Development of a three-terminal ready HVDC interconnector between France and Great Britain via Alderney

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ABSTRACT
The France-Alderney-Britain (FAB) project, a 1400 MW DC interconnector project, aims at increasing the interconnection capacity between France and Great Britain, while allowing renewable generation in Alderney waters to be exported to Britain and France.

After a general introduction of the project, the paper explores the issue of cable design and protection in order to cope with the challenges linked to developing a submarine cable in a high energetic area with strong tidal currents, the Alderney Race.

KEYWORDS
VSC, France-Great Britain, interconnector, installation, tidal, HVDC, submarine.

INTRODUCTION
The need for strengthening of cross border capacities between European countries is widely recognised. The European Council hence recently set an interconnection capacity target of 15% by 2030. The additional capacity needed between France and Great Britain was estimated to around 4 GW by 2030 by the TYNDP 2014.

Already in February 2012, the French and British Governments declared that it was necessary to strengthen interconnection capacities between France and Great Britain, mentioning FAB as one of the projects contributing to reaching the goal. At the same summit, a Memorandum of Understanding was signed by the different promoters of the France-Alderney-Britain (FAB) project in order to launch the first feasibility studies. FAB was subsequently selected as a Project of Common Interest (PCI) by the European Commission (EC) in October 2013. In 2014, the project was selected by the Connecting Europe Facility for receiving financial assistance for studies during its development phase.

The project is being developed by Réseau de Transport d’Electricité (RTE, the French TSO) together with FAB Link Ltd, a joint venture company, 50% owned by Transmission Investment LLP (TI) and 50% owned by Alderney Renewable Energy (ARE). Both partners signed a Joint Development Agreement in October 2013.

1 The Ten Year Network Development Plan published by ENTSO-E