

Government of Barbados: Ocean Energy Studies

Client : Government of Barbados

Location : Barbados

Date: 2020-2021

ITPenergised led a group of six international consultants to assess the opportunity for the deployment of Ocean Energy projects in the waters surrounding Barbados.

This wide ranging project began by using resource models and a range of technical and environmental constraints to identify areas of search for fixed and floating offshore wind and also OTEC (Ocean Thermal Energy Conversion).

Generic turbines, foundations and OTEC plants were designed to meet the resource and metocean conditions by our subcontractors, Ramboll and Makai. ITPenergised designed the offshore and onshore cables as well as the landing and grid connection.

The designs were costed and a financial analysis was carried out on a number of options with CmY Consultants to identify the most economically feasible projects. These studies were backed with soft market testing to gauge the appetite of investors and developers for a project in Barbados.

At the same time, a policy review was undertaken with JFC Consulting to recommend changes to the regulatory framework. This was used to devise an

outline environmental scoping report accounting for local laws and environmental receptors. This work was complemented by a tourism study and supply chain study to estimate the benefits of introducing Ocean Energy to Barbados.

Finally, a series of workshops were held to disseminate the results of the project to a broad group of Government employees and other stakeholders.

Our Role:

ITPenergised led the project and was the primary interface for all contacts with stakeholders and the client.

We also conducted technical work in a number of areas including a high level grid study to identify potential connection points; electrical design; environmental studies and GIS mapping.

Outcome:

Offshore wind (especially floating) provides one of the best opportunities for large scale renewable generation in Barbados. The Government of Barbados is currently assessing our recommendations and roadmap to understand how offshore wind could contribute to their ambitious 2030 net zero target.



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