An inter-connected European energy network is vital for European energy security and competitiveness, as well as for achieving the declared decarbonisation and climate change targets to which the EU is committed. An inter-connected network will help achieve the EU Energy goal: guarantee affordable, safe and sustainable energy compatible with growth and employment throughout the European Union.

To achieve these goals, the European institutions are promoting and politically supporting the development of interconnections between the Iberian Peninsula and the rest of the EU. Hence, for the first time, the European Council meeting in Barcelona in March 2002 approved the goal for Member States to reach a level of electricity interconnection meeting in Barcelona in March 2002 approved the goal for Member States to reach a level of electricity interconnection of at least 10% of installed generation capacity by 2020. Subsequently, the Madrid Declaration was signed at the France-Spain Summit in 2004 setting the importance of mobilising all necessary efforts to achieve the minimum electricity interconnection target of 10% by 2020 and increase it in subsequent years.

**Cornerstones of the European Union energy policy**

- Develop a fully operational and interconnected Energy Union to enable diversity of supply and guarantee security of supply.
- Promote the integration of renewable energies so that at least 27% of total energy consumption comes from renewable sources, hence reducing energy dependency.
- Reduce greenhouse gas emissions by 40% compared to 1990 levels.
- Improved security of supply guarantee.
- Increased efficiency of interconnected systems.
- Economic benefits for the electricity system.
- Increased integration of renewable energies.

**Advantages**

- Improved security of supply guarantee
- Increased efficiency of interconnected systems
- Economic benefits for the electricity systems
- Increased integration of renewable energies

**Public participation**

Each State will analyse and authorise the project based on its own procedures for electricity infrastructure projects. A consultation will be conducted in each country. The Commission will also coordinate public participation on a European basis. Hence, for the first time, the European Council meeting in Barcelona in March 2002 approved the goal for Member States to reach a level of electricity interconnection of at least 10% of installed generation capacity by 2020. Subsequently, the Madrid Declaration was signed at the France-Spain Summit in 2004 setting the importance of mobilising all necessary efforts to achieve the minimum electricity interconnection target of 10% by 2020 and increase it in subsequent years.

A project of European interest to be built together

**A project of European interest to be built together**

This project poses a challenge for France, Spain and Europe in the achievement of their goals towards energy transition. For this reason, on 14 October 2017, this project was designated by the European Commission, the European Parliament and the European Council as a Project of Common Interest (PCI) within the framework of the European regulations on Trans-European energy infrastructure (417/2013).

**Public participation**

France and Spain are one of the main factors in order to ensure the security of supply. Therefore, the following projects are of common interest and are being implemented: the mix of energy systems different and complementing in the two countries.

**The project leaders**

**INELFE** is a joint-venture project with companies that hold equity by Red Eléctrica de España (58%), Ence Electricidad (18%), Aena (10%), GDF Suez (10%) and ACCIONA (4%).

1. National Grid: https://www.nationalgrid.com
2. ENTSO-E: http://www.entso-e.eu
3. TEN-T: https://ec.europa.eu/transport/infrastructure/tens-europe_en
4. Transport and Environment: https://www.eteurope.org

**Project calendar**

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**Public participation leaflet**

August 2017

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The new electricity interconnection across the Bay of Biscay...

The interconnection consists of four cables, two per link. This submarine and underground direct current dual connection will be 370 km in length, running between the Cubnezais substation (near Bordeaux, France) and the Gatika substation (near Bilbao, Spain).

It will have two converter stations - one at each end of the link - that will convert the direct current to alternating current for connection to the electricity transmission grid of each country.

**KEY FIGURES**

- Increase exchange capacity up to 5,000 MW
- 4 cables (2 per link)
- 370 km Length of the interconnection
- Transmission capacity 2 x 1,000 MW

**subsection 1**

*The Connection to the Spanish Electricity Grid*

- The interconnection will be connected to the Gatika substation, located in the north-west of Bilbao and to land from the Basque coast. To do so, the existing Gatika–Lemoiz infrastructure comprising two 400 kV electricity power lines will be used. The route will leave the converter station to be built over the Gaita substation heading towards the Bay of Biscay area.
- The process for planning the interconnection will be carried out in accordance with the Spanish Environmental Impact Assessment procedure, and the document will summarise the environmental, territorial and environmental diagnosis of the project, the analysis of the potential impacts from the various alterations for the converter and the line, and a territorial and environmental diagnosis of the effects caused by the project.

**subsection 2**

*The Submarine Section*

- The link will connect to the Gatika electricity substation (in Bilbao) and the Cubnezais substation (to the north of Bordeaux).
- The submarine section will be approximately 260 km in length, from the Basque coast to the French Médoc coast.
- The choice of route and placement of the cable on the sea floor will minimise the impact on navigation, especially fishing.

**subsection 3**

*The Connection to the French Electricity Grid*

- The link will connect to the Cubnezais electricity substation located to the north of Bordeaux. Hence, the underground section will run for less than 100 km from the right bank of the River Dordogne, passing towards this area and the Garonne to reach the Aquitaine coast to the Médoc region, fully respecting the environment and human activity.

**subsection 4**

*Converter Stations*

- The connection will link two alternating current systems via a submarine direct current line. At each end of the connection, the converter stations will convert the direct current into alternating current for connection to the transmission grids of Spain and France.
A project of European interest to be built together

This project poses a challenge for France, Spain and Europe in the achievement of their goals towards energy transition. For this reason, on 14 October 2013, the project was designated by the European Commission and the European Parliament as a ‘Project of Common Interest’ (PCI) within the framework of the European regulations on Trans-European energy infrastructure (141/2011).

Public participation

The European Commission and the European Parliament have a website dedicated to the project, public meetings and a specific organisation capable of guaranteeing the collection of comments and opinions in any type of activity. To ensure the project has invested in the various stages to define the scale and technical specifications of the project. Since the public consultation is informative stages, a number of events will be proposed and the need to take into account the feedback received in the various stages of the consultation.

Increased interconnection capacity...

...for harnessing synergies

Increased energy efficiency

The energy mix and periods of peak demand are different and complementary in the two countries. To deal with these differences, an interconnection capacity of 3,000 MW, compatible with the existing 2,800 MW

Project calendar

The project leaders

Inelfe is a joint French-Spanish company with shares held equally by Red Eléctrica de España (the public transmission grid manager in Spain), the French National electricity manager RTE and the governments of Spain and France. It is a simplification of the ‘National Energy Infrastructure’ (347/2013). The project is regulated within European Regulation 141/2011. The project was designated by the European Commission as a 'Project of Common Interest' (PCI) within the framework of the European energy infrastructure regulations (141/2011).

The project leaders

- Project leader: Juan Prieto
- Technical Manager: Etienne Serres
- Public participation: Antonio Miranda
- Project leader: golfodebizkaia@inelfe.eu
The new electricity interconnection across the Bay of Biscay...

The interconnection consists of four cables, two per link. This submarine and underwater direct current dual connection will be 370 km in length, running between the Cubrebasia substation (near Bordeaux, France) and the Gatika substation (near Bilbao, Spain).

It will have two converter stations - one at each end of the link - that will convert the direct current to alternating current for connection to the electricity transmission grid of each country.

**KEY FIGURES**

- Increase exchange capacity up to 5,000 MW
- 4 cables (2 per link)
- 370 km Length of the interconnection
- Transmission capacity 2 x 1,000 MW

### A dual submarine connection

#### THE CONNECTION TO THE SPANISH ELECTRICITY GRID

The interconnection will be connected to the Gatika substation, located to the north-west of Bilbao and 10 km from the River Biscay. To do so, the existing Gatika-Gamboa infrastructure comprising two 400 kV electricity power lines will be used. The route will leave the converter station to be built near the Gatika substation heading towards the Bay of Biscay area.

The process for presenting the documentation will be carried out, in accordance with the Spanish Environmental Impact Assessment procedure, and the documentation will contain information allowing the characterisation and location of the project, the analysis of the potential impacts from the various alterations for the converter and the line, and a territorial and environmental diagnosis of the effects caused by the project.

#### THE SUBMARINE SECTION

The link will connect to the Gatika electricity substation (in Bilbao) and the Cubrebasia substation (to the north of Bordeaux).

The submarine section will be approximately 260 km in length, from the Basque coast to the French Médoc coast.

The choice of route and placement of the cable on the sea floor will minimise the impact on marine and coastal areas, especially fishing activities, and the ecological fauna and flora of the area, ensuring that all activities are carried out in accordance with the applicable environmental regulations.

#### THE CONNECTION TO THE FRENCH ELECTRICITY GRID

The link will connect to the Cubrebasia electricity substation located near Bordeaux, hence, the underground section will run for less than 100 km, from the River Dordogne, passing beneath the Aquitaine coast to the Médoc region.

### Converter stations

- **Bordeaux**
- **Gatika converter station**

### The submarine cable

Each cable will be placed on the sea bed with the help of a cable-laying ship. Generally speaking, the cables will be buried from 10 to 30 m below the sea-bed, where they will be covered.

### The underground cable

Each trench will contain a pair of cables, and the two trenches will be separated by a minimum distance of 1.50 m. The underground cables will be covered over to hide them from sight.

### Junctions

The underground cables will be installed in sections of approximately 20 km, each connected via a junction chamber. A similar, albeit slightly larger, device will be used to connect the submarine cables to the underground cable. These devices will be connected to the shore and will eventually be covered over because permanent access is not required, leaving them totally hidden from view.
A project of European interest to be built together

The project

This project poses a challenge for France, Spain and Europe in the achievement of their goals towards energy transition. For this reason, on 14 October 2013, the project was designated by the European Commission and the European Parliament as a ‘Project of Common Interest’ (PCI) within the framework of the European regulations on Trans-European energy infrastructure (1417/2013).

Franco-Spanish electricity interconnection project

The Bay of Biscay link will enable France and Spain to increase their electricity exchange capacity by 5,000 MW, compared with the existing 2,800 MW. This project is to build and implement interconnections between the two countries in order to increase the electricity exchange capacity between the Iberian Peninsula and the rest of the EU. Hence, for the first time, the European Council will be able to fully exploit the different generation resources of the two countries.

Increased interconnection capacity... for harmonising synergies... and boosting energy efficiency

Economic benefits for the electricity systems

The more interconnected systems are, the more stable the electricity supply guarantee is.

Public participation

Public consultation and information during all the authorisation stages, a number of meetings will be proposed and the most suitable will be monitored by a specific organisation capable of guaranteeing public participation and public access to information in accordance with European requirements.

Project calendar

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...strengthening the interconnection between Spain and France

An inter-connected European energy network is vital for European energy security and competitiveness, as well as for achieving the decarbonisation and climate change targets to which the EU is committed. An inter-connected network will help achieve the EU Energy goal, guarantee affordable, safe and sustainable energy compatible with growth and employment throughout the European Union. To achieve these goals, the European institutions are promoting and politically supporting the development of interconnections between the Iberian Peninsula and the rest of the EU. Hence, for the first time, the European Council meeting in Barcelona in March 2002 approved the goal for Member States to reach a level of electricity interconnection of at least 10% of installed generation capacity by 2020. Subsequently, the Madrid Declaration was signed at the Franco-Portuguese-Spanish Summit on 4 March 2015 ratifying the commitment of all Member States to reach the same level of interconnection in the electricity sector in 2020. As for achieving the decarbonisation and climate change targets, the Paris Agreement on climate change is expected to result in at least 27% of energy consumption coming from renewable sources, hence reducing energy dependency.

Conclusions

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