

Factsheet

The importance of Switzerland as an electricity transit country for Italy

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1 Initial situation

Switzerland lies at the heart of the continental European electricity grid. The country is therefore also an electricity transit corridor for energy exchange with neighbouring countries. At present, Italy in particular has a strong interest in ensuring functional transit through Switzerland. A significant portion of the electricity that Italy imports from Germany flows through Switzerland. In the political context, Italy's dependence on Switzerland is therefore repeatedly cited as a trump card against the European Union (EU). The truth is, however, that Switzerland's importance as an electricity transit country for Italy has declined and will continue to do so in the coming years.

2 Electricity generation in Italy

The largest share of Italian electricity generation is provided by gas, which accounts for at least 50 percent, followed by renewable energies, which represent approximately 40 percent. Furthermore, coal-fired power and other electricity sources are responsible for about 10 percent of Italy's electricity mix. Nuclear energy has not been used in Italy for many years. Following the Chernobyl nuclear disaster in 1986, Italy decided to phase out nuclear energy in a referendum in November 1987. After the Fukushima reactor accident in June 2011, the Italian electorate rejected a return to nuclear power. Italy also plans to phase out coal-fired power between 2025 and 2030.

Italy wants to increase the share of renewable energies in its electricity mix to 55 percent by 2030. A further eight gas power plants are currently under construction. In July 2021, it was announced¹ that «MEAG», the asset manager of Munich Re and ERGO, would provide financing for the construction and operation of a portfolio of eight gas power plants. In future, these gas power plants are to serve as backup power plants that will be used to guarantee security of supply when required.

3 Italy's dependence on electricity imports

In principle, the Italian power plant park is capable of guaranteeing security of supply in the country. But electricity prices in Italy are among the highest in Europe. This is due to Italy's power plant park, as gas-fired power plants have high variable generation costs. A significant amount of the electricity consumed in Italy is imported from other countries where electricity prices are lower. In 2020, for example, 30 TWh were imported, which corresponds to around 10 percent of Italy's total electricity demand. Italy therefore does not have a supply problem, but imports electricity from countries that have lower electricity prices than the Italian market. In addition to this, the number of times that Italy is even exporting electricity to other countries is increasing.

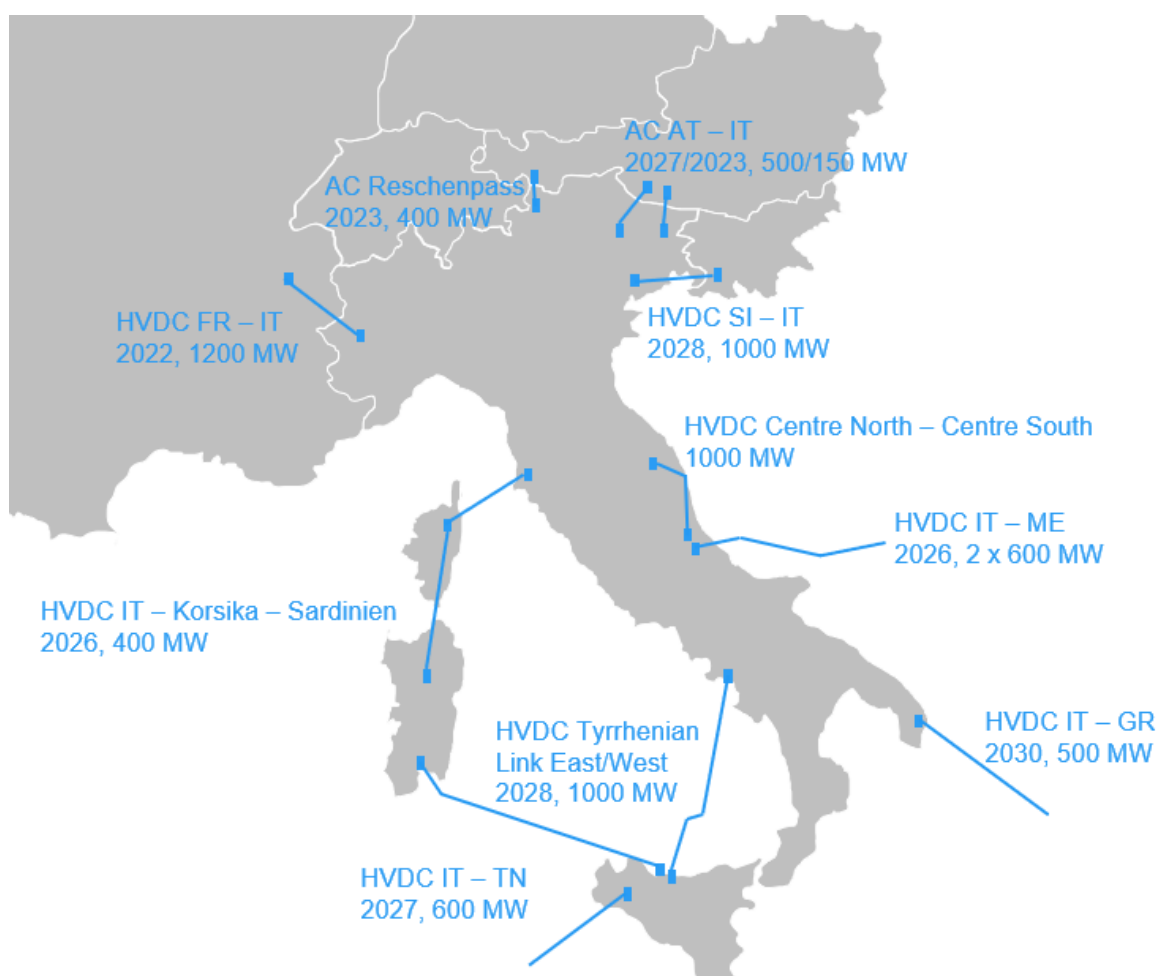
¹Cf. www.private-banking-magazin.de of 05.07.2021

Italy will continue to import electricity from other European countries in the future at certain times of the year.

4 Grid expansion in Italy

In addition to the connections to Switzerland, the Italian transmission system operator Terna has already established numerous cable connections with France, Austria, Slovenia and Montenegro (2019; interconnector for high-voltage direct current transmission [HVDC]). More are planned (cf. diagram below). For example, Italy wants to build new undersea cables (HVDC interconnectors) to Tunisia and between northern and southern Italy. In addition, Terna will invest EUR 750 million in a new 500 MW undersea cable to Greece stretching 200 km. The project will enable a doubling of the current electricity exchange capacity between the two countries and will support the integration of renewable energies. Terna's «2021-2031 Industrial Plan» comprises a total investment volume of EUR 18.1 billion for all grid projects.

Overview of grid development in Italy (selected grids)



5 Consequences for Switzerland

The implementation of generation and grid-related projects is likely to result in a significant decline in Switzerland's importance as an electricity transit country for Italy over the next five years.

Italy will increasingly import via France, Austria, Slovenia or Greece. This is due to the fact that Switzerland is excluded from the implicitly coupled intraday trading platforms (Day-Ahead Market Coupling und XBID). The lucrative intraday trading market, in particular, is a painful opportunity loss for Switzerland.

As long as Switzerland, as a non-EU member state without an electricity agreement, is not adequately included in the necessary grid capacity calculation processes, a massive increase in unplanned electricity

flows through Switzerland is to be expected. The introduction of the 70% criterion² in the EU and the implementation of balancing platforms (TERRE, MARI and PICASSO) will further accelerate the increase in unplanned, almost real-time flows. This could have a negative impact on Switzerland's ability to import in the winter months as well as on grid stability in our country.

² The 70% rule states that from January 1, 2020, EU member states must make at least 70% of the capacity of their network elements available for trade between EU member states.