

PRESS RELEASE

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**NORSEPOWER ROTOR SAIL SOLUTION TO BE INSTALLED
ONBOARD VIKING LINE CRUISE FERRY VESSEL**

Deal heralds the world's first LNG/wind electric propulsion hybrid ship

Helsinki, Finland – 25 January 2017: Norsepower Oy Ltd., the leading provider of low-maintenance, software operated, and data verified auxiliary wind propulsion systems, today announced that it has signed an agreement with Finnish shipping company Viking Line to install its Rotor Sail Solution onboard the *M/S Viking Grace*, an LNG-fuelled cruise ferry.

The 57,565 GT *M/S Viking Grace* currently operates in the archipelago between Turku (Finland) and Stockholm (Sweden), and is already one of the most environmentally-friendly cruise ferries in the global maritime industry. With the addition of Norsepower's technology, the vessel will further reduce its emissions, fuel burn and fuel costs; reducing carbon emissions by circa 900 tonnes annually; equivalent to cutting 300 tonnes of LNG fuel per year.

Preparations for the retrofit are underway, with the installation scheduled to take place during Q2 of 2018. *Viking Grace* is set to be retrofitted with one medium-sized Norsepower Rotor Sail unit that is 24m in height and 4m in diameter, making it the first-ever global LNG/wind electric propulsion hybrid ship.

The Norsepower Rotor Sail Solution, which can be installed on new vessels or retrofitted on existing ships without off-hire costs, is a modernised version of the Flettner rotor; a spinning cylinder that uses the Magnus effect to harness wind power to propel a ship. The solution is fully automated and senses whenever the wind is strong enough to deliver fuel savings, at which point the rotors start automatically – optimising crew time and resource.

Commenting on the technology, Ulf Hagström, Senior Vice President, Marine Operations & Newbuildings, Viking Line, said: "As an organisation that strives to ensure that our fleet operates in an environmentally friendly and economical way, we are proud to be partnering with Norsepower. Our cruise vessel is the first to use a combination of alternative clean fuels, modern Rotor Sails, electric propulsion, and a hydrodynamically optimised hull. We believe in the Rotor Sail Solution technology's ability to enhance our ship's performance by enabling significant reductions in fuel burn and costs, as well as carbon emissions."

Commenting on the deal, Tuomas Riski, CEO, Norsepower said: "This project marks the first of its kind modern auxiliary wind propulsion technology installation onboard a cruise ferry. As a Finnish based clean technology and engineering company, we are proud to be partnering with yet another prominent shipping company as we work towards a modern era of auxiliary wind propulsion for the global maritime fleet, while supporting shipping's transition to the low carbon economy."

To date, independent data analysis indicates that up to 20% fuel savings per year can be achieved on routes with favourable wind flows, sufficient sized Rotor Sails, and appropriate service speed.



The technology has proven commercial applicability, with two small units of Norsepower's Rotor Sails installed on board Bore's *M/S Estraden*, a 9,700 DWT Ro-Ro carrier. Measured and independently verified by NAPA, the leading maritime data analysis, software and services provider, the Rotor Sail Solution delivered fuel consumption reductions of 6.1% for the *Estraden*.

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[Illustration of Viking Grace with one 24x4m Norsepower Rotor Sail]



[Jan Hanses, President and CEO, Viking Line (left), and Tuomas Riski, CEO, Norsepower Oy Ltd. (right) during the signing ceremony]

Notes for Editors

- This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 738282.
- The Norsepower Rotor Sail Solution is particularly suited to tankers, bulk carriers, ro-ro vessels and ferries.
- Norsepower recently announced it received €2.6 million from the European Commission and the Finnish Government's funding agency for innovation, Tekes, to further its research and development programme. More on this story [here](#).
- The Norsepower Rotor Sail Solution won the 2016 'Innovation of the Year' award at the Electric and Hybrid Marine World Expo in Amsterdam. More on this story [here](#).

About Norsepower

Norsepower Oy Ltd is a Finnish clean technology and engineering company pioneering the generation of renewable wind energy for the global maritime industry. Norsepower is the leading provider of low-maintenance, software operated, and data verified auxiliary wind propulsion systems.

For more information on the Norsepower Rotor Sail Solution, please visit www.norsepower.com.



About Viking Line

Viking Line is a public limited company and a market-leading brand in passenger traffic on the northern Baltic Sea. It offers passenger services, recreation and cargo carrier services on the vessels Gabriella, Mariella, Amorella, Rosella, Viking Cinderella, Viking XPRS and on the new flagship Viking Grace.

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