

Investments for nearly 2.3 billion euros

Insula Project: a network for joining Italy to its islands

Terna's projects for joining the country with an avant-garde submarine cable network

The 150 kV "Capri-Torre Annunziata" connection represents another important step of the ***Insula Project***, the network of high-tech submarine cables similar to the meshing of overhead grids on land that Terna plans to build with the aim of strengthening the grid that connects Italy to its islands. The total amount of the investments equals nearly 2.3 billion euros, in line with the Development Plan. Terna's commitment is therefore continuing to strengthen the meshing of this grid which in the past 15 decades joined Italy from north to south and that continues to be joined thanks to the over 200 building sites already operating throughout the national territory.

Sardinia-Mainland connection (Sa.Pe.I.)

This infrastructure has been operating since 2012 and was defined the "record breaking electricity bridge". With its 435 km is indeed the longest submarine connection in the Mediterranean and the deepest in the world with 1,640 meters of depth. To build the Sa.Pe.I., Terna invested 750 million euros and this infrastructure will allow the electricity system to save 70 million euros a year, thanks to the elimination of "bottlenecks" between the Sardinia area and the rest of the electricity market. Moreover, from an environmental point of view, over 500 thousand tons a year of CO₂ in the atmosphere will be avoided, resulting from a greater use of renewable energy.

Interconnecting Campania's islands with the mainland

In addition to the Torre Annunziata-Capri connection, Terna is also strengthening the 150 kV "Cuma-Lacco Ameno" power line and the "Cuma-Patria" connection (Ischia). The aim of these projects is to increase the safety and reliability of the electricity supply in the island to minimize blackout risks, mainly during the summer months when tourism and consequently consumption increase. For these projects a total investment of nearly 150 million euros is expected. The projects will lead to significant environmental and economic advantages.

Sicilia-Calabria connection ("Sorgente-Rizziconi")*

This project is being implemented and will allow joining Sicily with Calabria through a 105 km long connection, 38 km of which in submarine cable between Sorgente (Me) and Rizziconi (Rc). It is the longest 380 kV AC submarine cable ever built in the world. Once the power line is completed, for which Terna is investing over 700 million euros, the quality and safety of Sicily's electricity grid will improve. This grid is old and poorly interconnected with the rest of the country. Significant benefits will also be achieved from an environmental point of view: in addition to building 82 km of new power lines in the province of Messina and Reggio Calabria, 67 km will be buried and 170 km removed of existing overhead lines. Lastly, the new power line will allow avoiding CO₂ emissions for nearly 670,000 tones a year.



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“Isola d’Elba-Toscana” connection

A 132 kV submarine cable between Piombino and Porto Ferraiolo, will connect Isola d’Elba to the mainland. The power line is awaiting authorization and Terna planned investments for nearly 50 million euros to build it. The power line will be nearly 39 km long, of which 33 submarine and 6 in buried cable. The connection will allow safely managing the electricity service in the island, guaranteeing greater energy reserves, mainly during the summer months when the energy demand in the Island reaches 40 MW. In addition to building the submarine connection, Terna’s project includes strengthening the existing 132 kV “S.Giuseppe-Porto Ferraiolo”, whose work has already begun.

Sardinia-Corsica-Mainland connection (Sa.Co.I. 3)

Owing to its natural characteristics, Sardinia will become a strategic energy hub placed at the center of the Mediterranean. It will increasingly become an important renewable energy production center. For this reason, Terna plans strengthening the interconnection between Sardinia, Corsica and the mainland with the objective of guaranteeing a greater exploitation of renewable energy production for nearly 500 MW at the same time ensuring adequacy of the system, with 300 MW of more efficient production. This project, for which Terna will invest over 600 million euros, includes replacing and strengthening the existing submarine cables and rebuilding the current converter stations.

Interconnecting the islands of the Venice Lagoon

This project was already authorized; Terna plans to invest a total of 33 million euros, for two infrastructures:

- 132 kV connection between the mainland and Murano (“Cavallino-Sacca Serenella”), 14 km long, 10 of which with an underwater cable; this connection will complete the 132 kV grid in the Venice Lagoon, improving the safety of the electricity service for both Venice and the upper Adriatic coast area near Jesolo;
- Burying the 132 kV “Fusina2-Sacca Fisola” overhead line for a total of 6 km, 5 of which underwater. This project will allow removing 7 km of overhead lines that affect the Venice Lagoon consequently improving boat transit.

Both projects include using avant-garde technology and devices for cable laying in the low lagoon bottom.