanied by a marked growth in energy traded as clearing house (+55%). The churn rate dropped to 3.2 (it was 3.6 in 2020).

In the **markets organised and managed by the Energy Markets Operator (GME)**, total volumes of 131 TWh were traded in 2021, up by 15% compared to 2020. This growth reflects the significant

increase in domestic consumption, which reached its highest level in the last decade (around 807 TWh). In contrast to 2020, in 2021 the greatest liquidity is observed on the **Day-Ahead Market** (45.4 TWh; +51%) and, in particular, in the trading session on the day before delivery. Monthly trends show higher trading levels in the last quarter of the year, with October more than doubling volumes compared to 2020 (+128%). In its second year of operation, the **AGS segment**, in which the Balancing Manager (RdB) procures the resources needed to operate the system, recorded exchanges totalling 33.8 TWh (+32% compared to 2020), almost entirely attributable to sales by Snam Rete Gas (90% of volumes). On the other hand, there was a decline in volumes traded on the **Intraday market** (44.1 TWh; -5.6%), mainly due to the lower handling of the RdB (13.1 TWh; -23%), while volumes traded by other operators increased (31 TWh; +4%), accounting for 70% of the total traded in the sector. Negotiations on the **Market for Gas in Storage** (MGS) show exchanges of 5.1 TWh, for Stogit alone, attributable both to third-party operators (2.8 TWh; -36% over 2020) and to Snam Rete Gas handling for all purposes (2.3 TWh; +37% over 2020). During the year, no sessions activated by Snam Rete Gas on the **Market of locational products** (MPL) were observed.

With regard to forward products traded on the **Futures market**, a decrease in trade continues to be observed, with 10 pairings relating exclusively to monthly products, totalling 33 GWh delivered in 2021. On the other hand, a recovery of trading is observed in the **P-GAS** royalties segment with 1.3 TWh of volumes delivered in 2021 and previously traded.

The **prices recorded on the various platforms** can be traced back to an annual average of around 46 €/MWh, in line with the annual average spot price at PSV (47.20 €/MWh; +347%). In particular, the average prices of the two M-GAS segments, respectively 46.30 €/MWh for MGP-GAS and 46.70 €/MWh for MI-GAS, showed an interim trend that mirrors that of the PSV price. MGS prices were also dynamically in line with those of other markets, with the exception of December, for which a lower level was recorded.

The provisional results of the Annual Survey showed that **just over 57 G(m³) were sold in the retail market** in 2021, to which must be added 240 M(m³) supplied through last resort and default services. Overall, therefore, the value of final sales was 57.3 G(m³), an increase of 1.8 G(m³) over 2020. However, in order to have a figure comparable with that of the final gas consumption published by the Ministry of Ecological Transition, and commented on in the previous pages, it is necessary to take into account the volumes relating to self-consumption, 18.4 G(m³), which brings the value of total consumption resulting from the Annual Survey to 75.7 G(m³), i.e. a value comparable to the 74.1 G(m³) from the ministerial source. As usual, there are differences between the two sources, which classify the volumes of gas handled during the year differently. The upturn in final consumption that emerges in both the Annual Survey data (5.1%) and the ministerial data, albeit to a sharper extent (8.3%), is mainly due to a significant recovery in the production sectors.

In 2020, the number of active suppliers in the retail market rose again and substantially (+13 active units). As the gas sold increased, overall, by 3.1%, and the number of sellers increased to a lesser extent (2.8%), the average unit sales volume increased slightly, by an average of 0.3%, from 117.2 to 117.6 M(m³). However, the increase in the number of sellers has been eroding this value for many years (suffice it to say that in 2010, the average sale was twice as high as it is today, at 237 M(m³)). Of the companies active in the end market, 6.2%, i.e. 30 out of 485, sold more than 300 M(m³) in 2021; together, these companies cover 83.7% of all gas sold in the retail market. Analysing the sales performance of corporate groups, instead of individual companies, however, allows a more accurate assessment of market shares and the **level of concentration in the retail market**. No changes emerged in the top four positions of the end market, in which Eni, Edison, Enel and Hera remain firm. As in 2020, the Eni group's share decreased by about one percentage point, from 18.4% to 17.1%,

because the group's sales fell by almost half a billion cubic meters (-4%). By contrast, the shares of the Edison and Enel groups have grown slightly: from 13.5% to 13.9% for Edison and from 11.8% to 12.4% for Enel. This was due to a clearly positive sales result of both groups: compared to 2020, the quantities placed on the retail market by the Edison group grew by 5.9%, while those sold by the Enel group increased by 8.5%. Thus, both the distance between Eni and Edison and that between Edison and Enel have shortened compared to 2020. In particular, that between the Eni and Edison groups decreased to 3.2% (in 2020 it was 4.9%), and that between the Edison and Enel groups decreased to 1.5% from 1.8% in 2020. Sales of the Hera group also increased significantly, by 9.2%. However, the gap between this and the Enel group remains wide (just under seven percentage points). Concentration in the final sales market in 2021, on average across all sectors, decreased slightly. However, trends differed between sectors. Using measures calculated on the volumes sold, it can be seen that the number of groups with a share of the total market of more than 5% remained unchanged at 4. Moreover, in 2021, the top three groups control 43.4%, while in 2020 the share was 43.7%. The Herfindahl-Hirshman Index (HHI) calculated on the sales market was 782, only slightly lower than the 2020 index, which was 788. When measured in terms of customers served, concentration tends to rise in almost all sectors: the only exceptions are industry and utilities, as well as the non-household sector as a whole.

As mentioned, net of last resort and default supplies, 75.5 G(m³) - of which 18.4 were for self-consumption and 57 for sale - were sold to 21.6 million redelivery points in 2021. Overall, gas sales increased by 5% compared to 2020. However, this increase was also due to a strong contribution from self-consumption. Overall, the latter, which mostly belong to the industrial and electricity generation sectors, recorded an increase of 11.3%; the quantities of gas sold in the free market, at 51.2 G(m³), showed an increase of 4%, while sales in the reference price market, at 5.9 G(m³), fell by 15.2%. Thanks also to favourable weather conditions, consumption in the household sector rose by 3.4%, and in central heating by 1.5%. The consumption of the production sectors (industry and thermoelectric generation) increased from 47.2 to 50 G(m³), thus recording an increase of 5.9%. Tertiary sector consumption (trade and services, together with public service activities) grew by 3.6%, from 7.5 to 7.8 G(m³).

Considering sales in the strict sense and thus excluding self-consumption, 89% of gas is purchased on the free market and the remaining 10.3% in the protection regime. In terms of customers, however, 34.6% buy on the reference price market, while 65.4% buy on the free market. Considering only the **household sector**, it can be seen that the share of volumes purchased on the free market in 2021 reached 63.9% for households and 85.2% for central heating (both shares are calculated on total sales in the strict sense, i.e. net of self-consumption). In 2020, the values were 61% and 84%, respectively. In terms of withdrawal points, in 2020, the portion of families that acquired gas in the protection service dropped to 36.8%; in 2020, it was 39.6%. The breakdown of sales to the end market (net of self-consumption) by consumption sector and customer size shows that 97.7% of the volumes sold to the household sector is purchased by households with an annual consumption of no more than 5,000 m³. On the basis of data provided by transmission operators and data from the IIS, the **switching** percentage, i.e. the number of redelivery points that changed supplier in the calendar year 2021, was 11.6% overall, or 13.4% when assessed on the basis of the consumption of customers who switched. Compared to 2020, the percentages are increasing for all customers, with the exception of other uses. Also in 2021, the increase in household sector rates may have been affected by the imminent end of the protection regime (although the date of the removal of price protection has been postponed several times). Last year, about 2.5 million households, equivalent to a share of 11.5% (and corresponding to a volume share of 13.2%), had made at least one change of supplier; compared to 2020, the change of supplier of household consumers increased by one percentage

point. Non-household users (excluding public service activities) who changed their supplier in 2021 accounted for 11.6% of the total in terms of redelivery points, and 13.9% in terms of volumes, showing less liveliness than in previous years.

Also in the gas sector, as already mentioned for electricity, the Annual Survey asked suppliers a number of questions aimed at assessing the quantity and types of offers that companies make available to customers who have chosen to supply in the free market. The **average of the commercial offers** that each gas supplier is able to propose to its potential customers is 11.8 for households, 5.8 for central heating and 13.8 for non-households. Of the 11.8 offers made available to the household customer on average, 6.1 **can only be purchased online**; the interest of households in such offers in 2021 declined slightly, as it turned out that only 7.2% of customers signed a contract offered via this mode (in 2020, this share was 7.9%). Considering condominiums, instead, of the 5.8 offers on average proposed to these customers, 3.6 are subscribed through the network. However, only 4.6% of the redelivery points of condominiums actually subscribed online. Finally, in the case of non-households (other uses), of the 13.8 offers made available to them on average, only 4.7 are subscribed to online; among these customers, however, the success of online offers is significant, since 39% of customers are reported to have subscribed to an offer via the Internet.

With regard to the preferred **type of price**, it was found that 72.7% of households signed a fixed-price contract in the free market (i.e. with the price not changing for at least one year from the time of signing), while 27.3% chose a variable-price contract, i.e. with the price changing at a time and in a manner determined by the contract itself. The percentages are reversed in the case of condominiums, among which variable-price contracts are by far the most popular, while less than a third of customers chose fixed-price contracts. Non-households, on the other hand, are roughly divided in half between those who prefer variable-price contracts, which are slightly more numerous (56.3%), and those who, on the other hand, have signed a fixed-price contract (43.7%). Looking at the supply cost component of the price of these contracts, it can be seen that variable-price contracts are less convenient for all types of customers. However, the differential with a fixed-price contract is larger for condominiums, while it is relatively small for households.

For all types of customers, the most frequent price **indexation modality** in variable-price contracts is that linked to one of the components established by the Authority for the economic conditions of supply of the protection service, chosen by 56.4% of households, by almost three quarters (73.3%) of the redelivery points of central heating and by 56.3% of the redelivery points for other uses; the other most common indexation method is linked to the gas price trend at the TTF (Title Transfer Facility), chosen by 34.2% of households, 13.7% of condominiums and 26.2% of non-households. In all cases, moreover, in 2021, the former was more convenient than the average of all variable-price contracts, while the latter led to a higher average value of the supply component than the average of all indexed contracts.

Of households served in the deregulated market, 4% have signed a contract with a **minimum contractual duration clause**, meaning that the customer is not required to change supplier for a minimum amount of time specified in the contract in order for the price to be applied; much lower percentages are recorded among other types of customers. Of households, 35.1% have signed a contract with a **rebate or discount**; lower percentages are found for other customers (14% of condominiums and 14.4% of non-households).

In the questionnaires of the Annual Survey 2021, the **presence of additional services** in natural gas sales contracts was also investigated. In contrast to the electricity sector, the frequency of contracts involving a combination of additional services is not very high; in fact, it concerns about 8% of

households, 0.5% of condominiums and just under 1% of non-households. The results obtained for households show that in the contracts signed by households, the presence of additional services is more common among fixed-price than among variable-price contracts: 60% of customers who chose a fixed-price offer sign a contract that also includes an additional service, while this percentage drops to 21.5% in variable-price contracts. In fixed-price contracts that provide an additional service, there is a clear preference (38.4%) for those that allow participation in a points programme and a good preference (8.1%) for those that offer additional energy services. With regard to the cost of additional services (measured by the component of the price that covers procurement and sales costs), it can be observed that the contract for households with a fixed price and no additional services is cheaper than the contract including participation in a points collection programme, which, as mentioned above, is almost as successful among customers; however, all other possible additional services show a lower price than the contract without additional services. For households with a variable price, on the other hand, the most popular options are the 100% green offer guarantee (8.8%) and the ancillary energy services (5%); even for these customers, the contract without additional services shows one of the highest prices, surpassed only by the ancillary energy services and the provision of other products or services offered together with gas. Considering the data of central heating, we note, and understandably so, a high lack of interest in additional services, especially in variable-price contracts: the portion of redelivery points of condominiums with a fixed-price contract and no additional services is about 71%, while it rises to 90% among those who have opted for the variable price. The contract without additional services is quite convenient for variable-price customers. Finally, as far as non-households are concerned, the choice of contracts without additional services is by far the most widespread, on average, about 90% of such customers, whether fixed-price or variable-price, choose a contract without other options. The price of such a contract tends to be affordable, however not in comparison with all the additional services available.

An analysis of the data collected in the Annual Survey shows that last year, the **average gas price** (weighted by quantities sold), net of taxes, charged by sales companies to end customers was 52.3 c€/m³, a level unprecedented in the last decade. This price was 33.9 c€/m³ in 2020; therefore, there was an increase of 12.3 c€/m³ in the last year, equivalent to 54.4%. The increase occurred in the year of the strongest increases in the cost of raw materials in the wholesale markets. It involves all consumer classes and to a greater extent the larger ones, which are more sensitive to price fluctuations in international markets.

Households, characterised by the prevalence of lower unit consumption (and thus a higher incidence of fixed charges), have a higher total average price (65.49 c€/m³), while for the opposite reason, industry has a lower total price (39.9 c€/m³). Central heating, utilities, commercial activities and power generation are in an intermediate condition.

Price trends since 2011 for households (households and condominiums), broken down according to the main contractual conditions under which supply can take place, i.e. the protection regime and the free market, confirm that the free market will be less expensive, on average, in 2021. With regard to smaller customers (up to 5,000 m³/year, mostly single households), in all years, the free market has higher values than the protection regime offer. The difference, which had remained around 13% over time, narrowed to 8.6%, probably due to the strong dissemination in the free market of locked-price contractual formulas, which delayed the transfer to end customers of the significant growth in international gas raw material prices that occurred in 2021. The class of customers with consumption between 5,000 and 50,000 m³/year (mainly condominiums) also has higher prices in the free market, with no narrowing of the differential in the last year. A similar trend is recorded for larger customers (consumption between 50,000 and 200,000 m³/year, almost exclusively condominiums). However, the latter size class is marginal for household consumption. The development over the past year is

due to the fact that while in the protection service, all size classes show a fairly similar percentage increase of around 20%, in the free market, the development is clearly differentiated and ranges from an 8% increase for smaller customers to a 36% increase for larger customers.

From the analysis based on the data communicated by the 367 sellers for the gas sector, the **actual average times for replies to complaints and bill adjustments** were 17.70 and 29.23 calendar days respectively, below the minimum standards set by the Authority (30 and 60 days respectively). The **actual average response time to enquiries** was also well below the general standard, i.e. a total of 6.48 calendar days. With regard to **double-billing corrections**, on the other hand, against the standard set at 20 calendar days, the actual average correction time was 18.04 calendar days. In 2021, sales companies serving the reference price and free market of natural gas received a total of 156,407 written complaints, 133,063 enquiries, 11,400 bill adjustments and 607 double-bill adjustments. There were 17,885 (+5.2% compared to 2020) cases of non-compliance with the standards set for services relating to the commercial quality of sales in the gas sector, which resulted in customers being entitled to compensation; 91.7% of these cases were due to failure to meet response times to customer complaints. During the year, compensation for gas customers totalling more than Euro 785,000 was paid out.

In 2021, **customers with dual fuel** contracts sent 27,714 written complaints, down 14.2% year-on-year, and 27,511 written enquiries, also down 6.9%. Bill and double-bill adjustments amounted to 1,667 (-32.6%) and 69 (-46.1%) respectively. Overall, there were 2,204 cases of non-compliance with standards that resulted in the right to automatic compensation in the bill for services related to the commercial quality of sales. Overall, compensation amounting to Euro 96,975 was paid to the dual fuel customer segment.

Consumer protection and dispute resolution

The consumer protection system in the sectors regulated by the Authority consists of two macro-areas: the first concerns information and assistance to customers (basic level); the second concerns the resolution of problems and disputes that may arise between customer and service provider (second level). Activities related to the basic level are carried out nationwide by Acquirente Unico (Single Buyer), on behalf of the Authority, through the **Energy and Environment Consumer Help Desk** (Help Desk), which provides answers to calls to the call centre, written requests for information, requests to activate special information procedures and second-level complaints.

In 2021, 630,083 calls were received at the Help Desk call centre during working hours, a sharp increase (+31%) compared to 2020; of these, 563,816 were handled and 66,267 were abandoned by customers without waiting for the operator to answer. Compared to 2020, both the average waiting time (229 seconds vs. 174) and the average conversation time (241 seconds vs. 227) increased, due to the pressure on the call centre from the sharp increase in calls and the multiplicity of questions posed in each call. Almost all calls handled by the call centre concerned the electricity and gas sectors (605,608, or 96% of the total).

In terms of **written enquiries**, the Help Desk received 18,834 requests in 2021, 40% more than the previous year. Almost three quarters of the enquiries can be traced back to just three topics: 'social bonus' (25%), 'billing' (19%) and 'market' (18%). **Special information procedures** make it possible to provide information without the need for assistance of the Help Desk staff. They have been operational since 1 January 2017 only for some specific topics in the energy sectors; in 2021, requests for the activation of special information procedures increased by 36%, totalling 43,756 cases (70%

for the electricity sector, 20% for the gas sector and 10% for both sectors). Finally, the Help Desk also received 2,041 **second-level complaints** (i.e. those for which the dispute was not resolved by the first complaint), for which the Help Desk informs the customer of the conciliation procedures that can be used to resolve the dispute, which can be activated by resorting to the Authority's Conciliation Service or other conciliation bodies.

Activities relating to the second level of the protection system concern the **resolution of problems and disputes** arising in the relationship between the customer and the regulated service provider. They can be settled through the special settlement procedures of the Help Desk or through conciliation procedures. The latter may be brought before the Authority's Conciliation Service or ADR entities registered on the Authority's special list.

Similarly to what happens for special information procedures, also for **special resolution procedures**, the Help Desk accesses information encoded in centralised databases. In contrast to information procedures, special resolution procedures allow the outcome of the dispute to be determined and imply assistance of the Help Desk staff, in case further information is needed to consult databases, or to verify the correct fulfilment of the regulation following the resolution of the dispute. In 2020, 11,298 requests for the activation of termination procedures were received at the Help Desk, a sharp increase over 2020 (+22%).

The **Authority's Conciliation Service** is a dispute resolution procedure that can be activated by end customers of electricity and natural gas for issues arising with energy operators (sellers and distributors), in case of missed or unsatisfactory response to a complaint. The procedure takes place entirely online and in the presence of a third-party, impartial mediator experienced in mediation. Any final agreement has settlement effect between the parties pursuant to article 1965 of the Civil Code. Moreover, with the approval of art. 141, par. 6, letter c of the Consumer Code, the attempt at conciliation has become a condition for proceeding before the courts for disputes arising in the sectors regulated by the Authority (with the exception of tax or fiscal profiles), unless urgent and precautionary judicial measures are taken. In 2021, customers and end users in the energy sectors submitted 16,795 requests to the Conciliation Service, 595 more than the previous year. The sectoral breakdown of the requests received by the Service in 2021, similar to the previous year, confirms the prevalence of electricity, with a 58% share of the requests submitted (9,784 requests); followed by gas customers with 31% (5,210 requests), dual fuel customers with 10% (1,688 requests) and prosumers with 1% (113 requests). Concerning the outcome of the requests received by the Service, 80% of the cases resulted in admission to the procedure, while the procedures concluded with an agreement between the parties accounted for 70%; these percentages are in line with the previous year. It took the parties an average of 58 days to reach agreement, 5 less than in 2020, probably due to a reduced impact of pandemic waves.

As an alternative to the Authority's Service, the end customer may make a compulsory attempt at conciliation for judicial purposes also with recourse to other parties. The Authority, in implementation of the rules, established in December 2015 the **List of Organisations entrusted to handle ADR (Alternative Dispute Resolution procedures)**. At 31 December 2021, 28 ADR entities were registered in the Authority's List. The information provided by ADR entities shows a slight decrease in the number of conciliation requests related to the energy sectors, which fell from 1,084 in 2020 to 1,048 in 2021; this figure is also affected by the fact that 2 entities did not receive any requests for pandemic-related issues. Almost half of the requests (44%) were submitted by the customer through a consumer association.

Since 2009, a protection mechanism has been in place for households in situations of economic hardship or serious health conditions who receive a **bonus, i.e. a discount on the supply of**

electricity and/or natural gas. In order to bridge the gap between the potential beneficiaries and the actual bonus recipients, which has always remained at considerable levels, Decree-Law No. 124 of 26 October 2019 innovated the regulatory framework by providing, inter alia, that from 1 January 2021, bonuses will be recognised automatically to those entitled to them (which are the persons whose valid ISEE⁸ is within the limits provided for by the legislation) and, therefore, without the need for them to submit a special request to the Municipalities and/or tax assistance centres. Therefore, in January 2020, the Authority initiated proceedings to render this provision operational. In February 2021, the Authority therefore approved the methods for requesting the **regime for the automatic recognition of electricity, gas and water social bonuses for economic hardship**, entirely replacing the regulation of the previous 'on request' system. However, the social electricity bonus for physical hardship does not fall within the scope of the measure, which remains 'on request' and continues to be managed through a separate system. The new regulation takes effect, in terms of the recognition of benefits to those entitled, as of 1 January 2021, consistent with the provisions of Decree-Law 124/19. Taking into account the time required for the development of the related IT systems, the mechanism became operational as of 1 June 2021. Therefore, the terms were defined for the recognition of any portion of the 2021 bonus accrued before said date.

In the context of the sharp increases in energy commodity prices in 2021, Decree-Law No. 130 of 27 September 2021 provided, inter alia, for the reinforcement of social bonuses for electricity and gas in order to minimise, for disadvantaged households, the increases in supply costs expected for the fourth quarter of 2021, allocating a total of Euro 450 million. The Authority implemented the decree immediately. In addition to these measures, in December 2021, it implemented art. 1, par. 508 of Law No. 234 of 30 December 2021 (so-called Budget Law 2022), which provided for a further reinforcement of the electricity and gas bonuses in the first quarter of 2022, in order to minimise the expected increases in expenditure for the supply of electricity and gas to economically disadvantaged households, up to the amount of Euro 912 million.

In 2021, which was the first year with the new automatic bonus recognition mechanism, the number of citizens who obtained the **social bonus for electricity supplies** tripled compared to the previous year, from 854,900 to 2,529,566, of which 2,487,599 (+209%) for economic hardship and 41,967 (+2.2%) for physical hardship. The total amount of bonuses disbursed for the electricity sector (for economic hardship and physical hardship) was approximately Euro 488 million, an increase of 260%. The beneficiaries of the social electricity bonus are located 31% in the North, 16% in the Centre and 53% in the South and Islands. Of the beneficiaries, 46% are households with up to 2 members, 40% with 3 or 4 members, 14% with more than 4 members.

The number of households benefiting from the **social bonus for gas supplies** due to economic hardship also tripled, from 543,963 to 1,537,884 (+183%). The amount of bonuses disbursed for the gas sector in 2021 was about Euro 209 million (+174%); this amount does not include the entitlements of households served by condominium supplies, the automatic identification process of which is ongoing. With regard to the beneficiary households (holders of direct supplies), their distribution by number of members appears similar to the electricity sector, while the territorial distribution is different, with the North (43%) prevailing, followed by the South and Islands (37%) and the Centre (20%).

Also in 2021, the actions of the Authority continued, aimed at accompanying end consumers on the **path to overcoming price protections**. As established by the Authority, therefore, the

⁸ Equivalent Economic Situation Indicator: this is the tool used to measure the economic condition of households in Italy. It is an indicator that takes into account income, assets and the characteristics of a household (in terms of size and type).

communications included in the bills issued in the first and second half of 2021 informed the end customer that changing contract or supplier is simple and free of charge and that continuity of service is guaranteed; they also provided the elements that should prompt the customer to make use of the tools aimed at making an informed and aware choice, such as the "Portale Consumi", the "Portale Offerte luce e gas" and the PLACET offers.

At 31 December 2021, there were a total of 3,886 offers in the "Portale Offerte" database, of which 1,934 were free market and 1,952 PLACET offers. For the electricity sector, a total of 2,036 offers were available, for natural gas, 1,814; there were 36 dual fuel offers.

Implementation of the Clean Energy Package

Law No. 53 of 22 April 2021 is the measure that defined the principles and guiding criteria for the delegation of powers to the Government for the implementation of the Clean Energy Package standards in the Italian legal system, with particular reference:

- to Directive 2018/2001/EU on the promotion of the use of energy from renewable energy resources (art. 5);
- to Directive 2019/944/EU concerning common rules for the internal market in electricity and amending Directive 2012/27/EU (recast) (art. 12);
- to the adaptation of national legislation to the provisions of Regulation (EU) 943/2019, on the internal market in electricity (recast), and Regulation (EU) 941/2019, on risk preparedness in the electricity sector and repealing Directive 2005/89/EC (art. 19).

In implementation of this law, the following were then enacted: Legislative Decree No. 199 of 8 November 2021, on the 'Implementation of Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources' (so-called Decree Red II); Legislative Decree No. 210 of 8 November 2021 on 'Implementation of EU Directive 2019/944 concerning common rules for the internal market in electricity and amending Directive 2012/27/EU, as well as laying down provisions for the adaptation of national legislation to the provisions of EU Regulation 943/2019 on the internal market in electricity and EU Regulation 941/2019 on risk preparedness in the electricity sector and repealing Directive 2005/89/EC' and other decrees transposing European directives.

At the beginning of 2020, the **National Integrated Energy and Climate Plan (PNIEC)** was published, which was sent to the European Commission by the Ministry of Economic Development in agreement with the Ministry of Environment and the Protection of Land and Sea and the Ministry of Infrastructure and Transport, pursuant to the so-called governance regulation (Regulation (EU) 1999/2018). The Plan, which is extensively described in the Annual Report 2020 (to which we refer) contains objectives, policies and measures that Italy intends to adopt in the coming years to achieve the European energy and climate targets for 2030. The Italian government is now working on its implementation.

Decree-law 31 May 2021, No. 77 (containing "Governance of the National Recovery and Resilience Plan and first measures to strengthen administrative structures and accelerate and streamline procedures", converted, with amendments, by Law No. 108 of 29 July 2021) **defined a governance** suitable for timely implementation of the National Recovery and Resilience Plan (PNRR) within a national regulatory framework aimed at simplifying and facilitating the achievement of the goals and

objectives established by the PNRR itself, by the PNC (National Plan for complementary investments) and the PNIEC (Integrated National Energy and Climate Plan); it also provided, among other **provisions**, those **aimed at accelerating the procedures for achieving the national energy efficiency targets** contained in the PNIEC and in the PNRR, with particular regard to the increase in the use of sources of electricity production from renewable energy resources (article 30); other provisions aimed at **simplifying the rules for storage and photovoltaic plants** and **identifying infrastructures for the transport of LNG in Sardinia** (art. 31); finally, simplification provisions regarding the production of electricity from renewable sources and **simplification of repowering procedures** (art. 32).