

State of the art and pathways for maritime application of H₂/NH₃

Sadi Tavakoli¹, Kamyar Maleki Bagherabadi¹

¹ Department of Energy and Transport, SINTEF Ocean, Trondheim, Norway

Corresponding author's e-mail address: sadi.tavakoli@sintef.no

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ABSTRACT

This paper addresses the urgent need for decarbonization within the maritime sector by systematically navigating challenges and identifying opportunities for the adoption of hydrogen and ammonia.

Structured into three sections, the paper first examines the challenges and opportunities associated with the use of hydrogen and ammonia. Subsequently, it outlines key pathways for integrating hydrogen and ammonia into power systems.

Different pathways and scenarios provide variety of choices and uncertainty about the performance and feasibility of alternative power plant configurations. Digitalization and full system simulators as practical tools can estimate the behavior of alternatives and facilitate the decision making for the most proper candidate in specific cases.

Finally, the paper presents a list of potential scenarios that prioritize efficiency. These findings inform future in-depth studies of selected pathways.

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