

Invited Speaker

S0401



JOGCHUM BRUINSMA

Commercial Director
Carbon Technology Energies
Nedstack Fuel Cell Technology

The next generation of maritime hydrogen fuel cells
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TALK TITLE

The next generation of maritime hydrogen fuel cells

ABOUT

Professional

2018 - now: Nedstack Fuel Cell Technology, Arnhem (NL) – Commercial Director, Application Manager Maritime, Manager System Development

2017 - 2018: Huisman Etech Experts, Druten (NL) – Lead Engineer System Integration

2008 - 2017: Boskalis, Papendrecht (NL) – Lead Engineer & Project Manager Central Fleet Support

Education

2007 – 2008: Master in Control Systems Engineering, HAN University of Applied Science.

2002 – 2007: Bachelor in Electrical Engineering, HAN University of Applied Science

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ABSTRACT

As maritime industries push toward zero-emission navigation, battery-electric solutions are increasingly challenged by limitations in power and range, especially for high-demand and long-distance

applications. Hydrogen and fuel cell technologies are emerging as viable alternatives, offering scalable, electric, and zero-emission power generation. Demonstrated by projects like the 'H2 Barge 1' and 'Antonie', fuel cells are proving their capability in real-world maritime operations.

The Dutch SH2IPDRIVE project, now in its final year, showcases progress in developing next-generation maritime LT-PEM fuel cells, pushing the boundaries of efficiency and reliability. Complementing this, the RH2IWER initiative supports shipowners and technology providers in navigating the complexities of hydrogen integration, fostering innovation and readiness across the sector.

While zero-emission short sea shipping projects are gaining momentum, the potential for hydrogen in deep sea shipping is increasingly plausible. Realizing this vision will require not only technological advancement but also creative approaches to infrastructure, regulation, and market incentives. The maritime sector stands at a pivotal moment, where bold steps and inventive thinking can unlock a sustainable future powered by hydrogen.

