

## 1.01 TRENDS AND CONTEXTS, STRATEGIC APPROACH AND GROUP MANAGEMENT POLICIES

### 1.01.01 Trends and contexts

Hera makes ongoing efforts to interpret the signs coming from the contexts in which it operates, in an attempt to obtain an overall view of what lies ahead for the Group and its stakeholders. In order to anticipate future developments, the main drivers of change and their essential interrelations are identified below. In particular, the macro-trends of the Group's reference contexts are described, as are its main management policies, i.e. its industrial strategy and the related factors of sustainability (concerning the environment, technology and human capital).

#### Macroeconomy and finance

##### World economy: trends at year-end

The global economy contracted sharply in 2020, largely owing to the effects of the Covid-19 pandemic on the economic and social fabric. The most recent estimates prepared by the International Monetary Fund (IMF) show a decrease in **global wealth** coming to 3.5% compared to 2019. Advanced economies accounted for much of this result (-4.9% compared to 2019), while the decline in developing economies was less pronounced (-2.4%). Particularly negative figures appeared in the Eurozone and the United Kingdom, which show reductions in GDP going from -7% to -10%, while the United States showed a -3.4% drop compared to the previous year. Positive figures were instead seen for China, which reported economic growth coming to 2.3% in 2020. The measures aimed at containing the spread of the epidemic over the year, at varying degrees of intensity, interrupted economic activities and obstructed the planning capacity of many players, bringing production and global trade almost to a standstill which was only partially unblocked by the notable recovery recorded over the summer months. This reversal in trends is due to the extraordinary measures adopted by all major world economies, intended to provide stimulus.



##### European economy: trends at year-end

In the **Eurozone**, the economic downturn was significant (-7.2% compared to 2019) and especially concentrated in the second and fourth quarters of the year. The drop in GDP was higher in Spain, France and Italy, coming close to -10%, and more contained in Germany (-5.4%).

**Household spending** plummeted, as a result of the measures taken to contain the virus and an increase in European households' inclination to save. Exports also suffered, having to deal with limitations on the flow of goods imposed by the restrictive measures introduced, in addition to the drop in demand.

**Average inflation** for 2020 was negative and settled at -0.3%, weighed down by the drop in energy prices and the weaker prices for services and non-energy industrial goods.

##### World and European economies: forecast trends

For the **upcoming two years**, the IMF has projected a general recovery worldwide (+5.5% in 2021 and +4.2% in 2022), still to be confirmed on the basis of the evolving health situation, the global distribution of vaccines and the effectiveness of the extraordinary economic and financial stimuli adopted in Europe. The **Eurozone** is expected to follow the same path of recovery: more specifically, growth rates coming to 4.2% in 2021 and 3.6% in 2022 are expected, which, however, will not make it possible to recover the amount of GDP seen at the end of 2019 within 2021.

##### National figures: year-end and forecast trends

Most of the considerations made regarding the Eurozone also apply to the **economic situation in Italy**: the restrictive measures, in fact, led to a significant reduction in GDP in the second and fourth quarters (by 13.0% and 3.5%, respectively, compared to the previous quarter), while the third quarter – during which the restrictive measures were eased, on the whole – saw a solid recovery (+15.9% compared with the second quarter). This, however, was not enough to prevent **national GDP** from **contracting** by around 9% over the entire year.

In 2020, **exports** fell by 9.7% and **household consumption** also dropped sharply. The employment rate, thanks to the extraordinary measures adopted by the Government, stood at 58.3% in November

2020, relatively close to the figure seen at the beginning of the year (58.9%): the freeze on redundancies and the extensive use of social welfare programs, in particular, made it possible to temporarily stop the negative impact coming from the external context.

The most recent projections prepared by the IMF estimate that Italy may see **recovery** coming to 3.0% in 2021 and 3.6% in 2022, provided, however, that the pandemic is effectively contained and that the extraordinary resources allocated at European level are used equally effectively.

#### Volatility on financial markets

Furthermore, 2020 was marked by **uncertainty and volatility on global financial markets**. Although the Covid-19 pandemic was undoubtedly the dominant event, the effects of the trade war between the US and China, as well as those related to the US presidential elections, should not be forgotten. In the first quarter of 2020, in particular, market volatility reached levels comparable to those recorded during the 2008 financial crisis, but had already fallen by the second quarter. As regards the main emerging economies, on the other hand, the Chinese stock market reacted more moderately, owing to certain structural characteristics of this financial centre and the robust monetary and fiscal measures adopted by Beijing to support economic activity.

#### Support provided by Central Banks

Public debt felt the effects of the crisis, which appeared more immediately than in the past, thus exposing countries to the need to deal with the combination of an increase in current spending and a related reduction in tax revenues. The stock of debt in advanced countries averaged over 100% of GDP, a sharp increase over the 74% recorded in 2007.

In order to cope with the economic recession and consequent deflationary spiral, central banks adopted **extremely expansive monetary policies**, which reduced interest rates to zero or to negative levels through **credit easing and quantitative easing measures** aimed at providing liquidity to support loans to households and businesses. The growth rate of global liquidity consequently increased from an annual average of 7% to over 26%.

Following the pandemic, in particular, the ECB immediately introduced an extraordinary program for purchasing public and private securities (Pandemic Emergency Purchase Programme, PEPP), aimed at restoring the correct functioning of European securities markets and ensuring the effective transmission of monetary policy impulses. This measure, which will be in effect until the end of the crisis, has eased tensions on secondary markets for government bonds, which showed a rapid reduction in yields compared to the peak at the beginning of March. In this area, the ECB announced that it will continue to provide economic and monetary support, while stressing the importance of coordinated fiscal policies to cope with the contraction of the Eurozone economy, as well as the key role to be played by the Next Generation EU fund, approved by the European Council, which will provide decisive support (750 billion euro for recovery and resilience in European economies) by leveraging the Union's budget and lending capacity.

#### Ongoing downward trend in interest rates

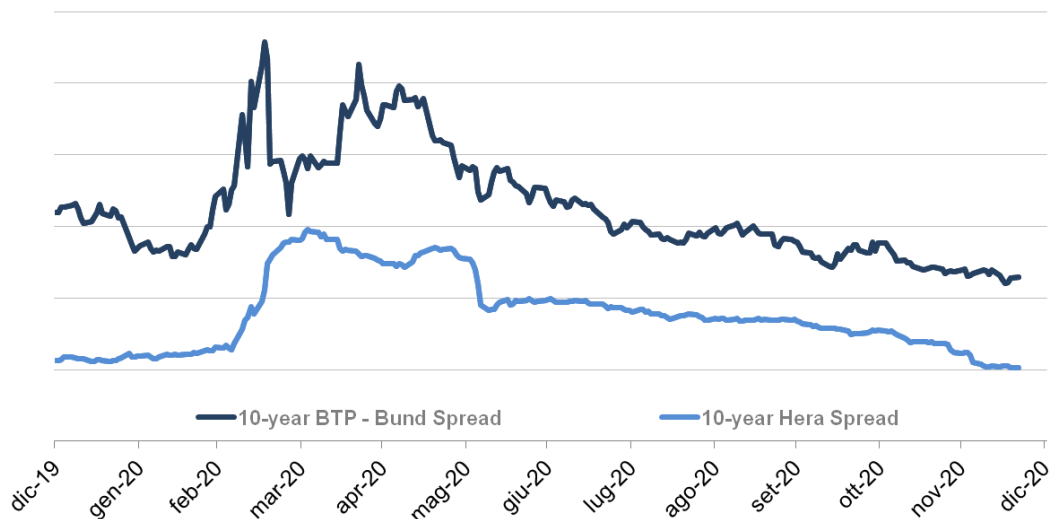
These monetary policies led the downward trend in **interest rates** to continue, concerning long-term maturities as well; the Euro swap interest rate curve, in particular, showed an average reduction of roughly 40 basis points compared to the previous year, reaching negative levels even on maturities up to 15 years, with a forward trend that does not point in an upward direction. The ECB, within a medium-term projection timeline, expects rates to remain at current levels or lower, until inflation outlooks converge sufficiently close to 2%.

In this context, the **Italian stock market** showed similar trends to those seen worldwide. In the first half of 2020, the FTSE MIB indeed fell by 18%, but then slowly recovered following the announcement of significant measures to combat the crisis at European and national level. Furthermore, according to the content of the Bank of Italy's Financial Stability Report, Italy's public debt remains sustainable, also in view of the temporary nature of the expansionary budget measures. The **national support measures** adopted until present, including the expansion of payroll subsidies, a moratorium on loans, a postponement of tax compliance, non-repayable grants and guarantee mechanisms for new financing, are believed to contain situations of economic and financial stress for households and businesses. In March, bond markets began to discount the debt of companies in all sectors of activity, but the monetary policy measures introduced in the meantime met their need for liquidity and helped mitigate the economic consequences of the pandemic. The Italian market for bonds issued by private companies showed a fall in prices, and the increase in yields on Italian government bonds was particularly strong; yields on bonds with a 10-year maturity came close to 2.5%, up compared to the 1.3% recorded at the beginning of the year. The spread between yields on Italian government bonds with a 10-year maturity (BTP) and the German benchmark rose rapidly in mid March, reaching a peak

of almost 300 basis points (from an average of around 145 basis points recorded during the previous two months); similar trends were observed with reference to credit default swaps (CDS) on sovereign debt.

#### National support measures

Hera's bond spreads were also affected by the pandemic, showing a rapid rise. The ten-year spread, shown in the following graph, in fact reached a maximum of 150 basis points, with an increase of roughly 100 bps compared to the previous year. However, thanks to the Group's good credit rating, it always remained at levels lower than the Btp-Bund spread with the same duration, while at the same time showing less volatility.



## Businesses and regulations

#### Business trends

Among the health emergency's effects on the national production system, a decline was also seen in **electricity consumption**. The most recent estimates prepared by the national grid transmission company (Terna) show nationwide energy demand coming to 302.8 TWh in 2020, down 5.3% compared to 2019. Approximately 90% of overall demand was met by domestic production, down 3.8% from the previous year, while the balance with foreign countries settled at 32.2 TWh.

In 2020, **renewable sources** accounted for 41.7% of total net electricity generation, coming to 114.0 TWh, up 1% compared to 2019. This contribution corresponds to an increase in the amount of final consumption met by renewable sources (up to 38%, more than 2 percentage points higher than the contribution in the previous year): in this sense, a significant contribution was made by photovoltaic production (+9.6% compared to 2019) and, albeit to a lesser extent, by hydroelectric production (+0.7% over 2019). Taken together, these two sources more than offset the overall drop seen in other renewable sources.

A similar trend occurred in **natural gas** consumption in 2020, with nationwide volumes in 2020 – according to the data provided by the Energy Market Management (GME) – decreasing by 4.4% compared to 2019, with a total of 70.7 billion cubic meters consumed. This trend is mainly due to the weaker **demand** recorded during the months when the lockdown was in effect. Consumption in the industrial and thermoelectric sectors stood at 24.4 and 13.2 billion cubic meters respectively (-5.7% and -6.1% compared to the previous year). Conversely, the decline in demand coming from the civil sector was slighter, settling at 31.0 billion cubic meters (-2.4% compared to 2019).

As regards the **waste sector**, the Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA) had estimated a national production of municipal waste coming to 30.1 million tons in 2019, with a slight 0.3% drop compared to the previous year, and a national production of special waste amounting

to 143 million tons, up +3.3% over the previous year. Special waste came primarily from the construction and waste treatment/redevelopment sectors (which respectively accounted for 42.5% and 26.5%), and 20% was covered by the manufacturing sector.

No data is currently available regarding the production of municipal and special waste in 2020, but considering its correlation with traditional socio-economic indicators (above all GDP and consumer spending) and the extraordinary effects of the health emergency, a decline in national **waste production** can in all likelihood be expected.

The most recent ISTAT report containing statistics on the **national water sector** confirms a total usage coming to approximately 9 billion cubic meters of water, equivalent to 419 litres per day per inhabitant. Almost 85% of this resource is taken from groundwater, roughly 15% from surface water and a minor amount from sea and brackish water. The latest update of the Blue Book shows that about half of the water consumed in Italy is used for agriculture, which is thus confirmed as the most water-intensive economic sector, followed by industry. This clearly indicates the importance of interventions aimed at encouraging **reuse of water resources** in agriculture and industry.

#### Competitive context

The **strong competitive pressure** that has defined for several years now the sectors typically served by utilities, as regards both free market and regulated businesses, was confirmed in 2020 as well.

In the **energy market**, intense **competition** among sellers to increase their customer base is confirmed by increasingly high churn rates, as has been noted by the Regulatory Authority for Energy, Networks and the Environment – Arera. In order to respond to the challenges and difficulties caused by the pandemic, many companies have rapidly adopted new digital solutions for customer management and relations, in many cases accelerating certain previously ongoing trends. Sales companies have added value-added services sales to their offer of commodities. Lastly, in the fall of 2020 tenders were held for the assignment of **Last Resort services** in the gas sector (annually defined Default gas and Last resort gas suppliers) and in the electricity sector (safeguarded services, defined on a two-year basis).



In the area of **industrial waste treatment and recovery**, the competitive scenario now includes major European players. The market for urban and special urban waste management and treatment is marked by a **strong demand**, linked above all to the emergency seen in central and southern Italy, capable of producing volumes that attract the attention of international competition. In the industrial waste market, currently existing **treatment plants** are often involved in acquisition strategies, following a trend that – in leading to a more pronounced industrialization of services – can be expected to benefit larger operators. In the **recovery market**, the sector is evolving towards a more industrial structure, which is the only way the challenging targets indicated by the EU can be adequately met.

As regards regulated businesses, Hera carries out its activities in the businesses falling under the responsibility of the Regulatory Authority for Energy, Networks and the Environment, which defines the conditions for access to and operating procedures within these businesses, in compliance with obligations concerning transparency.

In 2020, activities continued in **tender procedures** for the assignment of gas distribution, municipal waste and water cycle services. As far as **gas distribution** is concerned, the number of tenders actually awarded nationwide is still small (mainly including the Milan 1, Turin 2 and Belluno ATEMs), and almost all the tenders awarded have been subject to appeal. Concerning the areas in which the Group currently provides services, Arera has completed the assessment process for the tender documentation prepared by the granting authorities for the Forlì-Cesena, Modena 1, Rimini and Trieste ATEMs, while the bids submitted for the Udine 2 ATEM are still being assessed. With regard to the **municipal waste** business, a procedure was completed with the service awarded to the Group in the Ravenna-Cesena area, while the procedures for the Modena and Bologna areas are still open. Finally, in the **water cycle**, examination is underway for the bids made by competitors participating in the tender for the integrated water service in the province of Rimini, with the exception of the Municipality of Maiolo.

### Changes in the regulatory framework

In regulated businesses, the measures approved in 2020 having the most significance for the Hera Group are as follows:

- the legislative and regulatory measures adopted to face the Covid-19 emergency;
- the measures introduced by the 2020 national Budget and adopted by the Regulatory Authority for Energy Networks and Environment (Arera);
- the redefinition of the stages involved in eliminating protected electricity supply, by way of the Ministry of Economic Development's Decree and Arera's related resolution on the new service with gradual protection for small businesses.

Faced with a situation of nationwide lockdown, Arera intervened with measures first in favour of end customers in energy and water services, and later in favour of sellers and distributors in energy sectors.

### Covid-19 emergency: Measures taken along supply chains

For the period going from 10 March to 3 May 2020, end users benefited from a **temporary suspension of the procedures for interrupting supply due to arrears**, a form of support that from 4 to 17 May 2020 was reserved solely for household users (resolution 60/2020/R/com and subsequent supplements). In the energy sector, in order to mitigate the effect of the support granted to customers experiencing difficulty, sellers were granted the possibility of partially paying the bills issued by electricity and gas distributors due in the months of April-June (limited to a minimum of 70% and 80% respectively) and thus avoid non-fulfilment procedures introduced by distributors (resolution 116/2020/R/com). Lastly, by way of resolution 248/2020/R/com, Arera established the methods and terms through which sellers must pay the amounts still outstanding to distributors.

With resolution 190/2020/R/eel and in implementing the Relaunch Decree, Arera reduced **electricity bills** for non-household users connected at low voltage with power greater than 3 KW. In other words, in order to reduce the expense incurred by small businesses, tradespeople, bars, restaurants, laboratories, professionals and other service providers, for the amounts pertaining to the months of May, June and July 2020, the Authority provisionally redefined fees and tariff components per unit. Through the Energy and Environmental Services Fund (CSEA), Arera has already taken steps to compensate distributors for their lower revenues. With resolution 432/2020/R/com, Arera then introduced non-recurring changes regarding output-based regulation of electricity and gas distribution services. For electricity, the changes involve bonus-penalty regulations relating to the duration and number of interruptions, resilience and modernizing obsolete transformers; for the gas sector, the changes involve replacing sections of the network in non-compliant material, reducing the replacement target within 2022 from 40% to 30% and, lastly, postponing requests for waivers. In other words, for both sectors, Arera formalized the applicability of the force majeure clause for commercial quality.

Finally, with resolution 501/2020/R/gas, Arera also intervened in obligations concerning the installation of **G4-G6 smart gas meters**: achieving an 85% roll-out obligation was postponed to 31 December 2021 for large companies (with more than 200 thousand delivery points) and to 31 December 2022 for medium-sized companies (with between 100 and 200 thousand delivery points).

### Covid-19 emergency: measures in the integrated water cycle

As regards the **integrated water service**, resolution no. 235/2020/R/idr introduced a number of **exceptions** to current regulations regarding both tariffs and service quality, in order to safeguard operators' economic and financial balance.

With regard to **tariffs**, the reduction in recognised financial charges for assets under construction relating to non-strategic works was postponed to 2022, maintaining the coverage rate equal to the one used for strategic works for the tariff years 2020 and 2021. For 2020, specific components were also introduced to cover costs linked to the emergency, including those involving deferrals and payments by instalments granted during the emergency period. Lastly, as part of the efforts made towards higher tariff sustainability, regional authorities may postpone to subsequent years (but not after 2023) the recovery of the portion of charges eligible for 2020 tariff recognition, with the related possibility of a financial advance paid by CSEA.

With reference to **service quality** regulations, technical and contractual quality objectives will be considered cumulatively over the two-year period 2020-2021.

As for the other sectors under its responsibility, with resolution 443/2019/R/rif Arera introduced changes and additions to the tariff regulations for the **integrated waste service**. In particular, to ensure the necessary continuity of waste services, it introduced a series of levers aimed at guaranteeing the **social and economic sustainability of the tariff system**. The deadline for defining tariffs and the Tari was extended to 30 June 2020 (Decree 18/2020, so-called Cura Italia, converted into Law no. 27 of 24 April 2020), creating, as an exception, the possibility of approving for 2020 – until October 31 – the tariffs or the Tari adopted for 2019. Arera also introduced tariff facilitation measures



**Covid-19 emergency: waste service measures**

for non-household end users penalized by the closure of economic activities, reshaping the variable quotas for waste services, as well as other forms of protection for household users undergoing economic hardship (resolution 158/2020/R/rif). With resolution 238/2020/R/rif, in order to guarantee operators' economic and financial balance, Arera then completed the emergency regulation framework by introducing temporary changes to the waste tariff method, guaranteeing mechanisms covering the economic and financial charges incurred to adopt the measures protecting users. In addition, the possibility was granted to acquire in advance, within 2020 tariffs, payment of the differential charges incurred to deal with the emergency.

**Covid-19 emergency: district heating regulations**

Once again as a result of the health emergency, regulations for the technical quality of services in the district heating sector (resolution 548/2019/R/tlr), which should have come into effect on 1 July 2020, were postponed to 1 January 2021 (resolution 188/2020/R/tlr).

**2020 national budget**

The **national budget for 2020** (Law 160, 27 December 2019) introduced some significant measures for energy and water services. The cause of exclusion from the two-year statute of limitations for credits resulting from adjustments for consumption dating back more than two years, for example, was removed even in the case of ascertained **responsibility of the customer** in failure to measure. In regulations for the energy sectors, moreover, Arera subsequently implemented this legal provision with resolution 184/2020/R/com. The situation in the water sector is similar, where this measure was implemented with resolution 186/2020/R/idr, also introducing specific information obligations in favour of end users. Other interventions concern the notice period for **suspension of supply** due to arrears, which was increased to 40 days from receipt of the notice by the end user. For the energy sectors, the rules governing the indemnification system were strengthened in favour of operators in order to prevent customers from excessively changing provider, and at the same time this provision was implemented by Arera with resolution no. 219/2020/R/com. In turn, resolution 221/2020/R/idr, with which this measure was also applied to the water sector, provided for appropriately monitoring the effects resulting from its adoption, ultimately going towards the interest of operators' economic and financial balance. Finally, Law no. 160/2019 provided for the introduction of specific penalties in favour of end users in cases of violations relating to the methods of recording consumption, execution of adjustments or billing by sellers or managers.

**Elimination of protected electricity customers: methods for assigning and regulating "gradual protection in services" introduced**

As regards the market framework for sales to end customers in energy supply chains, the methods for eliminating protected prices are currently prefigured only for the electricity sector. With Decree 162/2019, so-called **Milleproroghe**, converted with Law 8/2020, the stages for **eliminating protection in electricity** were redefined, postponing them to January 1, 2021 for small businesses and January 1, 2022 for household customers and micro-businesses.

Arera intervened within this legislative framework: with resolution 491/2020/R/ee, in fact, it defined regulations for the economic and contractual conditions in service supply with gradual protection intended for small businesses that do not have a contract on the free market and, as of 1 January 2021, the procedures for assigning the service itself. The parties providing the service must be defined following competitive procedures (period of definitive assignment) and, considering the time required to complete the procedures necessary to carry out the assignment, this period will be preceded by a transitory period in which the supply is provided by operators providing protected services (period of provisional assignment, running until June 30, 2021). The portions will be awarded by means of a double round auction mechanism, awarding the area to the operator offering the lowest price, within the limits of a minimum floor and a maximum cap on the price offered, established by Arera.

In the provisional assignment phase, the economic conditions of the gradual protection service will be essentially in line with those of the protected service, thus ensuring basic continuity in remuneration for the provisional operators. In the definitive assignment phase, the end customer will be charged a price corresponding to the sum of the following items:

- a variable fee subject to periodic updates for supply;
- specific fees to cover imbalance costs and marketing costs, prudentially defined by the Authority before the competitive procedures are carried out;
- a single price defined nationally on the basis of the results of the award prices that emerged during the tender (which incorporates the remaining cost items).

Operators in the gradual protection service will therefore receive remuneration in line with the price offered during the tender, by means of a specific equalization mechanism with respect to the single price applied to the customer.

The Ministry of Economic Development's Decree 31 December 2020 sets out the methods for encouraging an informed entry into the free market and those for eliminating regulated prices for small businesses. It furthermore defines that each participant in the tender procedures must be awarded a maximum amount of 35% of the assignable volume over the entire nation. In order to bring the regulations into line with the aforementioned decree, with resolution 14/2021/R/eel the Authority ordered the publication of the regulations for the tender for assigning the service by Acquirente Unico Spa to be temporarily postponed until the end of January 2021.

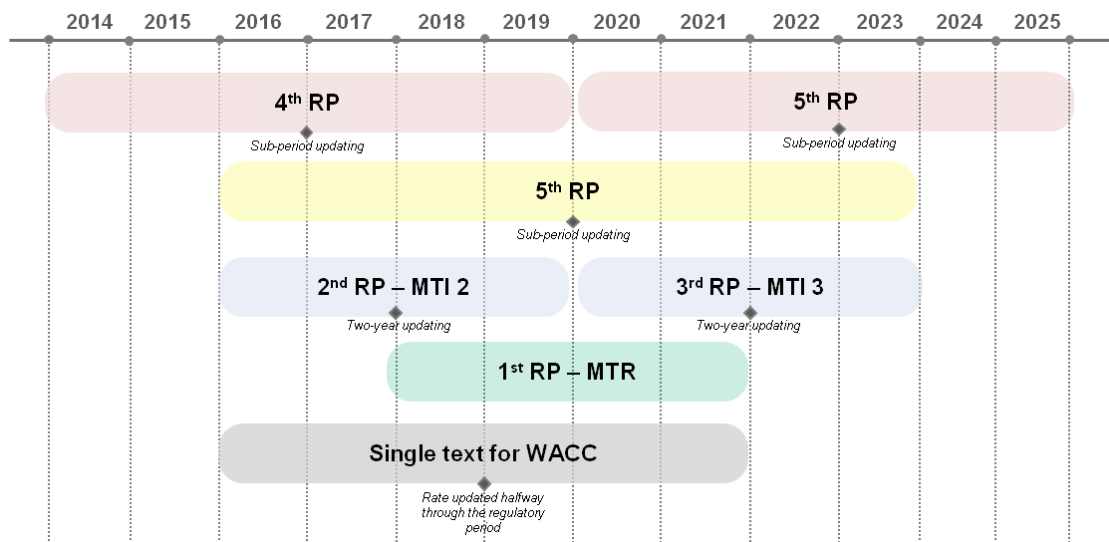
**Reintegration of OGDS charges**

With consultation document 445/2020/R/eel, Arera made known its final guidelines regarding the mechanism for recognising any failure to collect the tariff components covering general system charges (OGDS). This initiative is aimed at complying with the rulings of the administrative courts, which have established that sales companies do not have to bear economic charges relating to these charges which, after being paid to the distribution companies, have not been collected from end customers due to the latter's arrearage.





**Measurement quality regulations for district heating**

Lastly, Arera has almost completed regulations for the district heating service (TLR), also approving the Integrated district heating measuring text (TIMT) with resolution 478/2020/R/tlr, which will come into effect on 1 January 2022 and will apply to the three-year period 2022-2024. These regulations deal with various issues including meter reading, methods of estimating and reconstructing meter data and quality standards, as well as automatic compensation.

A timeline showing the main regulatory periods and related measures introduced by Arera, pertaining to the Group's sectors of activity, is provided below.



Lastly, the table below indicates the main tariff references for each regulated sector, based on the regulatory framework in effect in 2020 and expected to remain until the end of the current regulatory periods.

	 <b>Natural gas distribution and measurement</b>	 <b>Electricity distribution and measurement</b>	 <b>Integrated water service</b>	 <b>Integrated waste cycle</b>
<b>Regulatory period</b>	2014-2019 4 <sup>th</sup> regulatory period (resolution 573/13)  2020-2025 5 <sup>th</sup> regulatory period (resolution 570/19)	2016-2019 1 <sup>st</sup> sub-period of the 5 <sup>th</sup> regulatory period (resolution 654/15)  2020-2023 2 <sup>nd</sup> 1 <sup>st</sup> sub-period of the 5 <sup>th</sup> regulatory period (resolution 568/19)	2016-2019 2 <sup>nd</sup> regulatory period (resolution 664/15)  2020-2023 3 <sup>rd</sup> regulatory period (resolution 580/19)	2018-2021 1 <sup>st</sup> regulatory period (resolution 443/19) (1)
<b>Regulatory governance</b>	Single level (Arera)	Single level (Arera)	Double level (Ega, Arera)	Double level (Regional authority, Arera)
<b>Invested capital recognised for regulatory purposes (Rab)</b>	Previous cost revised (distribution)  Average between standard and actual cost (measurement)  Parametric recognition (centralised capital)	Parametric recognition for assets until 2007  Previous cost revised for assets as of 2008	Previous cost revised	Previous cost revised
<b>Regulatory lag for investment recognition</b>	1 year	1 year	2 years	2 years
<b>Return on invested capital (2) (real, pre-tax)</b>	2019 6.3% Distribution 6.8% Measurement  2020-2021 6.3% Distribution and measurement	2019-2021 5.9%	2018-2019 5.31%  2020-2021 5.24%  +1% for investments as of 2012, covering the regulatory lag	2020-2021 6.3%  +1% for investments as of 2018, covering the regulatory lag
<b>Recognised operating costs</b>	Average value of actual costs by company grouping (by size/density), based on 2011 (for revenues until 2019) and 2018 (for revenues as of 2020) (3)  Sharing for efficiencies achieved compared to recognised costs  Update with price-cap	Average values of actual sector costs, based on 2014 (for revenues until 2019) and 2018 (for revenues as of 2020)  Sharing for efficiencies achieved compared to recognised costs  Update with price-cap	Efficiency-applicable costs: actual amounts for the manager in 2011, adj. for inflation  Updatable costs: actual values, with 2-year lag  Added charges for specific purposes (provisional)	Actual costs for manager with 2-year regulatory lag (as of 2020 tariffs for 2018 costs)  Added costs for quality improvement and change in manager's scope (provisional)  Balance for 2018-2019 based on 2017 costs (gradual)
<b>Annual efficiency factor for operating costs</b>	Annual X-factor  2019 Distribution: 1.7% large companies 2.5% medium companies Measurement and commercialisation: 0%  As of 2020 Distribution: 3.53% large companies 4.79% medium companies Measurement: 0% Commercialisation: 1.57%	Annual X-factor  2019 Distribution: 1.9% Measurement: 1.3%  As of 2020 Distribution: 1.3% Measurement: 0.7%	Efficiency-applicable mechanism based on: sharing manager's 2016 efficiencies  Amount of sharing differentiated according to the discrepancy between actual costs and manager's efficient cost	
<b>Incentive mechanisms</b>		Sharing for net revenues coming from fibre optics transit in electricity grids	Sharing for electricity costs, based on energy saving achieved, recognition of 75% earnings from activities aimed at environmental and energy sustainability	Sharing for revenues coming from sales of materials and energy (range 0.3-0.6) and Conai incentives
<b>Annual limit on tariff increases</b>			Asymmetric, based on: -investment requirements -management cost -changes in scope  Possibility of motion guaranteeing economic and financial balance	Asymmetric, based on the presence of: -changes in scope -quality improvement (only for 2020) continuity-maintenance of service quality following the Covid-19 emergency  Possibility of motion guaranteeing economic and financial balance

(1) Resolution 443/19 applies to operators in the integrated waste cycle, including treatment activities (disposal or recovery), only if these activities are included in the operator's corporate scope. The specific measure to be introduced for tariffary regulation of compensation for plants falling outside this scope has been postponed. This measure will be effective as of the 2020 tariff year, following the application procedure foreseen in the measure itself, without prejudice to the derogations foreseen by Law Decree 18/2020 Cura Italia, commented on in the section with further details.



(2) For the energy and waste sectors, the Wacc methodology is applied, while for the integrated water service the amounts indicated refer to rate of coverage of financial and fiscal charges.

(3) Regarding the significant reduction in the recognition of operating costs introduced by resolution 570/2019 in February 2020, Inrete Distribuzione Energia Spa, the Group's main distributor, like other operators in the sector, has filed an appeal at the Lombardy-Milan Regional Administrative Court.

## Climate and the environment

### Climate change: objectives and policies introduced

Regulatory and economic interventions aimed at facing climate change, and the concrete opportunities that derive from taking on the risks linked to it, have become priorities for international and national institutions, as well as those operating in all economic sectors. The Group's main concerns in pursuing environmental sustainability coincide with: the 17 goals on the 2030 Agenda for Sustainable Development (SDGs); the indications contained in the Paris Agreement to limit global warming to below 2°C; and the long-term climate strategy "A Clean Planet For All" (adopted by the European Union), intended to achieve total decarbonisation by 2050, through carbon neutrality, and to limit the increase in temperature to below 1.5°C. The changes called for by the Green Deal and, hence, in the new Circular Economy Action Plan (CEAP), provide further significant indications moving in this direction.

A further lever comes from civil society and consists in the growing number of people who, showing increasing sensitivity to environmental issues and social inclusion, give voice to a rising demand for green & digital interventions, in line with the European Union's recommendations for economic recovery and resilience.

The funds made available by the Next Generation EU to address the crisis caused by the Covid-19 pandemic can be accessed by member states provided that they submit a **plan for recovery and resilience** that meets certain eligibility conditions.

The adoption of the **Green Deal**, i.e. the set of initiatives aimed at tackling climate change and environmental problems in order to achieve carbon neutrality, is in turn subdivided into eleven actions aimed at creating a society that manages resources in a fair and competitive way. These actions include adopting an industrial strategy that implements **circular economy** principles in all sectors, starting with the most resource-intensive ones, and promoting **clean energy**, crucial to ensuring the supply of green, economic and safe energy.

### The Circular Economy Action Plan: European directives and national implementation

The new circular economy action plan, presented by the Commission in March 2020, outlines a renewed strategic framework to bring together the economic development of the European Union in a circular sense and, in doing so, accelerate the transition and make possible the changes towards which the Green Deal is aimed.

Among the initiatives foreseen by the CEAP, particular significance goes to measures encouraging not only reusable and recyclable products but also a reduction of "over-packaging", as well as rules for bioplastics.

The new CEAP also calls for developing additional policy measures that indicate minimum recycled plastic content requirements for certain product categories and evaluate the possible introduction of prevention (for packaging waste) and recycling measures (for additional categories of plastic waste).

**Waste management** policies aimed at reducing the environmental impact of plastic products, on the other hand, apply to stakeholders across the entire value chain, thus including the design, production and consumption phases of these products, in order to achieve The target to be achieved consists in putting at least 10 million tonnes of recycled plastics per year into new products on the EU market by 2025.

Above and beyond the plastics sector, promoting circular economy principles is also encouraged in the wastewater management area.

In order to promote a **more sustainable use of water**, as well as to alleviate water shortages within the European Union, Regulation (EU) 2020/741 has been adopted, which contains requirements for water reuse, encourages purified wastewater reuse for irrigation in agriculture and defines minimum requirements for the use of reclaimed water.

European regulations have been incorporated into national legislation and substantial changes have been made to the **Consolidated Environmental Act**, with the aim of improving performance in waste management and increasing circularity. These changes include a new electronic recording for waste traceability, an updated definition of municipal and similar waste based on qualitative rather than



quantitative criteria, and an extended producer responsibility, now having minimum administrative, financial and data requirements. These measures are accompanied by the implementation of European recycling and landfill targets for municipal waste, as well as a reform of the landfill admissions system.

The innovations seen in this area will be accompanied by the adoption of a sustainable management system for **water resources** that combines the need for storage and conservation, efficient consumption and the possibility of reusing wastewater, while at the same time allowing for the regeneration of natural ecosystems. The depletion of water resources is indeed one of the main threats to economic growth, and energy production itself is one of the major causes of freshwater resource consumption.

**System integration strategy: decarbonising the energy sector**

In order to achieve full decarbonisation of the energy sector by 2050, the European Commission has released its **system integration strategy**, set out based on six pillars that aim to overcome opposition between individual energy sectors, in order to introduce a virtuous system which is able, as such, to make the different infrastructures communicate with each other.

The strategy adopted aims to develop:

- a circular energy system driven by energy efficiency, according to a rationale built around saving materials;
- the electrification of consumption, through increased generation from renewable sources (Fer EE);
- promoting biofuels (including hydrogen) in sectors that are difficult to electrify (e.g. industry with high gas consumption, or heavy transportation);
- energy markets able to encourage decarbonisation and decentralization of energy production;
- integrating and full exploiting the various existing energy infrastructures (electricity, gas and district heating systems), aimed at avoiding the risk of technological lock-in related to the introduction of new technologies;
- a digital and innovative energy system.

**Opportunities in the utilities sector**

The inevitable nature of climate change has led the European Commission to reconsider its targets for reducing emissions by 2030, with the hope of achieving full decarbonisation by 2050. These global trends, along with the health emergency and the ensuing economic-social crisis, have also forced local authorities to reconsider their priorities and lines of action. The pandemic has made it all the more urgent to implement initiatives capable of making cities more resilient and, for this very reason, local programs are increasingly consistent with circular economy, sustainable mobility, climate adaptation and digitalization initiatives. This scenario is challenging and offers new opportunities to the utility sector. All types of customers will be called upon to introduce technological improvements capable of reducing their energy needs: household customers, businesses and public administrations.

The initiatives incentivised include promotion and sales of products and services for efficiency in energy consumption, and support for the energy efficiency of buildings.

**Environmental, socio-economic and social factors**

Stakeholders, financial and otherwise, are showing increasing attention to **sustainability** issues and, therefore, also to companies' sustainability ratings. It follows that financing opportunities will be increasingly focused on green products, able to raise money on the capital market at rates that are potentially lower than the alternatives.

When aiming at **sharing value between companies and communities**, oriented towards a search for solutions that benefit both, the engagement of the community and individuals now plays an increasingly important role. The main megatrends are those shaped around the UN's 2030 Agenda, alongside theoretical reference points and successful experiences involving approaches based on shared value and new business opportunities.

These new lines of development cannot disregard a full exploitation of data (understood as a true business asset) and a greater attention to cybersecurity, to protect the company and its data. The speed of change makes it essential to define training plans that enable the company's workforce to manage change (especially digital change) in the best possible way, including – where necessary – training programs that, while provided individually, are able to guarantee the necessary continuity ("self-development").

## Technology and human capital

The main **trends in ICT** consist in artificial intelligence, automation and therefore software, robotic process automation, data collection and management (Internet of things, data governance and data analytics), cloud platforms and, lastly, cybersecurity. These are all enabling elements, capable of accelerating digital technological evolution.

### Technological evolution

Technological evolution, in its most “disruptive” aspects, produces changing paradigms for economic and social contexts. At an increasing speed, it thus alters entire segments of the market and patterns for social relations. The risk underlying this accelerating trend is a widened gap between players who keep pace with technological evolution and those who, due to resources or skills, are unable to do so in all sectors.

**Investments** in telecommunications, networks, software and automation as well as other technological infrastructures have become increasingly urgent, and must be accompanied by growth in knowledge and **training**, which plays an enabling role for new technologies, which in turn are oriented towards a sustainable and circular economy and revolve around **digitization** and **artificial intelligence**. Metaphorically, these two directions can be represented by green and blue: green for the environment, to be protected with extensive and pervasive sustainability initiatives, and blue for electronics, which takes on all the nuances of information & communication technology (ICT).

Robotisation and artificial intelligence can enhance the ability of human capital in terms of efficiency and productivity, allowing people to be assigned enterprising and high value-added activities, in which human thought proves to be the best possible resource. This undeniably includes activities that must be undertaken to rethink organizational and methodological scenarios in the light of new technologies, while taking challenging environmental and social objectives into account.

The advance of **digital technologies** has been accelerated by the pandemic, which has increased the need for connection and security in remote working, making it no longer a negligible right but as a strategic means to achieve flexibility, productivity and work-life balance. All this has increased infrastructural needs, orienting the demand for investment towards connectivity and remote collaboration tools. This has led the boundaries of an organization to be reconceived, no longer reduced to the physical boundaries of a company's offices or those of its business in a narrow and logical sense. They now extend, rather, to the interrelationships that affect the organization itself in relation to its objectives in sustainable development.

Utilities, in particular, are called upon to seize digital opportunities in terms of procedural efficiency and workforce management, but also with respect to multi-channel interactions with customers, without forgetting the management and “sensitization” of infrastructures across the area served.

The widespread presence of digital technology now concerns all aspects of business operations, extending the changes affecting them to the point of producing new, additional value-added services.

The need for **IT security** has become more acute with the spread of computerization, and with the pandemic last year saw an exponential increase in attacks and their ensuing risks. Operational technology (OT), or remote management, which in the past had developed as a niche area, limited to plant effectiveness and with little attention to IT security, has had to deal with the lack of training in users and the vulnerability of many components of its technological infrastructures. Another area of utility infrastructures potentially subject to security risks consists in objects connected by sensors, such as smart objects and smart meters, where leniency in communication protocols may lead to illegal intrusions.

In order to respond to the growing demand for IT security, companies can no longer postpone an increase in investments that, by reducing the fragility of systems, are the only possible way to recover ground in the unbalanced situations that gradually developed in the past.

The increase in the amount of data produced and its rapid availability is a source of potential for companies: **the internet of things and digital interaction with people** (of which the automation of the most standardized customer relations through chatbots is one example) can in fact enable a continuous and rising flow of data, which not only allows various situations to be rapidly diagnosed (real time analytics) but also means that the decisions and actions to be taken can be more precisely profiled, often with the support of artificial intelligence.

Customers in each sector, in turn, are increasingly inclined to interact through digital channels, and therefore expect real-time responses and uninterrupted service availability. Suppliers are expected to

be more proactive in terms of attention to behaviour and optimised consumption, and additional services such as smart homes and e-mobility become increasingly rewarding.

As regards the more technological aspects of digitization, **cloud platforms** are the main enabler and accelerator of the entire ecosystem. The availability of high-performance connectivity has made it possible to achieve significant infrastructural scale economies with an exponential development of technology. Across the world, this has cumulatively given systems the ability to express a processing capacity that until a few years ago was not even conceivable. The rapid spread of cloud technologies and the growth of large companies operating in this sector can be explained by the benefits these infrastructures bring to users. At a low cost, they are indeed able to optimize the use of time, currently one of the most precious resources available.

The increasing emphasis going to “as a service” and “pay for use” IT services, for this very reason, appears an unstoppable process, statistically headed towards becoming the only one that is actually feasible, with the exception – at the most – of extremely specific applications.

This availability of processing power explains and encourages a wider spread of **artificial intelligence and robotic process automation applications with integrated artificial intelligence (IRPA)**, useful for making the most appropriate decisions on the actions to be taken. These innovations will lead to a progressive automation of processes, especially for processes consisting of activities that have finite rules and/or procedures. Identifying and formalizing hybrid operational processes, which combine human and automated activities, balancing them according to the value added to the process, is therefore one of the issues to which all organizations will have to pay particular attention, not only in terms of organizational design, but concerning training and operational monitoring.

The added value of a resilient workforce

Valorising the human component is also fundamental for achieving a balance between technology and people, and thus focusing human efforts on value-added activities, working towards an intelligent integration that is not limited to mere cost efficiency and replacement considerations. **Digital workplace transformation** and interconnection on a single platform allow us to interact, share information and “earn” knowledge and skills. The technological ability to acquire huge amounts of data makes it even more important to invest in the human ability to read it and make it “speak”, so that it can generate the expected value. At the same time, while the increasingly pervasive adoption of tools for remote collaboration has created changes in our way of working and measuring performance, the ability to offer an environment that is also connected in terms of human relations becomes, precisely for this reason, sought after and appreciated.



The current historical period and the health emergency have emphasized the need for added value provided by a resilient **workforce** that is urged to continuously develop the skills allowing it to face changing and not always predictable future scenarios. Faced with the need to redesign **people organization**, including spaces to be adapted according to the indications given by health authorities, the reinforcement of **remote working** has proven to be crucial. Trends in economic, political, environmental and social systems – along with strong acceleration in digital transformation and the progressive technological literacy of people – also require an increasingly sensitive approach towards **relational aspects**. Research by the World Economic Forum has shown that future roles will depend on skills related to technology, but also problem solving and self management. Reskilling, active and adaptive lifelong learning, as well as designing training activities themselves, are becoming key to increasing the resilience of organizations. The uncertain external environment places increasing responsibilities on individuals, and it is essential for the **link between individual contributions and organizational impact** to become increasingly noticeable, giving greater strength to orienting all resources towards a common goal. Individual empowerment, accompanied by a new conception of working methods and people’s wellbeing, is therefore aimed at enhancing the value of people and, in so doing, increasing productivity. In this regard, **diversity and inclusion policies** also translate into a fight against discrimination on the workplace and, when accompanied by a commitment to the promotion and creation of fair and inclusive environments, are becoming increasingly essential elements for the responsible financial community.