

Wärtsilä Energy

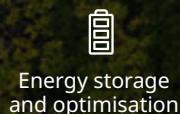
Towards a 100%
renewable energy future

Wärtsilä Energy

180	4 900+	79 GW	125+	18 GW
Countries delivered to	Employees	Power plant capacity delivered	Energy storage installations	Power plants under service agreements

The energy sector plays a significant role in global decarbonisation, and the increasing addition of renewables is speeding up the transition to net zero power systems. An energy system based on renewables requires multiple forms of flexibility to manage variability. Flexible technologies, such as flexible engine power plants and energy storage technology, can balance the intermittency of wind and solar power, to ensure that power supply always matches demand.

We are at the forefront of the transition towards a 100% renewable energy future. We help our customers and the power sector to accelerate their decarbonisation journeys through our market-leading technologies and power system expertise. Our solutions include flexible engine power plants, energy storage and optimisation technology, and services for the whole lifecycle of our installations.



Europe

Power plants:
10.9 GW

Under service agreement:
2.5 GW

Energy storage:
1 GW

Middle East & Asia

Power plants:
40.8 GW

Under service agreement:
8 GW

Energy storage:
1.4 GW

Africa

Power plants:
7.6 GW

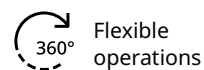
Under service agreement:
2.5 GW

Energy storage:
17 MW

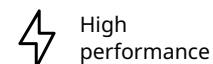
Engine power plants for reliable energy

In order to make smart investments, accurate modelling and future-proof solutions are necessary to avoid stranded assets as technologies change and fossil fuels are phased out.

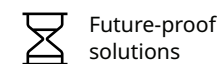
Our engine power plants offer flexible, efficient and reliable power generation in a changing energy landscape. Engine power plants are the optimal power generation technology to ensure the stability and reliability of power grids that are using increasing amounts of renewable energy. They can ramp up in just two minutes with no minimum uptime or downtime and their high performance can be maintained across a wide range of outputs, even in extreme weather conditions when balancing renewables. Engine power plants are future-proof and can run on sustainable fuels, once they become available – enabling 100% renewable energy systems.



With unbeatable flexibility, engine power plants can go from start-up to full load in as little as two minutes without minimum uptime or downtime. Unlimited starts and stops have no impact on maintenance.



We offer the highest available simple cycle energy efficiency of current technologies, 50% or more. With our technology, you can operate your plant on any operating profile without compromising efficiency.



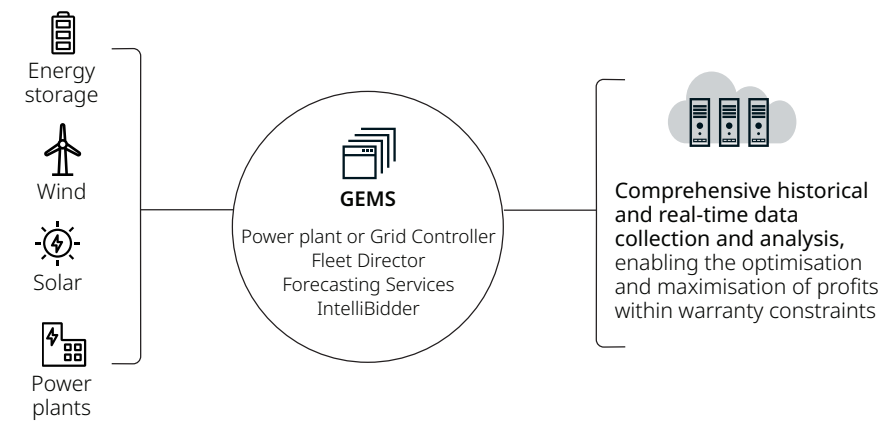
Engine power plants will operate on sustainable fuels to enable the final step towards a 100% renewable energy future. We constantly evolve our solutions offering to include upgrades, conversions and modernisation options.

Leading global energy storage integrator

Combined with the deep global resources and expertise, we seamlessly integrate traditional and renewable power sources, provide visibility into critical energy systems and optimise multiple generation assets — all while delivering unsurpassed reliability to energy operators around the world.

GEMS Digital Energy platform

Sophisticated software that monitors, controls and optimises energy assets at both site and portfolio levels






GridSolv Quantum

Modular and fully integrated storage system that is optimised for flexibility, functionality and safety — UL 9540A compliant

Lifecycle services

Comprehensive lifecycle solutions for storage systems with a holistic, system-level approach

-  Safe
-  Bankable
-  Reliable and mature
-  Integrated and scalable solutions

125+

Global grid-scale energy storage system installations

15+

Years of proprietary software leadership

Services to ensure customer success

A reliable partner with best-in-class expertise is essential in securing your investments and optimising your power plant performance.



Lifecycle solutions

Maintain and optimise safe, reliable and sustainable operations

- Customised solutions from transactional services to long-term, outcome-based strategic partnerships



Lifecycle upgrades

Maximise performance and future-proof existing assets

- Fuel conversions and a broad range of engine and power plant upgrades and re-powering solutions



Operational support & data management

Reduce operating costs and prevent problems through data analysis

- Our Expertise Centres with highly skilled specialists at your service 24/7, utilising state-of-the-art solutions to enhance your performance

Maintenance & operational support	Guaranteed performance	Optimisation & outcomes
<ul style="list-style-type: none"> • Parts predict • Optimised maintenance 	<ul style="list-style-type: none"> • Guaranteed asset performance • Operation & maintenance 	<ul style="list-style-type: none"> • Performance based partnerships • Decarbonisation services

Decarbonisation services:

Your partner in reducing CO2 emissions



Reduce CO2 emissions while ensuring power availability, reliability and cost efficiency



Plan which solutions to implement, as well as when and how to deploy them



Ensure competitiveness in the evolving energy market



Achieve your business and sustainability goals with an outcome-based partnership

Key references



Engine power plants



Energy storage system



Service

79 GW

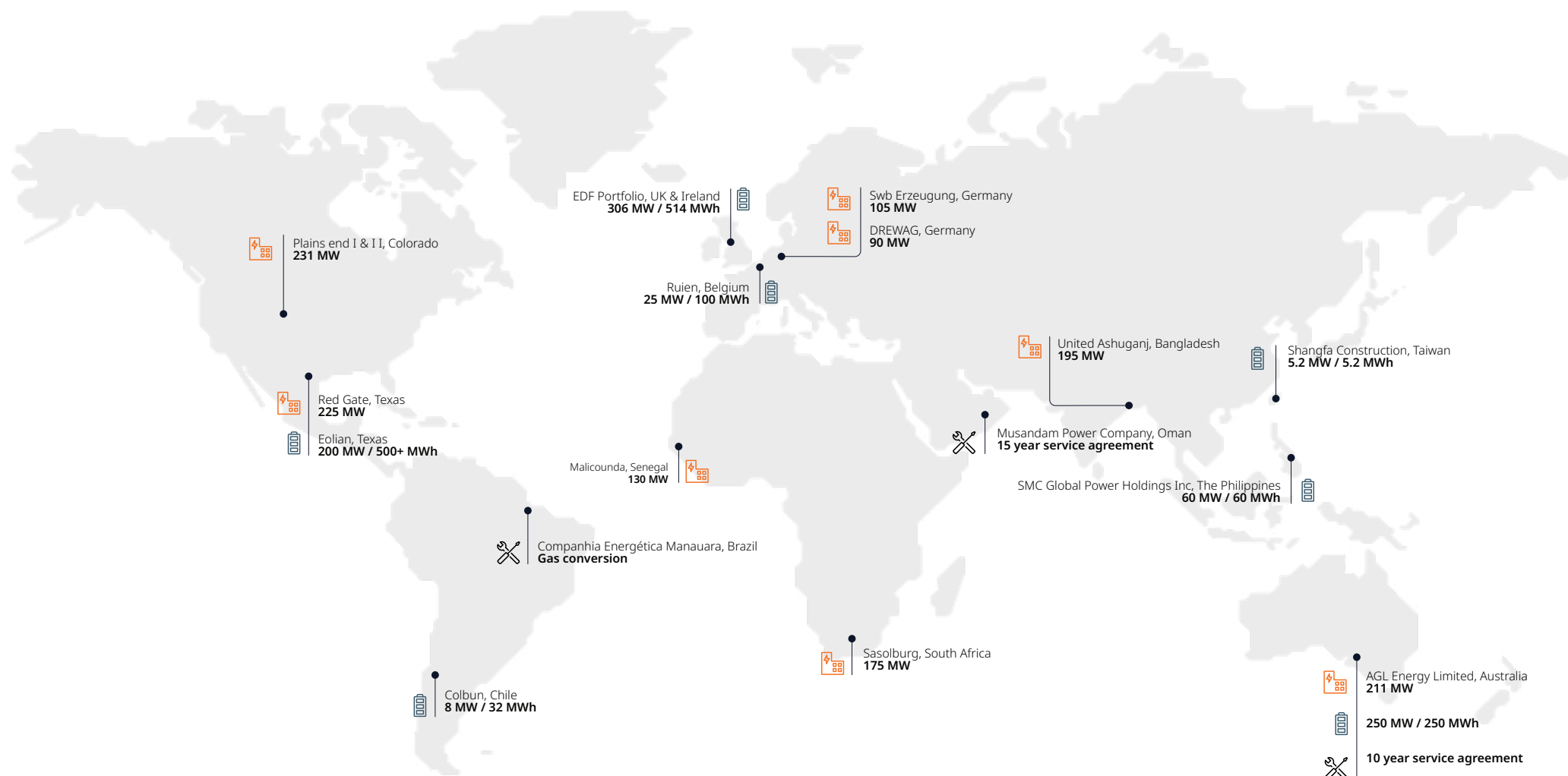
Power plant capacity delivered

125+

Energy storage installations

18 GW

Power plants under service agreements



Find more references on
www.wartsila.com/energy/learn-more/references



We are shaping the renewable energy transition with our advanced flexible technologies and solutions, expertise in sustainable fuels and lifecycle service offerings.



Learn more about our business
[wartsila.com/energy](https://www.wartsila.com/energy)

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