



## Vortrag

Freitag, 10. Oktober 2025, 09:30 Uhr

### **Celtic Interconnector: The first HDVC interconnection between Ireland and continental Europe**

Vortragende: François Gandard,  
Nicolas BLANC

Firmen: OPTIMUM, RTE

Web: [www.optimum-te.fr](http://www.optimum-te.fr)  
[www.rte-france.com](http://www.rte-france.com)

## Lecture

Friday, 10<sup>th</sup> October 2025, 09:30 am

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# Vorträge

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## Lectures

Friday, 10<sup>th</sup> October 2025, 09:30 am

### **Celtic Interconnector: The first HDVC interconnection between Ireland and continental Europe**

**Speakers: François Gandard (OPTIMUM), Nicolas BLANC (RTE)**

OPTIMUM and RTE would like to support the DCA Board with a presentation at this year's DCA Congress. We propose the "Celtic Interconnector" project as an interesting topic. Once complete, this 700 MW project will connect the electricity grids between southern Ireland and northern France. It is an integral part of Europe's energy transition strategy and recognised as a Project of Common Interest (PCI) by the European Union. The presentation will be jointly made by OPTIMUM and RTE.

In terms of trenchless works, the project comprised 3 parallel 440-metre-long HDD landfalls drilled 25m down through very hard and abrasive granite formations, as well as 2 small scale HDDs and a microtunnel under a railway further inland.

RTE is France's transmission system operator, in charge of the operation, maintenance and development of an impressive infrastructure: more than 105 000 km of high and ultra-high-voltage lines spanning the whole of France and 37 interconnections with neighbouring European countries. In the leading position of Europe's biggest high and ultra-high voltage network, RTE plays a pivotal role in Europe's electricity sector, supporting the EU's energy policy. Alongside its fellow European TSOs, it is building and strengthening around twenty cross-border connections in order to increase its capacities for exchange with its neighbours.

RTE develops, in a joint venture with its fellow Irish TSO EirGrid, the Celtic Interconnector Project aiming at establishing a direct-current connection covering a distance of 575 km (approx. 500 km offshore, 40 km inland France and 35 km inland Ireland) connecting the north coast of Brittany and the south coast of Ireland. Bringing an end to Ireland's electrical isolation from continental Europe, this line will be the longest submarine connector from France.

OPTIMUM has supported RTE on the Celtic interconnector project since 2018, providing trenchless expertise for feasibility studies, choice of landfall site, drill path engineering as well as operational practices. They then accompanied RTE throughout the operational phase of the construction, with dedicated trenchless engineers on HDD and microtunnel sites. OPTIMUM's engineering design and geotechnical recommendations ensured not only a reduced and secure drill path but also minimised environmental impact.

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### Project summary:

- Project name: Celtic Interconnector
- Project main characteristics: 575 km of land and subsea power link at 320 kV high voltage direct current (HVDC) for a 700 MW net transfer capacity
- Project owner: CIDAC (JV RTE / EirGrid) • Geotechnical analysis, feasibility studies, engineering design, works supervision and monitoring: OPTIMUM
- Total HDD length at landfall: 1320 m (3 x 440 m)
  - HDD contractor: Catalana de Perforacions
  - 2 x OD-355mm HDPE cable ducts
  - 1 x OD-250mm HDPE duct for fibre optics
  - Rig: 250 tons
  - Geology: granite
- Total HDD length inland: 260 m (2 x 130 m)
  - HDD contractor: Gendry
  - 2 x OD-355mm HDPE cable ducts
  - 1 x OD-250mm HDPE duct for fibre optics
  - Rig: double rod 18tons
  - Geology: granite
- Microtunnel length inland: 84 m
  - Drilling contractor: Eiffage
  - 2 secant piles shafts: Entry 6.5m wide x 11.39 deep // Exit: 5.0m wide x 10.35m deep
  - MTBM: AVN1200
  - Geology: schist