

Swedish energy company Vattenfall moves boldly towards electrification of Europe's maritime transport sector

Norway, the world-leader in maritime battery solutions, is working to become the first country to electrify coastal transportation, replacing fossil fuel energy with renewable sources. In Sweden, concerns about the upfront costs and uncertainty of introducing new technologies, along with a lack of economic incentives, has slowed the introduction of the newest maritime technologies, even as Swedish companies have a pioneering role in the sector.

But that is about to change, thanks to an exciting initiative from two innovative Swedish companies.

Power as a Service

In July 2019, Vattenfall and Echandia Marine announced a pioneering co-operation to speed up the introduction of fossil-free electric passenger ferries. The concept, known as 'Power as a Service', is being rolled out in Sweden, with plans for expansion into the rest of Europe.

Power as a Service will overcome the challenges of adopting new technologies and facilitate their introduction by reducing risks and cost to the end user.

Echandia will provide the battery system, whilst Vattenfall, with its extensive experience in owning and maintaining electric power plants, will own and manage all electrical equipment onshore and onboard, including charging station, battery system, Echandia E-LTO battery system and drivetrain.

It is very important that we show that this concept works in reality. Power-as-a-Service gives Vattenfall responsibility for that we know best; the drivetrain, batteries and electrification, both onboard and onshore. If we can apply this concept to larger vessels as well that will take us further towards our goal – a fossil-free world. says Vattenfall's CEO Magnus Hall.

Leading company in maritime electrification

Echandia, a Swedish company based in Stockholm, is one of the leading companies in maritime electrification.

Echandia started out as a systems integrator and has recently found its niche developing powerful LTO battery systems for heavy-duty applications using advanced cell technology from Japanese industrial giant Toshiba.

The company is responsible for both the world's first supercharged electric ferry, E/S Movitz, which operates in central Stockholm and the world's fastest electric ferry, BB Green. The company recently won a tender to supply Arriva Denmark with batteries for 7 commuter ferries to be delivered by Damen shipyards.

We are currently seeing a substantial increasing interest in our systems, not just in Norway, but all over the world, says Magnus Eriksson, CEO of Echandia. The Vattenfall-Echandia collaboration will allow our technology to reach more customers, more quickly. As our battery systems accept high power effects, allowing for fast charging, the availability of high current effects becomes increasingly important. Vattenfall's charging station concept is very positive for the possibility of move from fossil to fossil-free sea transport.

Environmental Fact

For every 500 hours of vessel operation, carbon dioxide emissions are reduced by approximately 40 tonnes when compared with a vessel with a diesel engine. Electric vessels also make virtually no noise, to the delight of travellers and residents living along the waterways.

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