



Improved profitability, and continued growth driven by decarbonisation

Anders Lindberg

President, Wärtsilä Energy and Executive Vice President



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Significant value creation opportunity – improving performance and capturing growth

Perform – on track to deliver our targets

- Driving performance in new build through **improved risk / reward**
- Continued **strong profitability in services** with a solid foundation for growth – Moving up the service value ladder
- Driving profitability in Energy Storage & Optimisation through **increasing value add in our products**
- Achieving **positive comparable operating result in Energy Storage & Optimisation**

Transform – growth opportunity in Engine Power Plants

- **Thermal balancing** addressable market is expected to **grow 19% p.a.** between 2022-2030
- Wärtsilä is the **global market leader in engine power plants** with superior balancing capabilities vs. gas turbines
- **Capability to convert to future fuels** key for customers to avoid risk of stranded assets

Transform – growth opportunity in Energy Storage & Optimisation

- **Energy storage addressable market** is expected to **grow 17% p.a.** between 2022-2030
- Wärtsilä is a **top 5 global leader** in energy storage
- **Differentiated** by project execution excellence, safety, reliability, and a fully integrated design
- **Strategic review** now started

CMD 2021: “Capture growth in balancing solutions and services”

Targets from CMD in 2021 → Status as of 2023¹

Perform

Focus on profitability and project excellence

Improve profitability in energy storage	✓	Energy Storage & Optimisation is now profitable
Capture growth in services	✓	+31% total services order intake
	✓	+21% in transactional services order intake
Grow agreement coverage in services	✓	+41% order intake to agreement installations
Expand performance-based agreements	✓	+29% GW in performance guarantee agreements ²
Deliver project excellence	✓	Improved new build margin in the order book

Transform

Capture growth in balancing solutions

Capture growth in thermal balancing	✓	+17% balancer installed base growth ³ (vs 2021)
Capture growth in energy storage	✓	+35% growth in order intake (LTM Q3 vs 2022)



1) Growth figures refer to the last twelve months (LTM Q3/23) compared to 2021 2) End of Q3/23 compared to the end of 2021 3) Balancer installed base has grown from 8GW in 2021 to 9.4 GW

My first 5 months – Energy has a good foundation to build on

The energy transition creates opportunities

Energy has extensive competence and understanding of power systems to capture growth

Energy has the right solutions and services for our customers

Convertibility and future-proofed fuel roadmap are key to avoiding the risk of stranded assets

Improved risk / reward and project management

Quality of order book is improving. Rigorous actions taken to improve profitability and risk management



**Perform –
improve profitability in new build and grow agreements in services**

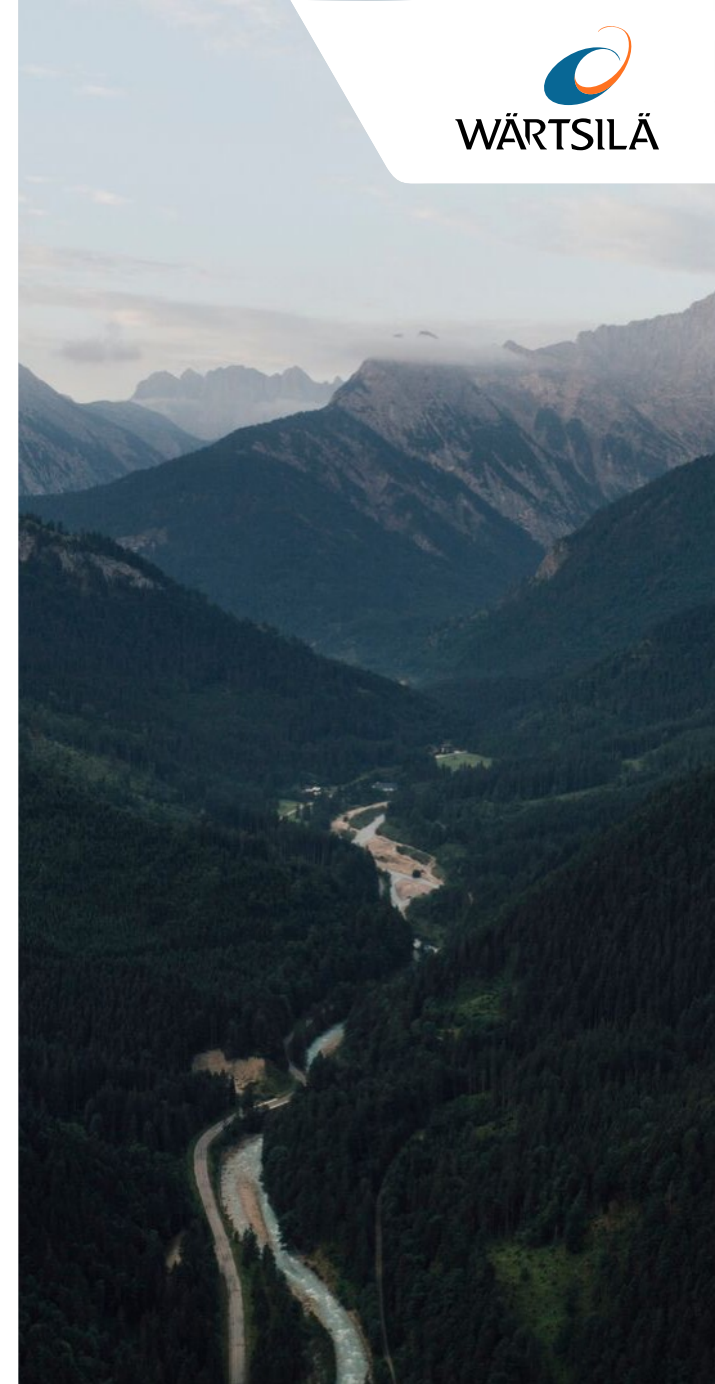
Actions taken to improve new build profitability and achieve better risk / reward

Organisation, team & governance

- **New organisation structure** with three global Business Units with P&L responsibility
- Significant changes in **Energy management & leadership**
- Energy has implemented **new governance**:
 - Updated sales-to-order processes to focus on **profitability** and a less volatile business
 - **Sales and operations planning** is regularly executed to improve productivity

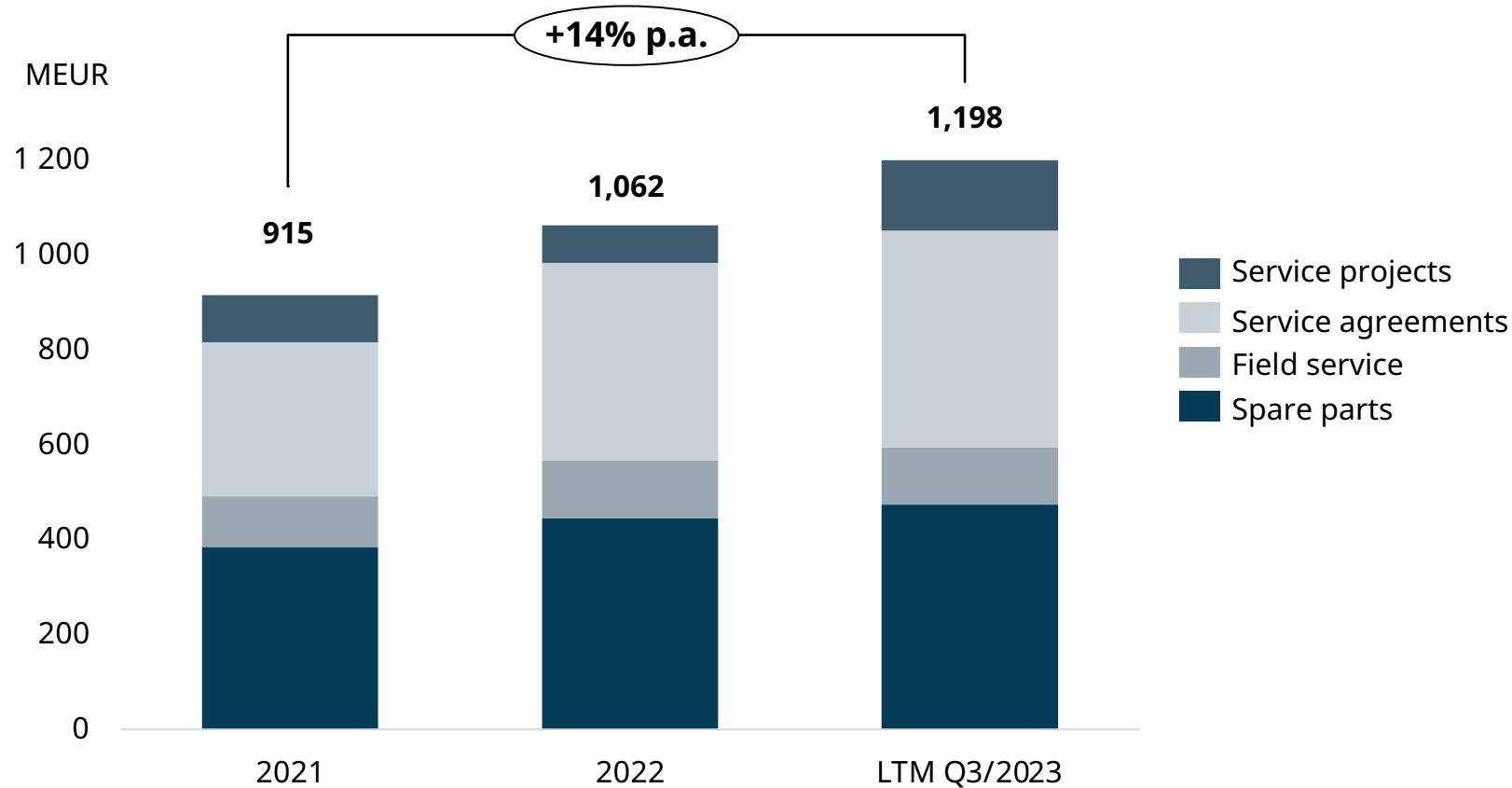
Offering & risk management

- Energy has **EEQ** (extended equipment supply) as **the preferred offering**, EPC (engineering, procurement and construction) is only considered in selected markets
- Going into 2024 **more than 80% of the order book is equipment orders**, compared to 40% going into 2022
- Rebalance in risk appetite leads to **stronger order book risk/reward profile for 2024 and onwards**



Continued good profitability in services with a solid foundation for future growth

Service order intake, MEUR



Energy services – growth drivers

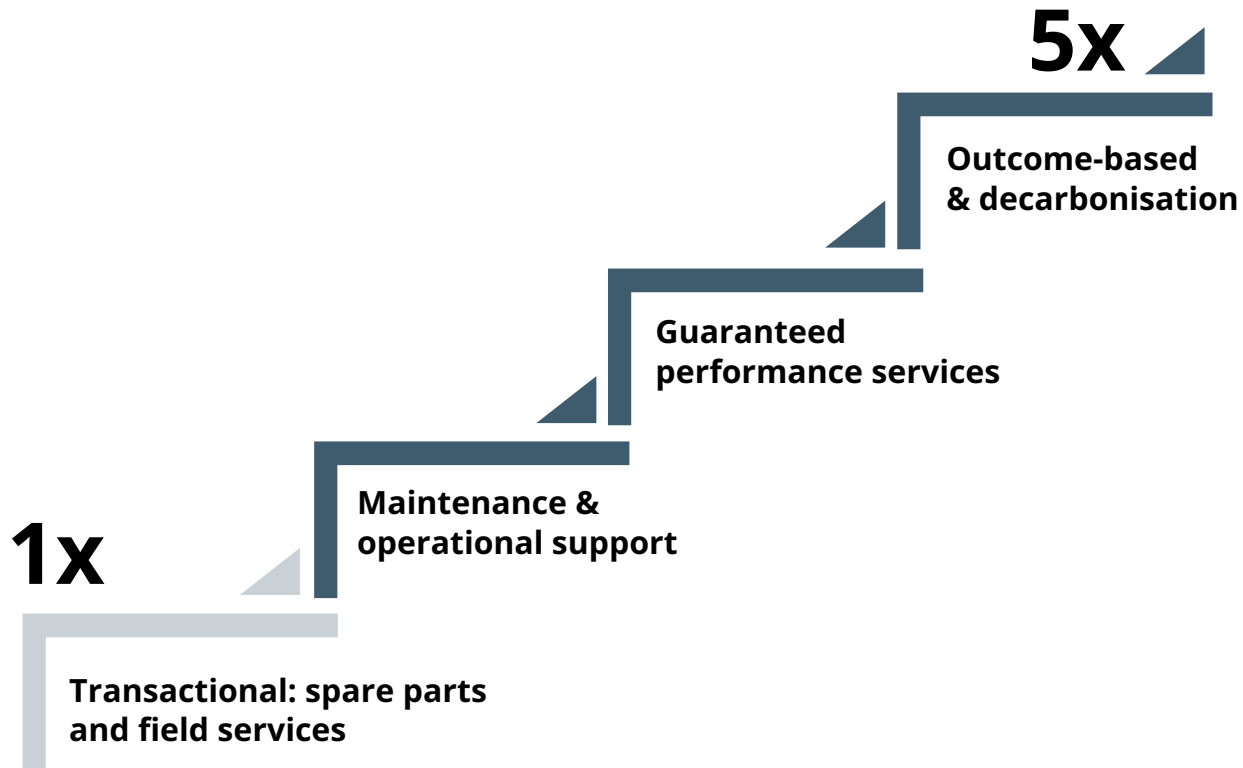
- Growing installed base over time
- Stable total operating hours
- Increasing agreement coverage
- Upgrades & fuel conversion demand
- Future growth potential in decarbonisation services and outcome-based agreements

LTM = Last twelve months, Q422-Q323

We increase sales, profitability and customer satisfaction by moving up the service value ladder

Wärtsilä service value ladder

Sales EUR/kW relative to transactional



Continuous growth in agreement coverage

- Securing service agreements for **new power plants**
- Maintaining **high renewal rate** for existing agreements: >90% renewal rate shows high customer satisfaction
- Increasing the **share of agreement customers** in our installed base: 29% agreement coverage and ~18GW under agreement¹⁾, 3,4GW added since 2021

Moving customers up the service value ladder

- Local presence, global operations, and investments in data & digital solutions enable us to meet high customer expectations
- Higher satisfaction scores for agreement customers that are higher up the value ladder
- Portfolio of **agreements with performance guarantees** is growing: Total 7GW with ~2GW added since 2021

1) Includes agreements covering both installed assets and assets to be installed in the future

Energy Storage has grown 3X¹⁾ since 2021 and is now profitable – key focus on commercial approach and differentiated offering

Selective commercial approach

- Focusing on growth of utility scale storage in selected geographies
- Systematic project selection to drive profitability

Differentiated offering & approach

- Excellence in project execution, a reliable and leading storage player globally
- Industry leading design and safety record with outstanding performance in fire safety
- Fully integrated energy storage solution with modular and scalable design
- Leading GEMS energy management system with optimisation and grid integration capabilities

Cost competitiveness

- Hardware and software development for competitive product cost
- Multi-sourcing and active supply chain management to meet regional requirements

1) Net Sales LTM Q3 2023 vs. 2021



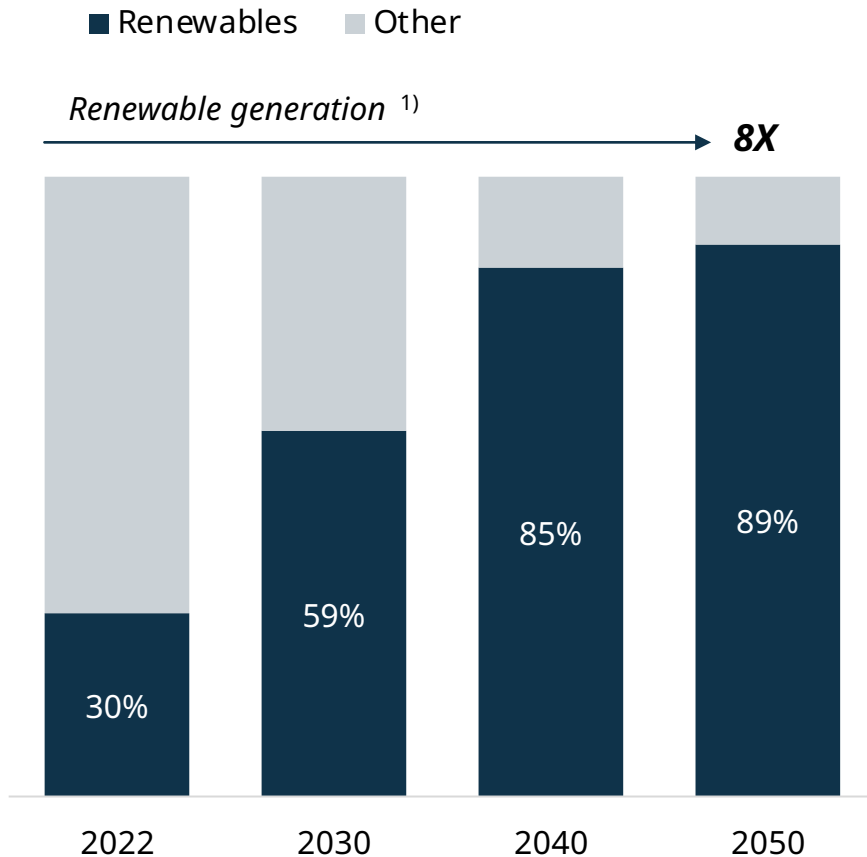
Transform – decarbonisation driving future growth in balancing



As the renewable energy transition accelerates, balancing solutions are key enablers for the transition

Share of renewables in global energy generation

Technology disruption in the energy sector



Renewables becoming main source of power



Gradual replacement of coal



Increased need for balancing solutions



**Development and increasing use of sustainable fuels –
Being enabled for future fuels avoids stranded assets**



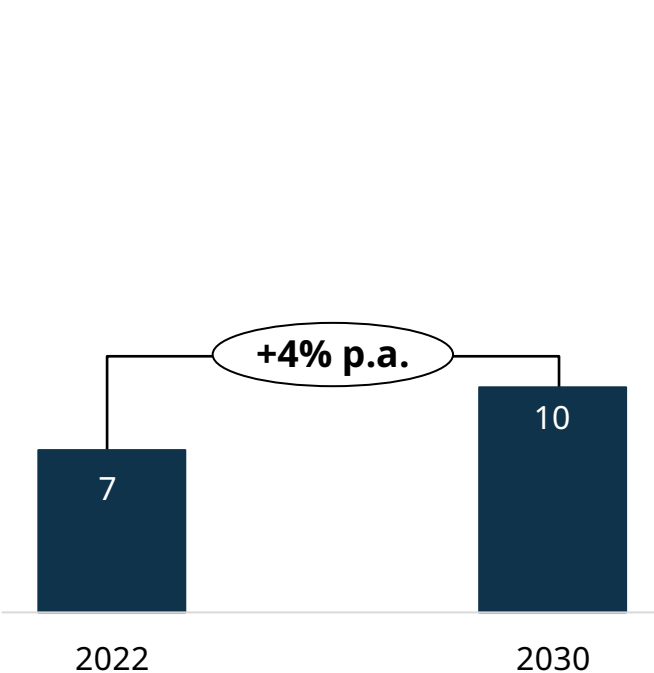
Power systems becoming increasingly more complex

1) IEA World Energy Outlook 2023 (Net Zero Emissions scenario)

Thermal balancer market expected to grow ~20% per year – the baseload market outlook remains stable

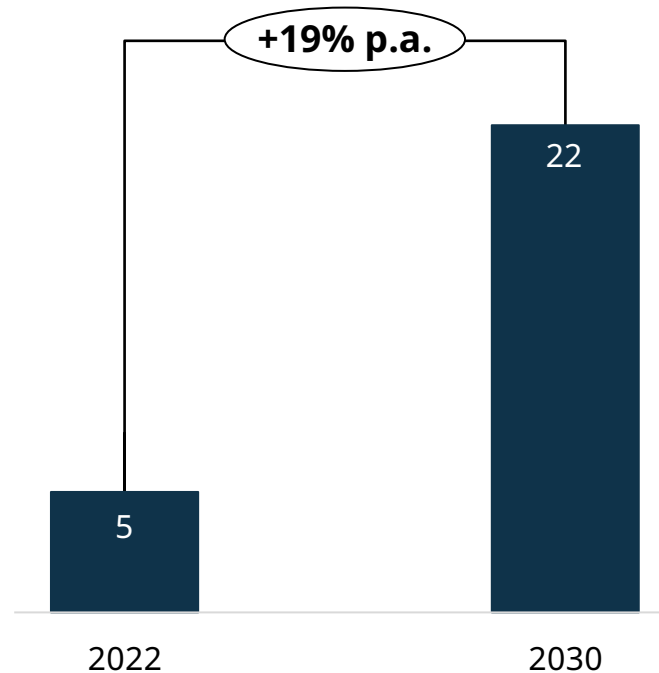
Engine power plant - baseload

Addressable annual market (GW)



Engine power plant - balancers

Addressable annual market (GW) ¹⁾



Outlook

- The transition towards renewables is the driving force behind demand for thermal balancing
- We see large balancing market potential e.g. in North America and Europe
- The role of gas as a transition fuel is essential for a secure transition, as highlighted by the IEA
- Future fuels will play an important role, a credible roadmap is essential

1) Forecast based on BloombergNEF forecast on wind and solar capacity additions, and estimated share of balancing capacity compared to renewables growth

Engine power plants are in a strong position as the balancing market grows. Power system knowledge makes Wärtsilä the go-to partner for capacity planning

Engines superior to Gas Turbines for balancing

- **Faster start up** and continuous **ramping** for renewables
- **Cycling** several times per day with **no cost impact**
- **High efficiency** due to multiple modular units
- **Catching price spikes** and avoiding negative prices

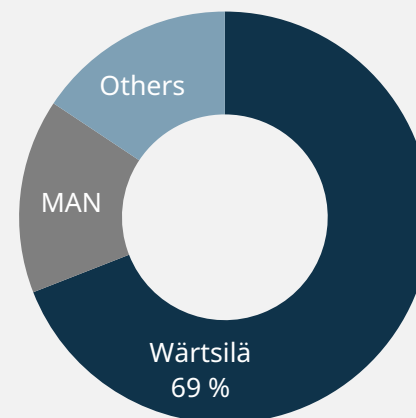
Modelling supports Wärtsilä go to market approach

- We have modelled >190 countries and systems worldwide
- Transparent modelling shows value of balancing with engines
- Shift to net zero energy feasible with existing technology

Wärtsilä is clear market leader in engine power plants

- Clear market lead in engine power plants with 50-70% market share
- **Technology leader** in new green fuels and performance-based services
- **Proactively develops** new engine markets, competing with gas turbines

Engine market shares ¹⁾



1) >5MW units, LTM Q2/2023. Based on public and Wärtsilä data

Wärtsilä in strong position as thermal balancing market grows

- Balancing market expected to grow in key regions ²⁾

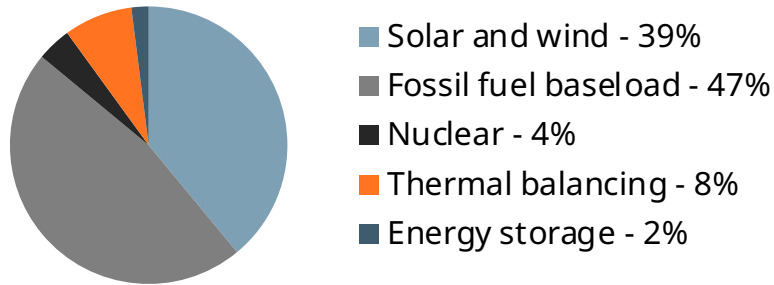
	2027 (GW)	5-year CAGR
US	3.6	19%
Australia	0.7	
Europe	5.0	
India	1.7	

- Additional potential in markets like Brazil, Argentina, China, Japan and Vietnam

2) Based on BloombergNEF ETS and Wärtsilä data

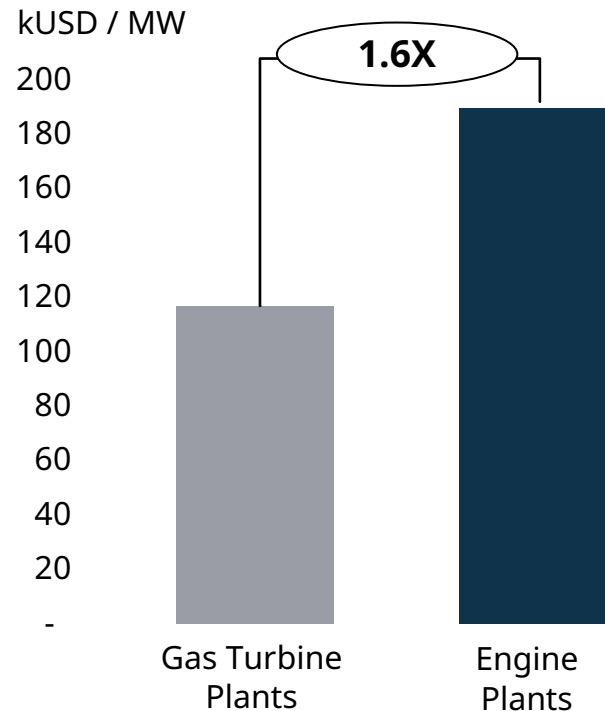
Case Texas shows future trends. Increasing renewables creates need for balancing with engines outperforming competing technologies

30 million population with 133 GW of installed power (system size equal to France)



- 7% in annual growth of thermal balancing the last 5 years with expected continued growth
- Growing regulatory support for balancing in Texas
- Wärtsilä installed based (and growing):
 - 1 GW of thermal balancing
 - 1.2 GWh of energy storage

1.6X higher¹ real time market revenue potential for engines vs. gas turbines



Texas as a proofpoint for thermal balancing

- High amount of renewables
- Granular price signals
- Policy support for balancing

Similar conditions forming in:

- Midwestern USA (SPP and MISO)*,
- Australia
- Europe

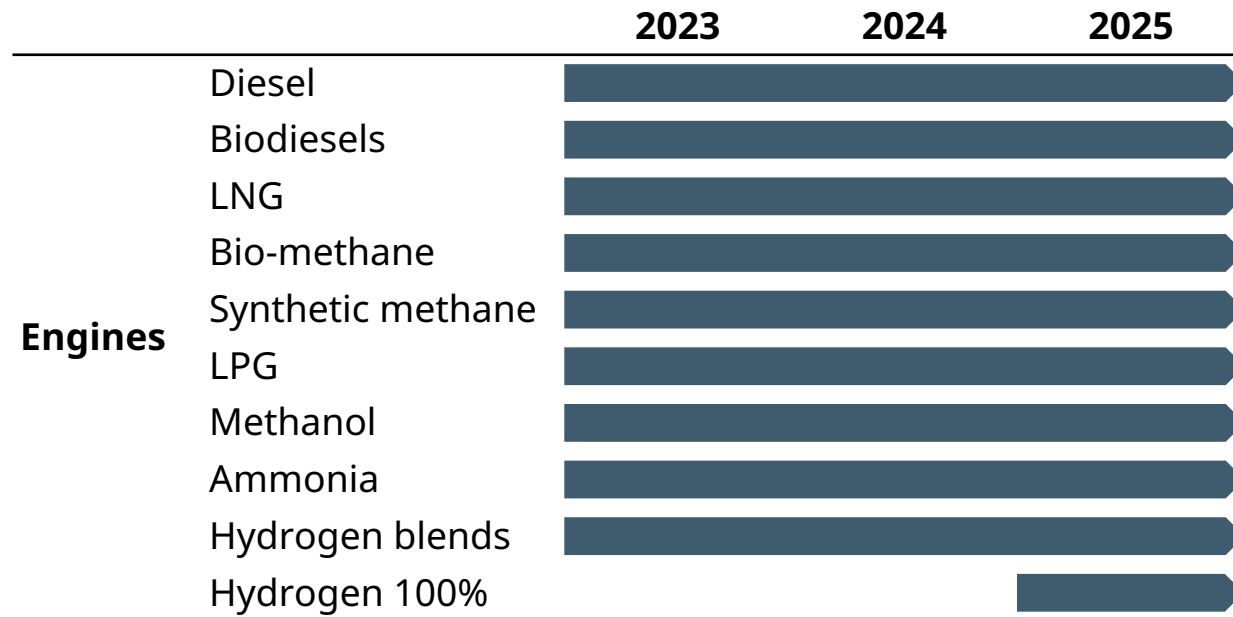
Source: S&P Capital IQ Pro, ERCOT (September 2023 data), 1) ERCOT's Security Constrained Economic Dispatch (SCED) data – Wärtsilä study. Data based on average of 2 Aero derivative gas turbine plants and 2 Wärtsilä engine plants for the full year 2022

*SPP = Southwest Power Pool

*MISO = Midcontinent Independent System Operator

We have a credible roadmap for engine convertibility to avoid stranded assets

Technology roadmap for engines



- Methanol engines and engines running on hydrogen blends are available today, ammonia engine in Q4 2023, **full hydrogen technology in 2025**

Sustainable fuels for engine power plants

We are preparing for a **range of future sustainable fuels in Energy** as there will be no single global green fuel for use in the energy sector

Hydrogen

- In 2022 Wärtsilä & US partner WEC succeeded with world's first-of-a-kind engine power plant fuel tests using 25% hydrogen blend
- Developing a full scale 100% hydrogen plant design in 2025 and a 100% hydrogen pilot in 2026

Ammonia

- Developing plant concept for ammonia, ready in 2024

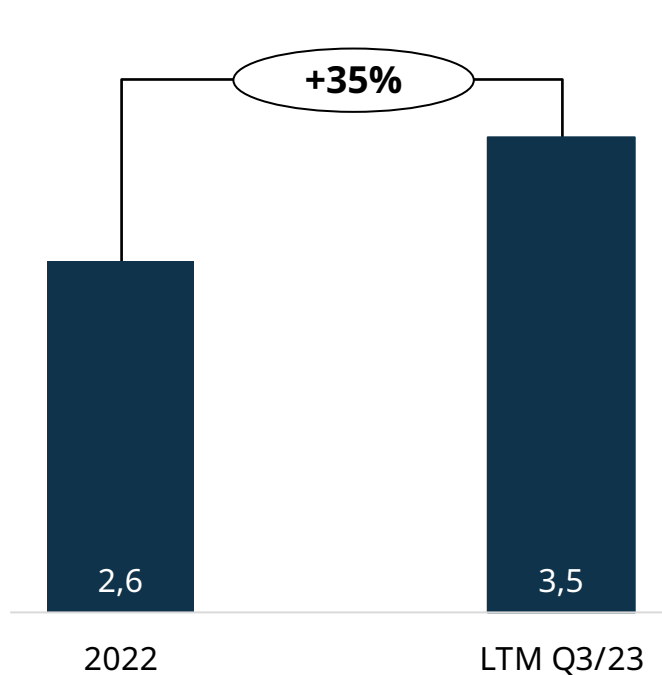
Methanol

- Developing plant concept for methanol, ready in 2025

Energy storage growth outlook remains strong

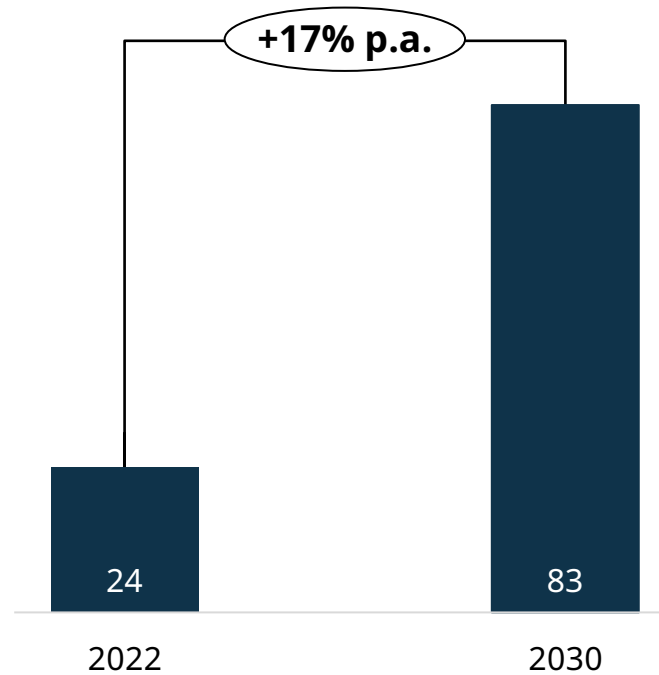
Order intake

Order intake (GWh)



Market outlook

Addressable annual market (GWh)¹⁾



Outlook

- Focus on profitable growth. Maintain **top 5** market position
- **Strong new build sales growth** expected, driven by market demand
- **>11 GWh** energy storage capacity delivered, awarded, contracted or in deployment
- **Complexity drives demand** for advanced energy management systems

1) Adapted from BloombergNEF Energy storage market outlook 1H2023. Addressable market excluding certain geographical markets and residential and commercial storage

Future performance will be driven by strong sales growth and service volumes, continuous improvement, and a future-proof solution portfolio

Recent actions:

- ✓ **New organisational structure and processes:** Updated sales-to-order processes and Business Units with P&L responsibility
- ✓ **Rebalance in risk appetite:** EEQ as the preferred offering, EPC only considered in selected markets
- ✓ **Stronger risk / reward profile:** Legacy projects have been concluded

New build margins

- ✓ New organisation & governance
- ✓ Stronger risk management
- ✓ Operational leverage from growth

Continuous improvement

- ✓ Lean operations and flow efficiency
- ✓ Predictive and autonomous operations
- ✓ Cost indexation & active pricing

New build sales


- ✓ Strong thermal balancing growth
- ✓ Strong energy storage growth
- ✓ Future-proofed portfolio for sustainable fuels and optimisation

Service sales

- ✓ Growing installed base
- ✓ Increasing agreement coverage
- ✓ Climbing the service value ladder

← Profitability →

← Growth →



**On track to improve
profitability in Energy**

**Growth opportunity in
thermal balancing**

**Focus on profitable
growth in energy storage**

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