

PÖYRY CASE SUMMARY:

Kraftnät Åland AB, ÅLink project Mariehamn, Åland archipelago Finland



Project management, design, engineering, procurement services and acceptance testing for a 100 MW (130 MVA) HVDC link of the VSC type, from Åland to mainland Finland.

PÖYRY SERVICES

Pöyry was contracted by Kraftnät Åland AB to participate in the implementation of an HVDC link between the network of Åland and the main grid of Finland.

Since the network of Åland is normally supplied by a submarine 110 kV cable from the Swedish network, this new connection is primarily intended as back-up supply, but also to transfer wind power from Åland to the Finnish network. Due to this latter purpose, the link will be designed to allow an optional third terminal in a part of the archipelago where a large wind farm is planned.

Schedule

- Project started in January 2009
- Contract with HVDC supplier signed in December 2012
- Project energisation planned for October 2015
- Project completion after tests planned for April 2016

Main responsibility areas:

- Overall project management
- Preparation of main EPC package for the HVDC link
- Verification of seabed survey for the submarine HVDC cables
- Detail design of a 110 kV transmission line to connect the converter station on Åland to an existing substation. Preparation of a procurement and construction packages for the transmission line.
- Preparation of EPC packages for one new 110 kV substation, changes and additions in two existing substations
- Participation in tender negotiations
- Administration of project documents (ProjectPlace)
- Supervision of cable laying operation for the HVDC submarine cable
- Supervision of factory acceptance tests

TECHNICAL DATA

- Rated capacity of link 100 MW, with an additional 30 MVA available at peak load
- Black net starting capacity as main requirement
- Distance between converters, length of submarine cable, approximately 158 km
- Addition of a third terminal shall be possible
- 110 kV transmission line with unstayed, small foot-print towers

Total investment

- Approximately 125 M€

“Pöyry worked tirelessly alongside our own people on this project. Their depth of expertise in areas like HVDC, sub-stations, and transmission lines complemented our own areas of knowledge and made working together a seamless experience”,
CEO Jan Kahlroth, Kraftnät Åland

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