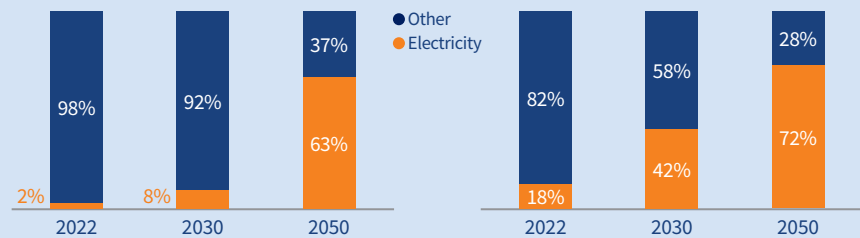


CONCEPTUAL MAP

1 THE ROLE OF ELECTRICITY DISTRIBUTION FOR ENERGY TRANSITION

The development of power grids is pivotal to the energy transition...

- Power grids are an essential building block for guaranteeing the energy transition, both in terms of energy supply (renewables will cover 93% of EU electricity generation by 2050) and in terms of energy demand (electricity will cover 60% of EU final consumption)
- The increase in the share of electricity in the EU's final energy consumption will be primarily driven by the transport sector (+61 p.p. vs. 2022), and by the residential sector (+53 p.p. vs. 2022)



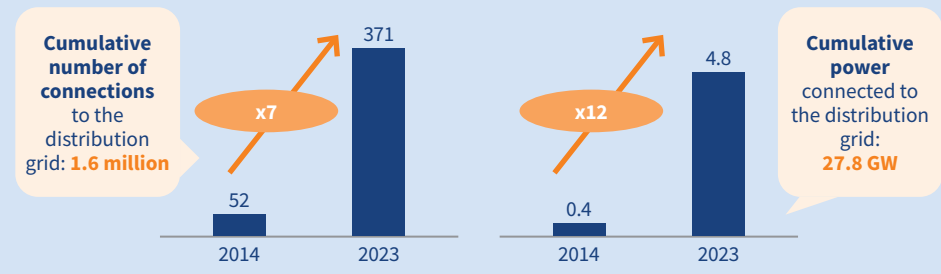
By 2030 a total of 64 mln electric vehicles are envisaged, a number expected to rise to 165 mln by 2050 (vs. 10 mln by 2022)

By 2030 60 mln electric heat pumps are envisaged (x3 times the number in 2022)

Breakdown of energy carriers for the transport sector in the EU (% values), 2022, 2030 and 2050 – left graph – and breakdown target of energy carriers for the residential sector in the EU (% values), 2022, 2030 and 2050 – right graph. Source: TEHA Group elaboration of European Commission and ENTSO-E data, 2024

...especially because of the growing importance of the power distribution grid...

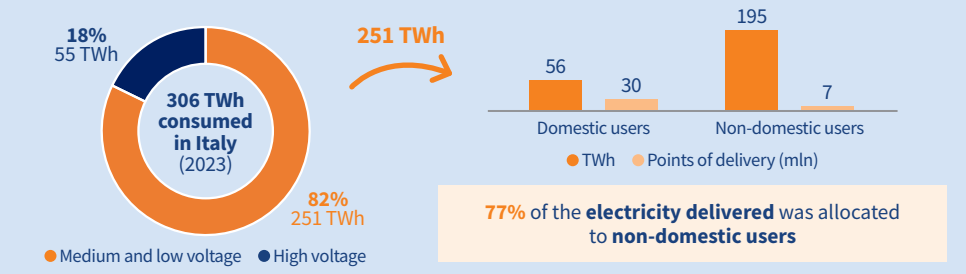
- In particular, the power distribution grid plays a crucial role, both because of the increasing number of connections to the distribution grid (x7 between 2014 and 2023) and the increasing cumulative power connected to the distribution grid (x12 between 2014 and 2023)
- Thus emerges the need for structural upgrading of the distribution grid, also in light of the increasing frequency of extreme weather phenomena that can wreak considerable damage on the electrical infrastructure (Italy is the first country in the EU-27 for per capita economic losses related to climate change)



Evolution of the number of annual additional connections to the distribution grid (thousands of units), 2014 and 2023 – left graph – and evolution of annual additional power connected to the distribution grid (GW), 2014 and 2023 – right graph. Source: TEHA Group elaboration of GSE data, 2024

...strategic infrastructure for the maintenance of vital societal functions

- The relevance and strategic importance of the power distribution grid is also highlighted by the European Commission, which considers this sector as essential to the maintenance of vital societal functions and critical to the proper functioning of productive economic activities
- In Italy, the power grid (and electricity distribution infrastructure) is among the strategic infrastructures covered by the Golden Power, which lays down special powers enforceable by the government to safeguard the ownership structures of companies operating in sectors deemed to be of strategic and national interest



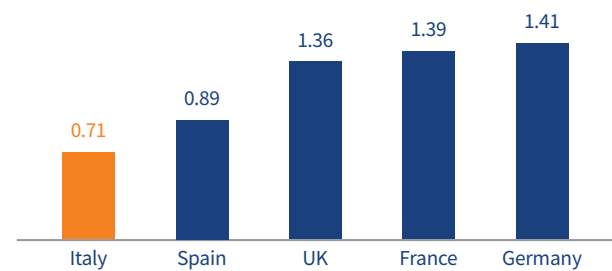
Breakdown of low-, medium- and high-voltage electricity consumption in Italy (% values), 2023 – left graph – and distribution of users connected to the power distribution grid (TWh and million of points of delivery), 2023 – right graph. Source: TEHA Group elaboration of ARERA data, 2024.

2 THE PERFORMANCE OF ITALY'S ELECTRICITY DISTRIBUTION MANAGEMENT AND ORGANIZATIONAL MODEL COMPARED WITH THE EUROPEAN BIG-5

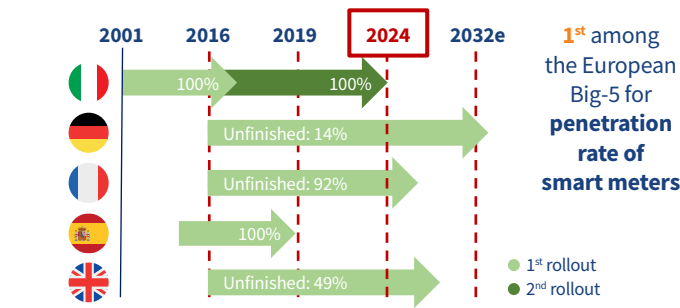
The Italian distribution grid (in its current set-up) is among the most virtuous in Europe, thanks to effectively invested capital that has enabled high rates of innovation, efficiency and infrastructural development. In order to present an effective comparative analysis, it has been chosen to analyze the distribution set-up of 5 countries that are comparable in terms of economic-social size and electricity distribution management model: Italy, France, Germany, Spain and the United Kingdom

Invested capital

1st for investment capacity (RAB/customer and RAB*/grid km)

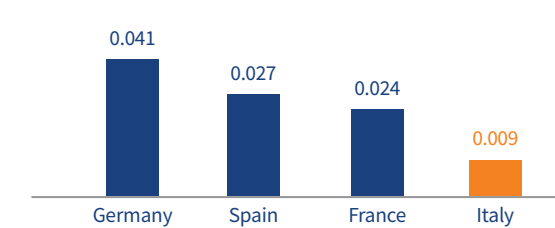


Innovation



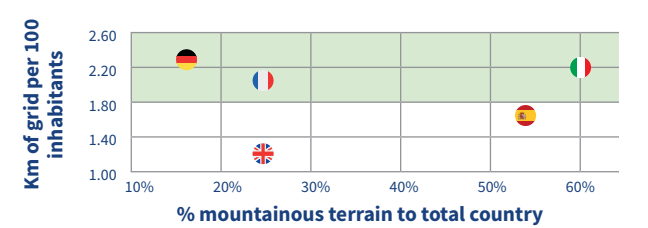
Efficiency

1st for cost-effectiveness of energy distribution charges for small and medium-sized enterprises (SMEs)



Effectiveness

2nd for territorial coverage of its power distribution grid, despite being 1st for its percentage of mountainous terrain



Regulatory Asset Base (RAB) per customer in European countries (€/end customer), 2023 or latest available year. Source: TEHA Group elaboration of Eurostat and DSO data of the countries taken as reference, 2024 (*) Invested capital on which the annual remuneration to operators is calculated.

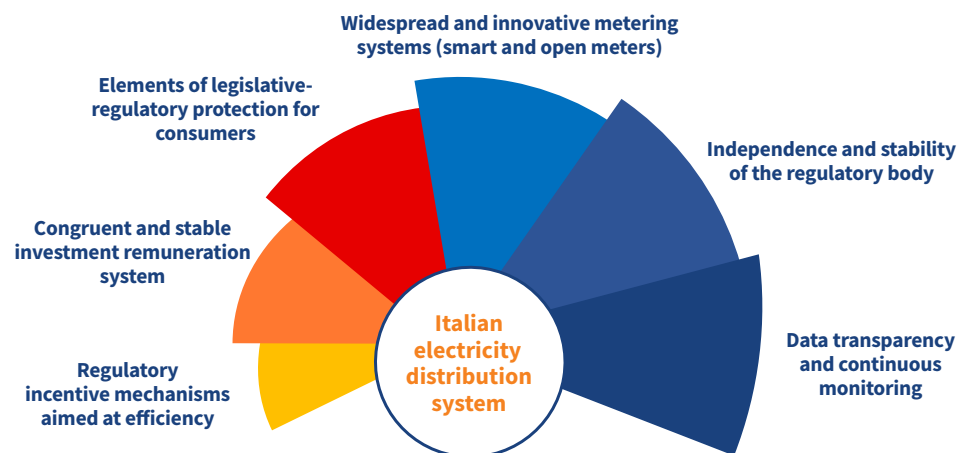
Smart meter penetration rate in European countries (% values), 2022. Source: TEHA Group elaboration of European Commission data, 2024.

Distribution charges for SMEs in selected EU countries (€/kWh), 2023. Source: TEHA Group elaboration of European Commission data, 2024.

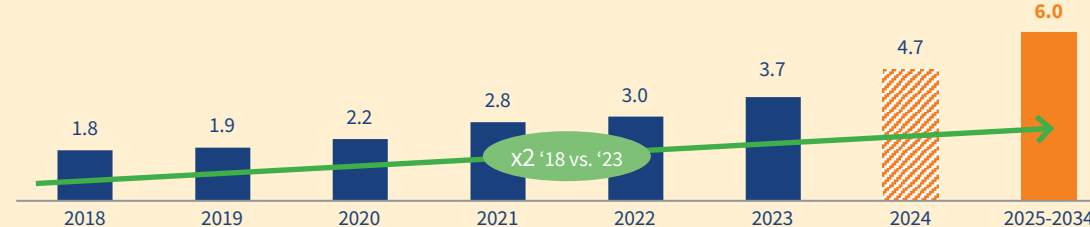
Matrix relating the proportion of mountainous terrain to the total land area of the country (x-axis – %) and the density of the distribution grid (y-axis – km/100 inhabitants), 2023. Source: TEHA Group elaboration of CEER, EEA and European Commission data, 2024.

3 KEY POINTS TO ENCOURAGE INVESTMENTS TO OPTIMIZE THE DISTRIBUTION GRID

The performance of the distribution sector is supported by a multi-level integrated legislative-regulatory framework that is particularly well-suited for the grids, with:



- In Italy between 2018 and 2023, investment in the distribution grid more than doubled (x2 times), with a forecast for 2024 of approx. €4.7 billion (1.8 times higher than the average for 2018 – 2023)
- Between 2025 and 2034, there is an estimated investment requirement of approximately €6 billion per year
- Past investments, and even more so future investments, are geared toward the upcoming challenges of a rapidly changing scenario: demand-side management (flexibility), digitalization (smart grids), resilience and climate change, the integration of distributed generation and smart meters
- The average annual investments required in the distribution grid in Italy (€6 billion) will further amplify the economic effects that can be activated by the sector, generating an annual economic impact for the country system that may rise to as much as €13 billion of Added Value every year (0.7% of the Italian GDP)



Dedicated annual investment in the development of the power distribution grid in Italy (billion €), 2018-2024 and 2025-2034. N.B. The investments consider the major Italian distribution grid operators. The year 2024 considers the business plans and the investment projections of the major Italian distribution grid operators. Source: TEHA Group elaboration of Eurelectric and major DSOs data, 2024.

In light of the current performance of the distribution sector in Italy, that consists of investment capacity and effectiveness, quality of service, innovation and cost-effectiveness for end users, it is desirable that, starting from the current set-up (consistent with European legislation), future development should preserve and improve, in a long-term perspective, the important benefits guaranteed so far by the multi-level integrated legislative-regulatory system