

The Tenerife-La Gomera interconnection, a boost for the energy transition in the Canary Islands

- The Regional President of the Canary Islands highlights that the project fits in with the green transformation of the Islands and enables the integration of renewable energy, which will result in less dependence on fossil fuels for electricity generation.
- For the Chairwoman of Red Eléctrica, Beatriz Corredor, "with the new link, we reaffirm the Company's commitment to the security and quality of the electricity supply in the Canary Islands."
- Thanks to this investment, the efficiency in electricity production will increase, which in turn will reduce the energy generation costs on the Islands by seven million euros per year.

San Sebastián de La Gomera, 26 February 2021

The Regional President of the Canary Islands, Ángel Victor Torres, today, Friday 26 February 2021, presided over the official presentation of the submarine electricity interconnection project between the islands of Tenerife and La Gomera, a plan that he defined, at the meeting in San Sebastián de La Gomera, as "a key element in the promotion of the energy transition in the Canary Islands."

Mr. Torres stressed that this energy project "is included within the framework of the European and national objectives for the decarbonisation of the economy and which, among other things, seeks to reduce greenhouse gas emissions by 2030 and increase the integration of renewable energy to move to a 100% green energy sector by 2040" in the Canary Islands, ten years before the 2050 horizon set by the European Union.

For her part, the Chairwoman of the Red Eléctrica Group, Beatriz Corredor, highlighted that "with this new link, we reaffirm our commitment to the security and quality of the electricity supply in the Canary Islands, as well as consolidate our role as a key player in the energy transition, by promoting the implementation of new green energy facilities."

This future submarine interconnection, which will be the second link between islands in the Canary Islands (the first being the one between Lanzarote and Fuerteventura), fits in not only with the green transformation process initiated by the regional government of the Canary Islands following the signing of the Progress Pact is backed by the current government, but also with the Climate Emergency Declaration in the Canary Islands (30 August 2019) and the ongoing definition of the Canary Islands Agenda for Sustainable Development. Furthermore, the Regional Ministry of Ecological Transition, Fight against Climate Change and Territorial Planning, headed by José Antonio Valbuena, is promoting the adaptation of the regional legislation to this green energy initiative.

At the same event, the President of the La Gomera Island Council, Casimiro Curbelo, confirmed the island's commitment to the electricity interconnection project, stating that it is "a project which will provide stability and ensure the guarantee of supply & response capacity in the event of possible grid failures." In this regard, he pointed out that the submarine electricity cable project does not hinder commitment of La Gomera to clean energy. "It is an opportunity to address the decarbonisation of the economy and the reduction of dependence on fossil fuels, as well as to place La Gomera in a privileged position and make it a territory capable of producing more renewable energy than it consumes in a year," said Mr. Curbelo.



The President of the Island Council of Tenerife, Pedro Martín, also indicated that "the electricity system in the Canary Islands is fragile. For this reason, all the interconnection initiatives mean unquestionable improvements for our archipelago". Mr. Martín added that "the proposals to plan and design meshed networks and grids will always result in more complete and powerful energy infrastructure, as is the case with the interconnection between Chío and El Palmar, which will also entail the installation of a substation to be located in the upper part of Guía de Isora, far from the town." Mr. Martín concluded by pointing out that "for Tenerife, this new interconnection with the island of La Gomera is another step forward in which environmental protection and respect for the natural environment have been taken into account, which further strengthens the permanent ties that exists between the two islands."

During his intervention, the Regional Minister for Ecological Transition, José Antonio Valbuena, also stressed that this interconnection will not only enable both islands to achieve more robust electricity systems and significant progress in the penetration of renewable energy, but it will also contribute to helping reduce CO₂ emissions by 16 kilotonnes per year, a decisive step towards achieving the proposed decarbonization targets for the Canary Islands' economy by 2040.

Significant governmental representation at the head office of the La Gomera Island Council

The official presentation of the submarine electricity interconnection project between Tenerife and La Gomera took place in the meeting hall of the La Gomera Island Council and was attended by the regional presidents of the Island Councils of La Gomera, Casimiro Curbelo, and Tenerife, Pedro Martín; the Regional Minister for Ecological Transition, the Fight against Climate Change and Territorial Planning, José Antonio Valbuena, and the General Manager of Transmission Division at REE, Eva Pagán.

Regarding the electricity systems of the Canary Islands, it should be noted that they are characterised by the fact that they are small-sized and isolated systems. These circumstances make them more vulnerable and, therefore, less stable and secure than other larger and interconnected systems. Obviously, the larger and better interconnected an electricity system is, the stronger and more reliable it is, which also increases its chances of integrating renewable energy, which is exactly what will happen in this case. The submarine electricity link between Tenerife and La Gomera will create a larger and more robust electricity system, improving the efficiency and reliability of supply on both islands.

Until now, only the islands of Lanzarote and Fuerteventura have had a submarine electricity interconnection; therefore, the Regional President of the Canary Islands, Ángel Víctor Torres, stressed that this new investment project, which will interconnect Tenerife and La Gomera, "will favour the implementation of new infrastructure for green electricity production, especially on La Gomera, where generation facilities will be able to maximise the island's abundant natural resources in the form of sun and wind."

Mr. Torres added that this "will facilitate the reduction of electricity generation costs" and will contribute to "lowering the dependence on fossil fuel imports and enhancing the environmental aspects of both islands."

A planned investment of 103 million euros

This submarine electricity interconnection between Tenerife and La Gomera has enabled the suitable conditions to be established so that La Gomera can be, from an electricity grid point of view, the first island in the Canary Islands to produce more renewable energy than it consumes in a year, thus avoiding the need to resort to other more expensive and polluting fossil fuel energy production systems.

The planned investment to make this interconnection possible is of approximately 103 million euros, and the deployment time for the link and the construction of the two substations, one at each end of the interconnection, will be around 24 months, once all the authorisations and permits have been obtained.



The construction of this interconnection supplements other grid strengthening actions currently being carried out in the west of Tenerife as per the current grid planning and contribute to providing greater security to the electricity system and thus advance the energy transition objectives planned for the Canary Islands.

A plan considered strategic for the Archipelago

The Tenerife-La Gomera interconnection axis, included in the electricity transmission grid planning approved by the Council of Ministers, is a strategic project to advance the energy transition in the Canary Islands.

Upon completion of the environmental and technical studies, and once the Ministry of Ecological Transition and Demographic Challenge had recognised the uniqueness of the project, REE submitted the execution project and the Environmental Impact Study to the Regional Ministry of Ecological Transition, Fight against Climate Change and Territorial Planning, in order to obtain the environmental impact statement as well as the relevant administrative authorisations and permits.

"The link between Tenerife and La Gomera allows resources to be shared between systems, which means, across the board, a reduced need for energy reserves and installed generation capacity, as well as facilitating the integration of renewable energy by creating a larger and, therefore, more robust and secure system," explained REE's General Manager of Transmission Division, Eva Pagán.

The new electricity axis will include all the infrastructure needed and foreseen to enable the electricity interconnection of the island of La Gomera with the island of Tenerife, which are as follows:

- Underground-submarine double-circuit 66 kV (kilovolts) electricity transmission line, Tenerife-La Gomera (known as Chío-El Palmar), with a transmission capacity of 50 MVA (megavolt-amperes) per circuit. This facility consists of a submarine section of approximately 36 kilometres in length and will run at a maximum depth of 1,145 metres, with two land cable routes on La Gomera and Tenerife.
- New 66 kV electricity substation in Chío (Tenerife), which will be located in the vicinity of the current Guía de Isora substation, far from urban centres and towns.
- New 66 kV electricity substation in El Palmar (La Gomera), to be built in the vicinity of the El Palmar thermal power station, which currently supplies the entire island, with the aim of integrating it into this industrial area, thus minimising the length of new infrastructure connecting the transmission and distribution grids. Maximum use is made of the synergies of the location.

Environmental protection

For the study of the layout of the Tenerife-La Gomera submarine interconnection, as well as the location of the two new substations, a complete environmental inventory of the terrestrial and marine environments has been carried out.

In the case of the marine environment, a specific oceanographic campaign was carried out to obtain a very precise knowledge of the area between Tenerife and La Gomera, including all aspects related to the physical, biological and socio-economic environment in order to be able to define alternative cable routes. The selected route for the interconnection has been designed to minimise the impact on the landscape and to ensure maximum protection of the flora and fauna in the areas along the cable route.



One of the unique construction features used in this project is the use of the horizontal drilling technique to connect the underground cable with the submarine cable. This technique allows the first few hundred metres of the land cable route that connects to the submarine cable section to be installed using a horizontal drilling technique that runs the cable through a micro-tunnel under the seabed, thus eliminating any impact on the biology of the coastal areas used for this interconnection.

Furthermore, to guarantee the protection of the interconnection in the submarine section and thus minimise the risk of external aggressions on the cables, different techniques will be used depending on the geophysical and geological characteristics of the seabed in each cable section.