Powering a remote site using renewable energy

Creating a Sustainable Marine Experience in Greyhope Bay – Aberdeen,Scotland

"Morningstar's product range integrates very well with our off-grid systems and batteries."

Lukas Geider
Business Development Assistant,
JCE Group

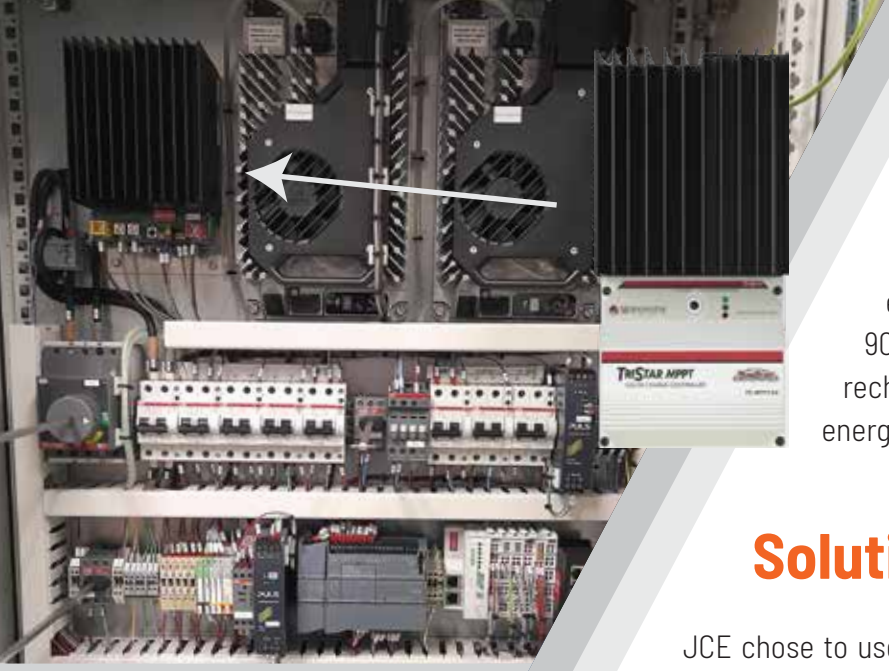
Summary

Conservationists wanted to renovate Aberdeen's Torry Battery to create an educational marine center for the community with a zero-footprint, sustainable design. Local developer, JCE Energy, used Morningstar products in a clever solar solution using shipping containers to power the remote site using renewable energy.

Situation

Torry Battery is a landmark artillery installation that has overlooked Greyhope Bay harbor in Aberdeen, Scotland since 1860. Today, it's renowned for its spectacular panoramic views of the city and coast, as well as the largest bottlenose dolphins in the world. Conservationists wanted to renovate the Battery to create an educational marine center for the community with a zero-footprint, sustainable design, which, at such a remote location, would require on-site electricity sourced from renewable energy.

Local developer JCE Energy stepped in to provide such a renewable solution to power the center, plus a community space and cafe at the remote site. The company has vast experience working with renewable energy projects and supporting off-grid power requirements.



Project

JCE installed an off-grid hybrid solar electric system using recycled shipping containers as platforms, equipped with 6kW of rooftop solar to charge a 48V, 900Ah battery bank inside. A silent generator also helps recharge batteries in periods of darkness or abnormally high energy consumption.

Solution

JCE chose to use a Morningstar TriStar TS-MPPT-60™ controller for the remote project. "Their product range integrates very well with our off-grid systems and batteries," Lukas Geider, Business Development Assistant, JCE Group, said. "Morningstar components are proven to continue to operate excellently over considerable lengths of time."

JCE completed the system in 2021, but future project goals include replacing the supplemental generator still in place with a wind turbine for a 100% green energy solution. As summed up by JCE: "The 'Dolphins at the Battery' phase will engage the wider community...Greyhope Bay highlighted the importance of providing educational opportunities incorporating science, wildlife, technology, history, and art while showcasing an impressive facility. We were excited to be involved in a project which offers various opportunities and promotes environmental awareness to the communities within the region."

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