

## Environmental and Social Data Sheet

### Overview

Project Name: WÄRTSILÄ RDI IV  
 Project Number: 2012 0416  
 Country: FINLAND  
 Project Description: The project concerns the promoter's RDI activities in four-stroke (medium speed) engines for marine and power plant applications. The objectives of the planned development activities include improvement of efficiency, improved environmental performance, reliability, lifecycle costs and automation.

EIA required: no

Project included in Carbon Footprint Exercise<sup>1</sup>: no

(Details for projects included are provided in section: "EIB Carbon Footprint Exercise")

### Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The project concerns investments in research, development and innovation (RDI) that will be carried out in existing facilities already authorized that will not change their scope due to the project: an Environmental Impact Assessment is therefore not required according to Directive 2011/92/EU.

Overall, the project will have positive or neutral residual impact as a significant part of it aim at reducing engines' exhaust emission to comply with upcoming regulations, reducing fuel consumption and intrinsically associated CO<sub>2</sub> emissions, both for marine and stationary power plant engines; therefore the outcomes of the project are expected to create considerable environmental benefits.

### Environmental and Social Assessment

#### Environmental Assessment

The company is one of the leading providers of power solutions for the marine and energy markets. In the ship power solutions, its product portfolio includes engines, generating sets, reduction gears, propulsion equipment, automation and power distribution systems as well as sealing solutions for all types of vessels and offshore applications. In the power plants area, the company supplies solutions for the decentralised power generation market and offers power plants for base-load, peaking and industrial self-generation purposes as well as for the oil and gas industry.

A significant part of the project investment concerns the RDI activities to reduce exhaust emission to comply with upcoming regulations, fuel consumption and intrinsically associated CO<sub>2</sub> emissions, both for marine and stationary power plant engines; therefore the outcomes of the project are expected to create considerable environmental benefits.

#### Other Environmental and Social Aspects

In the marine applications, the company's efforts in fuel consumption improvement focus both on engine improvements and application of technologies such as the common rail. The company's technologies related to the reduction of Marine emissions include among others the Selective Catalytic Reduction (SCR) and Exhaust gas scrubbing.

<sup>1</sup> Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100 000 tons CO<sub>2</sub>e/year absolute (gross) or 20 000 tons CO<sub>2</sub>e/year relative (net) – both increases and savings.

Wärtsilä power plants are traditionally designed so that their emission levels are lower than the World Bank limits, when using a suitable choice of fuel. Secondary and wet primary emissions reduction methods can be used, either to permit the use of poorer-quality fuels or to enable even lower emission levels, for instance due to local ambient air quality issues or to reach better fuel economy.

The company has a formalised environmental strategy that includes aspects such as consumption of raw materials, consumption of fuels and lubricants, emissions into the air, noise and vibration, solid and liquid wastes, heat emissions and electrical and thermal energy. All these aspects are also included in a specific environmental reporting that includes among others the company's consumption of energy, electricity, heat, water, emissions to the air, waste and environmental related expenditures. The company's has set quantified objectives for the reduction of energy consumption and the achieved results are positive. With reference to its products, the company carries out a comprehensive life-cycle analysis that includes also environment related aspects.

In 2008, the company updated its management system approach and the new principle is to apply certified EHS (Environmental, Health and Safety) management systems based on ISO 14001 and OHSAS 18001 in all group companies, excluding the companies focusing purely on sales. In 2012, about 60% of Wärtsilä companies had operated with a certified environmental management system, covering roughly 90% of Wärtsilä total workforce.