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# Baltic SO<sub>2</sub>lution

## Benefits

- + Low emission supply chain
- + Gas fuelled two-stroke engine
- + Supporting the LNG infrastructure
- + Connecting ports for LNG bunkering infrastructure
- + Involving three EU countries

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An innovative model  
to environmentally  
optimise the product  
supply chain in the  
Baltic Sea

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**Into The Future – Baltic SO<sub>2</sub> lution** is an innovative and environmentally friendly model proposed for the transport route of energy products in the Motorway of the Baltic Sea. Finnish North European Oil Trade (NEOT) is driven to reduce the environmental impact of their oil product supply chain by utilising new, energy efficient technology to the shipping community in order to reduce current levels of emissions in the Baltic Sea emission control area.

Finnish engine manufacturer Wärtsilä is currently developing Wärtsilä RT-flex 50DF engine, a new low-speed, two-stroke, low-pressure, dual-fuel gas engine using liquefied natural natural gas (LNG) as fuel, making it the first installation of this technique globally. This sustainable and environmentally friendly technology will be installed to retrofits and new buildings to provide drastic reductions in energy consumption and emissions, such as NO<sub>x</sub> and SO<sub>x</sub>. This technology will help shipowners to ensure continuous operations in the Baltic Sea region by meeting the Sulphur Emission Control Area (SECA) requirements that will become binding from the 1<sup>st</sup> January 2015 onwards.

In addition to other emission reductions, these engines will be able to meet the International Maritime Organisation's (IMO) NO<sub>x</sub> Tier III limit without the need of NO<sub>x</sub> abatement equipment which currently is not mandatory in the Baltic Sea area. Danish Terntank will be the first shipowner to test this innovative technology in use and will also provide a test bed for Wärtsilä's further developments.

This transport model and technology package will provide NEOT with the most sustainable supply chain of oil products in the Baltic Sea region. The ports of Gothenburg and Turku will develop and provide LNG bunkering facilities to secure the LNG supply for the transport route. Through making use of LNG, the project supports the investment and development of the LNG infrastructure in the Baltic Sea region uniting it with the European Union's clean fuel strategy.

European Commission has been promoting actions towards a comprehensive EU framework on the use of LNG as fuel within shipping. **Into The Future – Baltic SO<sub>2</sub> lution** directly reflects this proposal for a directive on the deployment of alternative fuels infrastructure.

#### Emission reductions obtained by using LNG as fuel

+ SO <sub>x</sub>	100 %
+ NO <sub>x</sub>	85 %
+ CO <sub>2</sub>	25 %
+ Particles	98 %

#### Wärtsilä 5-cylinder RT-Flex 50DF Engine

- + MCR 5850 kW
- + The first low pressure two-stroke gas engine
- + IMO Tier III compliant



DENMARK

SWEDEN

FINLAND

BALTIC SEA