



RAMBOLL

LONG ISLAND, DESIGN AND CONSULTANCY

Client: Arcadia Windpower, Bluewater Wind, Long Island, USA

Scope: Design and consulting services (2003)

Total output of 140MW

The project is located off the shore of Long Island, a location with one of the largest known wind resources in the northeastern United States. For the Long Island Power Authority Offshore Wind Farm project, Ramboll was selected as Owner's Engineer for Arcadia Windpower for assisting in developing an EPC proposal for the project.

Foundation design challenge

The proposal included 39 turbines rated at 3.6 Megawatts (MW) each, giving a total rated output of 140 MW. The turbines will be constructed 6 nautical miles offshore in 20 m of water.

The construction of turbines in such deep water and design wave heights is beyond what has been used so far in the market and is challenging the foundation design

Our services

Ramboll's services included:

- Design of foundations for turbines and offshore substation. The design includes a new concept developed by MT Højgaard and Ramboll for deeper water sites;
- Alternative transmission inter-connection, investigating alternate location of transformer station;
- Assessment of impact on fish and sea mammals;
- Review of one-line electrical diagrams;
- Description of solutions to protect sea cables;
- Review of EPC proposals from turbine vendors;
- Assisting during development of overall budget price;
- Assistance during completion of EPC proposal.

In addition, Ramboll has described the time schedule for development of a met station project, the physical layout of the met station and foundation, construction methods, the functioning of the planned and optional instruments and the budgetary cost.

CONTACT

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