

Decarbonising ports



Marnie Hope, group sustainability manager Flinders Port Holdings (FPH). The group's decarbonisation efforts helped reduce its scope 1 emissions (including those from its pilot boats) by more than 6 per cent in FY25. FPH also owns a farm on the Eyre Peninsula (below), where it recently planted more than 60,000 locally collected eucalyptus.

Technologies for a hard-to-abate sector

Operating seven ports and facilitating over \$25 billion in international trade annually, Flinders Port Holdings (FPH) connects Australia to the world. The top 10 South Australian business, by market capitalisation and revenue, is achieving success from a project to decarbonise its pilot boat and stevedoring services, as a driver of its net zero commitments.

Decarbonising such a hard-to-abate business is an involved, complex process and FPH has been working its way through its approach over the past few years. Recently, it has made substantial progress to invest in three pilot boats and the straddle carriers that move containers in and around FPH's Flinders Adelaide Container Terminal to more sustainable fuel options and ways of operating.

Flinders Port Holdings owns and operates Flinders Adelaide Container Terminal as well as six regional ports, Port Giles, Port Lincoln, Wallaroo, Port Pirie, Klein Point and Thevenard. FPH also provides integrated supply chain solutions through Flinders Warehousing & Distribution.

In total, 73 per cent of FPH's scope 1 emissions, which are greenhouse gases produced by its assets, are from straddle carriers and pilot boats. Demonstrating early success for the organisation's decarbonisation measures, its scope 1 emissions fell by 6.4 per cent in FY25.

Additionally, the Hybrid Konecranes Noell straddle carriers introduced at the terminal deliver fuel savings of around 36 per cent versus the diesel models. The redesigned pilot boats also

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Marnie Hope

use less fuel, but perform better, all while reducing emissions.

"In terms of the fuel we use, whether it be liquid fuel or electricity, the majority of our emissions are associated with the pilotage service we provide, as well as with our straddles," says Marnie Hope, group sustainability manager, Flinders Port Holdings.

Fleet assets such as pilot boats, which have a long asset life, can be difficult to convert to renewable fuel. This is partly because fuel sources such as biofuels are not yet at a point technically or commercially where they could be substituted for traditional fuel sources.



"We've moved from diesel to hybrid straddles and we are working on a proof-of-concept in relation to cantilevered automated tyre rubber gantry cranes which remain relatively uncommon in Australian ports," says Hope.

In infrastructure, this work is cutting edge and identifying reputable partners can be a challenge. So FPH partnered with leading composite boat builder Hart Marine on the boats' engine design, alternative fuel capability, hull design and coatings, sustainable materials and safety enhancements.

Data such as real-time fuel use and vessel speed given certain weather conditions helped guide decisions around how the boats and

engines are used in the most efficient way. FPH's pilot boats' hulls are also now coated to reduce drag from algae and biofouling, which helps lower the fuel the boats use and the maintenance they need, vastly reducing slippage.

The project has been so successful other Australian ports are looking to FPH's experience. "We've had a real influence on what great pilot boats look like. This is the cornerstone of how we're looking at decarbonising our business, recognising we don't have all those solutions now," says Hope.

It will take time for big infrastructure businesses like ports to transition their assets to the low-carbon economy, among the reasons why FPH has in place nature-based abatement strategies. Nature programs can help FPH to mitigate scope 3 carbon emissions, which are produced by businesses in their supply chain that are beyond their control. "The main focus is having credible pathways to reduce emissions," Hope adds.

The port owns a farm on the Eyre Peninsula, where it recently planted 110 hectares of more than 60,000 locally collected eucalyptus. "Our ability to use local contractors was critical due to their expert local knowledge and an opportunity for us to bring economic value to the local community," says Hope.

"FPH's net-zero strategy will continue to evolve as new technologies emerge that enable us to transition in a way that is right for our business and remain a leader in decarbonising the Australian infrastructure sector," she adds.

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