

This technology implements a battery on a heavy lift vessel for peak shaving when the crane is in operation. This demo sets out to increase the utilization of an existing shore power hub facility in the Port of Rotterdam, aiming to reduce the greenhouse gas emissions and costs.

Value proposition

- Improving the shore power system architecture by lowering the overall grid demand and smart system integration within ports.

The shore power system in combination with the battery energy storage system implemented on the vessel can achieve peak shaving

Hybrid heavy lift vessel utilizing shore power



BESS integrated on vessel and shore power combination leads to

- A reduction in grid power demand for vessels requiring high but short-term peaks
- Increase the duration of shore power usage
- Enforce the local electricity system



Decrease in shore power peak demand

A battery on board can decrease shore power peak demand significantly by peak shaving

Current Progress Status



1. Launch of demonstrator; 2. Elaboration of KPIs, Operation characterization and modelling, and ongoing studies; 3. Testing phase in lab and data collection; 4. Simulations and testing phase in pilot area; 5. Results and commercially available; 6. Ready to scale up

Mock-up tests can verify

- peak-shaving performance
- battery utilization
- the use of local renewable electricity