Shore power development in the Baltic

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Baltic ports are well known for their strides towards greening the maritime transport sector and establishing the region as an eco-friendly shipping role model. Among many others, it is thanks to developing onshore power supply (OPS) facilities, an activity increasingly crucial given the recent Fit for 55 package published by the European Commission (COM).

The COM's proposal stipulates ports to provide OPS to ships (passenger and container) at every berth starting in 2030, as part of the FuelEU Maritime, a new initiative included in the package, and the revision of the Alternative Fuels Infrastructure Directive (AFID; proposed to be converted into a regulation). Shore power is already available in various Baltic ports, but many new projects have sprouted all over the region to increase the coverage.

Connecting Stockholm, Helsinki and Tallinn

Over the recent years, all three of the above ports have invested simultaneously in OPS, following a collaboration tasked with standardising solutions. The final part of the puzzle is in place: ferries serving the Helsinki-Tallinn route can 'plug in.' The ferries connecting the Swedish capital with Finland's and Estonia's are already OPS-connected. Overall, the annual CO_2 emission reduction is estimated to be more than 18kt.

Ferry connections between the countries are of great importance to the supply of goods and the movement of people. Each year, approximately 4.5mt of freight (some 380k ro-ro cargo units) and 12m passengers travel between the three capitals, totting up to 200 sailings a week. In other words, a regular source of emissions that fortunately can now be abated.

Inaugurating shore power in Rostock-Warnemünde and Copenhagen

As of May 2021, cruise ships can draw energy from the shore in Warnemünde. Up to 20 MVA from renewable sources can concurrently be delivered at two berths.

The system is of modular design. Standard twenty-foot containers contain nearly all electrical components, including integrated frequency converters that allow the shore electricity to accommodate all standard global shipboard power supply systems.

Next, in October, a brand-new OPS was installed at DPDS' terminal in Copenhagen. It is the port's first, but not last: in 2024, cruise ships will have the possibility to use shore power while docked at Ydre Nordhavn and Langelinie in Østerbro.

Aarhus enters the game

From the 2023 season, cruise ships will be able to connect to shore power in Aarhus, too. The OPS investment is part of a broader sustainability strategy, aiming to turn Aarhus into one of the region's most sustainable seaports. According to the port's CEO, Thomas Haber Borch, the decision is also meant to attract more shipping companies that have already converted their vessels to draw electricity from ashore.

Meanwhile, the Ports of Stockholm have received building permits to equip the country's capital's central quays with OPS for cruise ships. The installations will sit inside buildings illuminated to create a more attractive environment. But even more importantly, to achieve the highest sustainability production level, all construction materials must comply with the Miljöbyggnad Guld master environmental standard.

Accounting for diversity

Baltic ports are moving full steam ahead to make OPS facilities widely available. Shore power is undoubtedly one of the solutions that can help the maritime sector combat pollution – greenhouse gas emissions and noise alike.

That said, it needs to be underlined that these projects are highly cost-intensive, and the technology itself may not be a great fit for everyone. Ports are highly diverse, and this diversity needs to be accounted for in the context of various environmental regulations and policies, such as the Fit for 55 package (**you can find BPO's stance on the proposal here**). ■

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