

CLIMATE NEUTRAL WATER TAXI



WATER TAXI



BACKGROUND

Fuel consumption per passenger-kilometre is particularly high for small watercraft, as no “economies of scale” can be exploited. Globally, small-scale shipping - especially between mainland and islands - is an important component of local economic and social development. Energy-efficient, climate-neutral vessels for small-scale shipping can significantly reduce emissions locally and make a significant contribution to reducing CO₂ emissions from shipping globally through widespread use.

OBJECTIVES

Within the framework of H2Watt, a vessel concept with fully electric propulsion enhanced with a range extender based on climate neutral fuel was tested for use in the Wadden Sea. This should significantly expand the operation profile and enable continuous use as a water taxi between islands and the mainland.

MAIN CHARACTERISTICS

Length	8 m
Beam	6 m
Draft	0.20 m
Range - pure electric	15 – 30 nm
Power - electric	100 kW
Range-Extender - Methanol Motor-Gen	20 kW
Speed (Service)	12 kn
Speed max.	16 kn

Contact



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RESULTS

The Water Taxi was specially developed for use in the Wadden Sea. The design ensures high efficiency as well as an extremely shallow draught through cat hull design with low resistance (Parametric Fast Hull). This allows for a larger deployment window in the tidal area. The lightweight construction is cost-effective and easy to produce. With a speed of 12 knots, the specific fuel consumption of small watercraft is usually particularly high. High savings are possible here due to the special hull concept. The large deck area allows flexible use for passengers or cargo between the mainland and the islands.

The advantages of emission-free battery-electric propulsion are combined with the flexibility of a range extender based on green methanol for an extended operational deployment profile. This allows the operation of the water taxi to be CO₂-neutral even in intensive commercial deployment profiles. In addition, the integration of a range extender enables longer ranges independent of charging infrastructure at the berth. This enables flexible deployment planning and opens up routes outside the pure battery range of the vehicle.

The Green Water Taxi is a forward-looking concept for quiet and emission-free water transport and taxi services in sensitive sea areas such as the Wadden Sea and supports ecotourism on coasts, rivers and lakes.



Supported by:



www.deutschland-nederland.eu

Further information at: www.h2watt.eu

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