

This is Wärtsilä

Shaping the decarbonisation
of marine and energy



Our everyday lives depend on a steady supply of electricity and goods shipped to us from across the world

The marine and energy sectors currently generate
> 1/3 of global greenhouse gases

Global electricity demand is on track to double by 2050

Over 80% of world trade is carried by sea

Dedicated to shaping the
decarbonisation of marine and energy

We help our customers to be successful by reducing
emissions while securing financial viability.

Our purpose

Enabling sustainable societies through
innovation in technology and services



Green is not black or white

No single solution will get us through the transition alone
Fossil fuels will play a role for decades
Most of the needed technologies already exist



Our solutions help our customers towards success by reducing emissions, improving efficiency and cutting costs



We innovate along with our ecosystems



We work to make decarbonisation both environmentally sustainable and financially viable



We are a global leader in technology and services

Serving our customers wherever they are in the world



Of the 110,000 large vessels out at sea 1/3
carry Wärtsilä solutions on board



In 180 countries
Wärtsilä energy installations provide reliable power

Two centuries of innovation

1834

A sawmill is established in a Finnish village, Wärtsilä.

1995

Our dual-fuel engine can switch fuel during operation.

2015

Our engine in Guinness World Records.

First methanol conversion for customer's engines.

2023

As one of the 100 most influential companies*, we continue our story of world firsts with a 4-stroke engine-based ammonia solution for marine.

1950s

Our first marine engines.

1970s

We enter the energy sector.

2001

Remote monitoring enriches our service offering.

2012

World's first hybrid system on a vessel.

2022

Our first newbuild methanol engines.

2024

As one the world's most sustainable companies* we launch the world's first 100% hydrogen-ready engine power plant concept.

*recognition by TIME magazine

A global team of experts fuelling change since 1834



53%
service sales
of total



6,449
net sales, MEUR



18,300
people



230
locations



128
nationalities



77
countries



Figures from 2024



A culture that fuels our power

84%

of Wärtsilians are proud of our company's efforts to have a positive impact in the world.

90%

of Wärtsilians feel that work here meets or exceeds our expectations.

The broadest service network for marine and energy

> 50%

of our sales come from services.

30%

of our installed base is covered by agreements or performance-based agreements.

> 90%

of our lifecycle customers renew their service agreement.

90%

of our customers' support cases we solve remotely in our 24/7 Expertise Centres, preventing issues before they arise.



Figures from 2024

Set for 30 – our decarbonisation targets for 2030

Provide a product portfolio ready for zero-carbon fuels

Our investment and long-term research efforts have resulted in several milestones and industry firsts. Our engines can already now run on low- and zero-carbon fuels – such as ammonia, hydrogen, and methanol.

Become carbon neutral in our own operations

By the end of 2024, we have decreased our greenhouse gas emissions by 50% compared to the 2021 baseline.

25% reduction of direct suppliers' greenhouse gas emissions

A new target set in 2024.

Håkan Agnevall,
President & CEO



The decarbonisation of marine and energy industries is accelerating



Market fundamentals on our side, accelerating decarbonisation



Stronger need to reduce emissions

- Energy demand and trade growing
- Policies and regulations
 - Marine: net zero greenhouse gases ~2050
 - Energy: countries with net zero targets cover 88% of global emissions



Technology development

- Renewables take over
- Focus on fuel-flexible technologies and sustainable fuels
- Other solutions cutting emissions, such as abatement and battery technology



Increased connectivity and data

- Installations and systems grow in data and complexity
- Holistic optimisation for efficiency and cost savings

The marine industry's three pathways for decarbonisation

Burn less fuel

More efficient operations and solutions

Clean up emissions

Carbon capture, exhaust treatment

Use alternative energy sources

Sustainable fuels, hybridisation and electrification

A 100% reduction in greenhouse gas emissions will require the adoption of sustainable fuels

Decarbonising the energy industry with renewables and balancing power

Curtailment of renewable energy caused by system inflexibility
+
Decrease running hours of inflexible power plants.

1
Add renewables

Continue adding renewables supported by flexibility.

2
Add balancing engine power plants and energy storage

Utilise Power-to-X and flexible balancing engine power plants to provide carbon-neutral long-term storage.

3
Phase out inflexible power plants

4
Convert remaining power plants

5
A 100% renewable energy future is here

It is based on renewables, energy storage, and balancing engine power plants that run on sustainable fuels

| Our solutions and know-how enabling the transition



We are a technology leader in the decarbonisation transformation



Fuel-flexible engine technology



Industry-leading fuel research



Hybrid, battery, and energy storage solutions



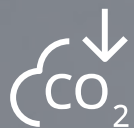
Digital solutions to optimise **and secure** operations and service



Energy-saving technologies



Services: broadest network **and** lifetime support, Decarbonisation services



Emission-abatement technologies



Industry know-how and modelling of power systems

Wärtsilä Marine: the right combination of solutions for each vessel and fleet



Engine
optimisation and
fuel flexibility



Electrification and
hybrid systems



Energy-saving
solutions



Abatement
systems and
carbon capture



Lifecycle solutions
and services

Wärtsilä Energy: towards a 100% renewable energy future

Our technologies provide reliable power and balancing to support the growth of renewables.



Engine power plants



Energy storage and
optimisation



Services and power
system expertise

Helping our customers decarbonise by climbing the service value ladder

The renewal rate of our service agreements is more than 90%

Agreements and
performance-based
agreements

Retrofits and
upgrades

Optimised
maintenance

Transactional spare
parts and field services

Value to the customer

| Our strategy drives change



THE WÄRTSILÄ WAY

Purpose

Enabling sustainable societies through innovation in technology and services

Target position

Shaping the decarbonisation of marine and energy

Strategic priorities

Roadmap to improve performance and reach the target position

Execution plan

What to do – tactics & operations, updates yearly

Values, leadership and continuous improvement

Our beliefs and behaviour

Innovation and R&D investments as change drivers

296 MEUR R&D investment
representing 4.6% of our net sales.

2,500 patents and applications
of which 45% are classified as technologies that reduce or
eliminate GHG emissions (since 2013).

Over 500 ideas and inventions in 2024
from our colleagues through the internal innovation programmes.

Figures from 2024



Fuel efficiency and fuel-flexible technology ensure the most future-proof solution

The decarbonised future will involve multiple fuels. Besides traditional fuels, our engines can run on:

Ammonia

Bio-methane

Bio/renewable diesel

E-diesel

E-methane

Hydrogen

LNG

LPG

Methanol/ethanol



Leading the way with our customers

Selected references





The world's first ammonia-fuelled in-service ship

After the fuel conversion, Viking Energy is to start operating on ammonia in 2026.



Eidesvik offshore

Copyright: © Peter Tubaas/Vestland Media

Customer case

The marine industry's first conversion of dual-fuel engines to spark gas operation

The conversion of six LNG carriers will significantly reduce methane slip, reducing greenhouse gas emissions.



Chevron Transport Corporation Ltd.



Copyright: © Chevron Shipping

Customer case

Aurora Botnia is one of the
world's most efficient
and sustainable ships

Engine upgrades and hybrid propulsion have
delivered double-digit reductions of fuel consumption.



Customer case

A digital twin ship helps Carnival Corporation



Identify optimal solutions to
meet sustainability targets



Plan its fleet decarbonisation
programme



Carnival Corporation



The world's largest hybrid vessels

Can operate with zero emissions during manoeuvring operations and when in port



Brittany Ferries

Copyright: © Brittany Ferries

Customer case

Critical balancing capability with a new power plant



Our engines' grid balancing capabilities will allow seamless integration with increasing share of renewables



Protection from price volatility in electricity markets



Kentucky Municipal Energy Agency, US



Customer case

A renewable-heavy power system optimised with balancing power plant and energy storage



Fast-starting balancing
power ensuring reliability



Landmark case of 250 MW
energy storage system



10-year service agreement



AGL Energy Limited, Australia

Barker Inlet Power Station

Customer case

A long-lasting services partnership since 2013 with our power plant customer in Zambia



The 105 MW power plant is crucial for maintaining a reliable electricity supply in Zambia, especially during the current hydropower shortage caused by drought



The service agreement ensures the plant's reliability and availability



Ndola Energy Company Limited

Customer case

Europe's largest operational battery energy storage site

First project under the UK's Network Options Assessment (NOA) Stability Pathfinder programme

The 200 MW / 400 MWh project provides stability services – including short-circuit & true synthetic inertia – to the National Grid Electricity System Operator (NESO) in Scotland

Continued partnership: A second project (300 MW / 600 MWh) is on its way



Zenobē

Image: Blackhillock project under construction
Copyright: © Zenobē

Customer case

Australia's largest battery energy storage project and one of the largest in the world

We are delivering a total of **700 MW / 2 800 MWh** – enough to power 150 000+ New South Wales households yearly

The Eraring battery will connect to Australia's National Electricity Market, enhancing energy security and reliability in the state as renewable energy supply increases



Origin Energy

Financial performance

2024 was a year of all-time highs



Financial highlights 2024

Order intake

8,072 MEUR

Net sales

6,449 MEUR

Comparable
operating result

694 MEUR

Comparable operating
result, % of net sales

10.8%

Order book at the end
of the period

8,366 MEUR

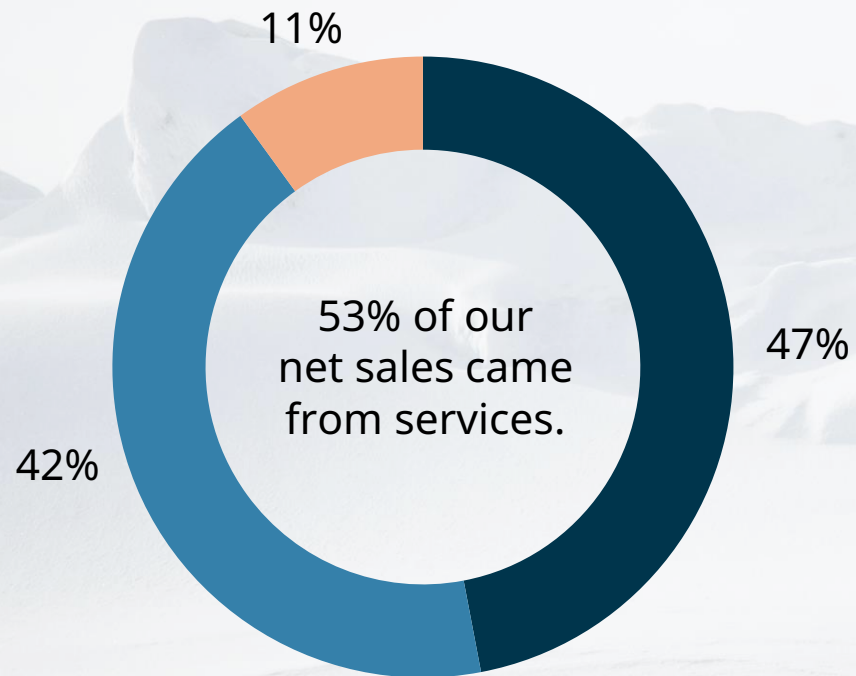
Basic earnings per
share

0.85 EUR



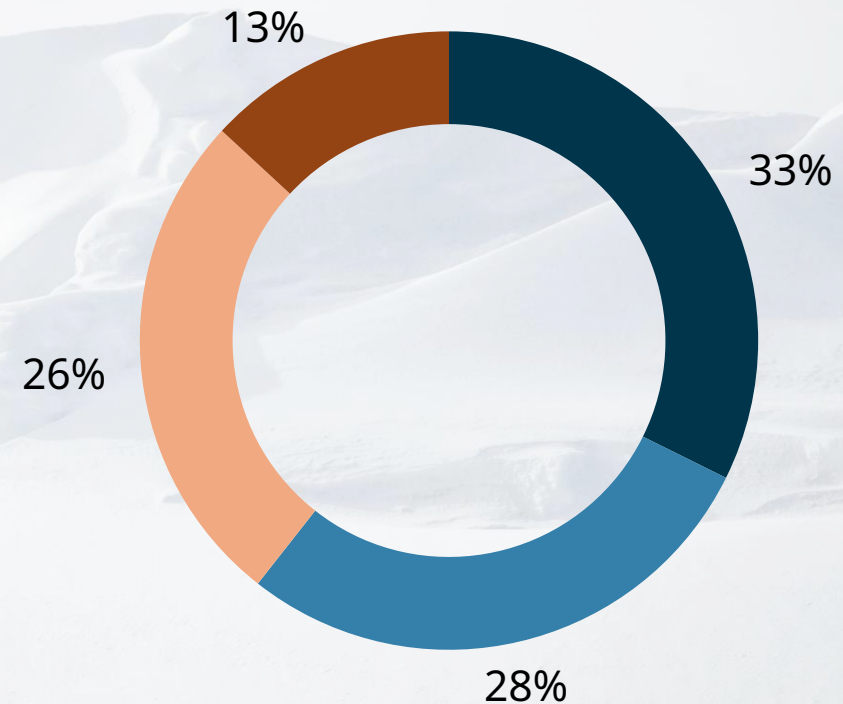
Sales by businesses and geographical areas in 2024

6,449 MEUR net sales, per business



■ Wärtsilä Marine ■ Wärtsilä Energy ■ Other

Geographical net sales



■ Europe ■ Americas ■ Asia ■ Other

A clear purpose:
Enabling sustainable societies
through innovation in
technology and services.

We are 18,300 dedicated Wärtsilians shaping
the decarbonisation of marine and energy.



One in three vessels carries
our marine solutions.



In over 180 countries, our
energy solutions help power
the local communities.



Get to know our story and people on social media



#FuelYourPower





WÄRTSILÄ