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Green Port & Northern Ireland Green Seas

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CLEAN MARITIME DEMONSTRATION COMPETITION



Department
for Transport



Innovate
UK



Energia

Belfast Harbour

Mott MacDonald

Queen's University Belfast

Artemis Technologies

Ulster University

NIE Networks



A topographic map of Northern Ireland is shown on the left side of the image. It features green terrain with white lines representing roads and rivers. The map is partially cut off on the left and top edges. Dashed white lines extend from the map towards the text on the right, indicating the locations of Belfast, Bangor, and Rathlin Island.

Northern Ireland Green Seas

Belfast

Large urban port with international reach

Bangor

Regionally significant marina

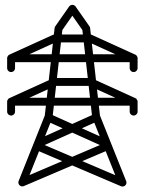
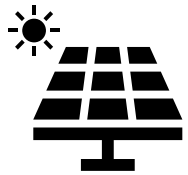
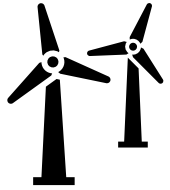
Rathlin Island

Small remote port providing essential services

Work Packages

Battery Storage Systems	Hydrogen Storage	Electrical Infrastructure	Autonomous Digital Twin	Renewable Energy Supply	Future Energy Demand
Requirements	Requirements	Review	Input Factors	Direct Options	Capacity Reqs
Impact	Performance	Options Pathways	Simulation	Grid Options	Existing Limits
Design	Design	Design	Iteration	Energy Policy	Backsteps
Consenting	Consenting	Consenting	Instruction	Supply Security	Scheduling
Financing	Financing	Financing	Dev Costs	Financing	Financing

Green Port



**Renewable
Energy Supply**

**Grid Connection or
Direct to H.E.**

**BESS & Hydrogen
Production**

**Marine and Land
Use Cases**

Accomplishments & Next Steps



- 13 No. Design & Analysis grid studies across the three locations and associated electrical infrastructure analyzed and modelled
- Technologically-viable solutions identified and costed
- Principle use cases identified for both marine and land assets
- Solution is steady-state load
- Indicative results from independent DfT-appointed Monitoring Officer suggest solution is strongly aligned with goals of UK Clean Maritime Plan
- Phase 3 CMDC competition (funding for capital works) expected to be announced next year following Phase 2 feasibility studies (currently **open**)

Lessons Learned

- Win or learn mindset approach to open competitions
- Consortiums are more than the sum of their parts
- Let the data have a voice
- Skills drive the success
- The infrastructure mantra: finance follows function
- “Most people overestimate what they can do in one year and underestimate what they can do in ten years.” – Bill Gates



GATEWAY TO OPPORTUNITY