European Commission

GREEN DEAL PROJECTS SUCCESS STORIES

URBAN ENVIRONMENT & MOBILITY WORKING

PIONEERS project

EU-funded activities such as PIONEERS provide huge opportunities to support technological enterprises (e.g., the joint venture Antwerp Terminal Services), in developing highly innovative solutions to reduce carbon emissions in the port sector.

Ultimately projects such as these aim to transform ports into green infrastructures and energy hubs by 2050.

#EUGreenDeal

SHAPING THE GREEN PORTS OF THE FUTURE

October 2023

ABOUT THE PIONEERS PROJECT

PIONEERS addresses the challenges faced by European ports to reduce their environmental impact while remaining competitive and offering added value in a sustainable global trade ecosystem.

DESCRIPTION OF SUCCESS

Antwerp Terminal Services (ATS), a joint venture between MSC PSA Europe Terminal (MPET) and PSA Antwerp (PSAA), launched the world's first hydrogen dual fuel straddle carrier in the Port of Antwerp-Bruges. Using state-of-the-art hydrogen dual fuel combustion engine technology, developed by cleantech company CMB.TECH and integrated into a straddle carrier with the support of ATS, the machine runs on a mix of hydrogen and diesel. It can therefore play an important role in reducing terminal greenhouse gas emissions.

HIGHLIGHTS

- The dual fuel technology can **replace 70% of diesel consumption** with hydrogen on new straddle carriers, with the eventual goal of **100% hydrogen injection**.
- Following a 24-month design and development phase, the partners are now testing the dual fuel straddle carrier's **performance in live operations** at PSAA's Noordzee Terminal. They will evaluate improvements in equipment design, as well as other factors to **scale up new technology**, including the supply and storage of hydrogen for an entire fleet.

Research and Innovation

IMPACT

Demonstrating to the world that clean hydrogen in a port terminal environment is a realistic alternative clean fuel.

More specifically, the decarbonisation of container handling means it is possible to safely use hydrogen in a container terminal environment and use hydrogen in combustion engines.

Read more about this success story online
Shaping the green ports of the future

Visit the project website
PIONEERS

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