



BERGEN
E N G I N E S

ON LAND. AT SEA.

Company Profile





Centre of excellence in Bergen

Iconic medium-speed liquid and gas fuelled engines

Established in 1855, Bergen Engines has been designing and building high quality medium-speed engines near the city of Bergen, Norway, since 1946.

Since then, the company has built over 7,500 of its iconic liquid and gas fuelled engines and generating sets, of which over half are still in service today; such is the quality and reliability of a Bergen engine.

Formerly Rolls-Royce Bergen Engines AS since 1999, the company was acquired by the British engineering and industrial group, Langley Holdings plc, from Rolls-Royce plc on 31st December, 2021.

Our engines can be found operating in some of the most demanding and hostile environments on earth, both on land and at sea.



Did you know: The world's first lean-burn natural gas engine, released to the market by Bergen in 1991, is still in operation, clocking more than 100,000 operating hours.



On Land. Enabling a net zero carbon future

On land, Bergen engines are principally found driving alternators in power generation applications, either as single units, or as multiple generating sets, delivering a power output of up to 200 MW and beyond.

We provide reliable, responsive and high-performing power solutions for any operational mode, from baseload, variable load, peaking, grid support and stand-by to combined heat and power and microgrids with renewable power sources.

With a variety of installations across the world, we are trusted to deliver power solutions to a variety of applications such as utilities, independent power producers, manufacturing facilities, greenhouses, healthcare, mining sites and nuclear power plants.

Bergen engines are renowned for their high efficiency and durability, and continuous technological development is making sure the engines will handle new fuel types as we transition towards low carbon fuels.

Future proof engines

Bergen Engines recently launched a comprehensive test programme aiming to develop zero carbon emission engines operating on hydrogen. The project aims to develop an engine that allows for a gradual transition from liquid natural gas to 100% green hydrogen, as and when it becomes commercially available.

The flexible and modular engine architecture allows for easy adaptations of minor and major reconfigurations of the engine combustion system, ensuring maximum fuel flexibility, and reducing the risk of ending up with stranded assets due to fuel incompatibility.

Did you know: Liquid fuelled Bergen engines can be converted to run on natural gas and hydrogen blends.

POWER RANGE: 5.3 - 11.8 MW



H₂-Ready natural gas engines

Future proof engines ready for zero carbon shipping





At Sea. Part of the solution towards zero emissions

At sea, Bergen Engines is a leading developer and manufacturer of medium-speed diesel and gas propulsion engines and generator sets for commercial and naval vessels and oil & gas installations.

From tugs and fishing vessels, to ferries, offshore supply, polar research, cargo, RoPax, seismic, naval and cruise ships, Bergen engines are a watchword for supreme quality and reliability in the marine industry.

Energy optimisation is key, and Bergen Engines builds on successful reference projects for hybrid propulsion systems in a variety of configurations, including combined mechanical and electrical propulsion systems designed to optimise fuel consumption in different operational modes.

The energy transition towards zero carbon shipping, will take time and happen at different speeds depending on the regions, and it is still uncertain which fuel will be the fuel of the future. As most ships have a lifetime of 25-30 years, machinery chosen today must be able to operate on the least GHG intensive fuel that is available now and be able to transition to green fuels as they become available. Natural gas is the cleanest fossil fuel, and bunkering systems are established worldwide. With a 92 % reduction in NOx emissions, the Bergen pure gas engines offer an immediate answer to the current IMO Tier III

limits, and the Sulphur CAP of 0.5%, without exhaust gas after-treatment. The modularity of the Bergen engines makes it possible to adapt them to new fuels, ensuring that investments today are valid throughout the vessel's lifetime.

Ambitiously moving towards zero emission combustion engines

Hydrogen is likely to become one of the fuels of the future, and Bergen Engines has already proven that the engines can run on hydrogen and natural gas blends, making a gradual transition towards greener fuels possible. And in partnership with important Norwegian industry players and the Norwegian University of Technology and Science in Trondheim, Bergen Engines have launched the AMAZE (Ammonia Zero Emission) research and development Project. This research aims to gain knowledge about ammonia as a marine fuel in combustion engines, and is expected to be completed in 2024.

Did you know: Bergen gas engines can run on carbon neutral bio-gas without any need for modifications.

POWER RANGE: 1.4 - 12 MW

Power Solutions division

The Langley Holdings' Power Solutions division is a hybrid-renewable microgrid collaboration between three of the world's most respected engineering manufacturers aiming to meet immediate and future microgrid requirements on our path towards a zero-carbon future.

Incorporating renewables such as solar and wind with dispatchable balancing power from reciprocating combustion engines and energy storage in a microgrid solution, makes it possible for companies and communities around the world to move closer to their sustainability targets.

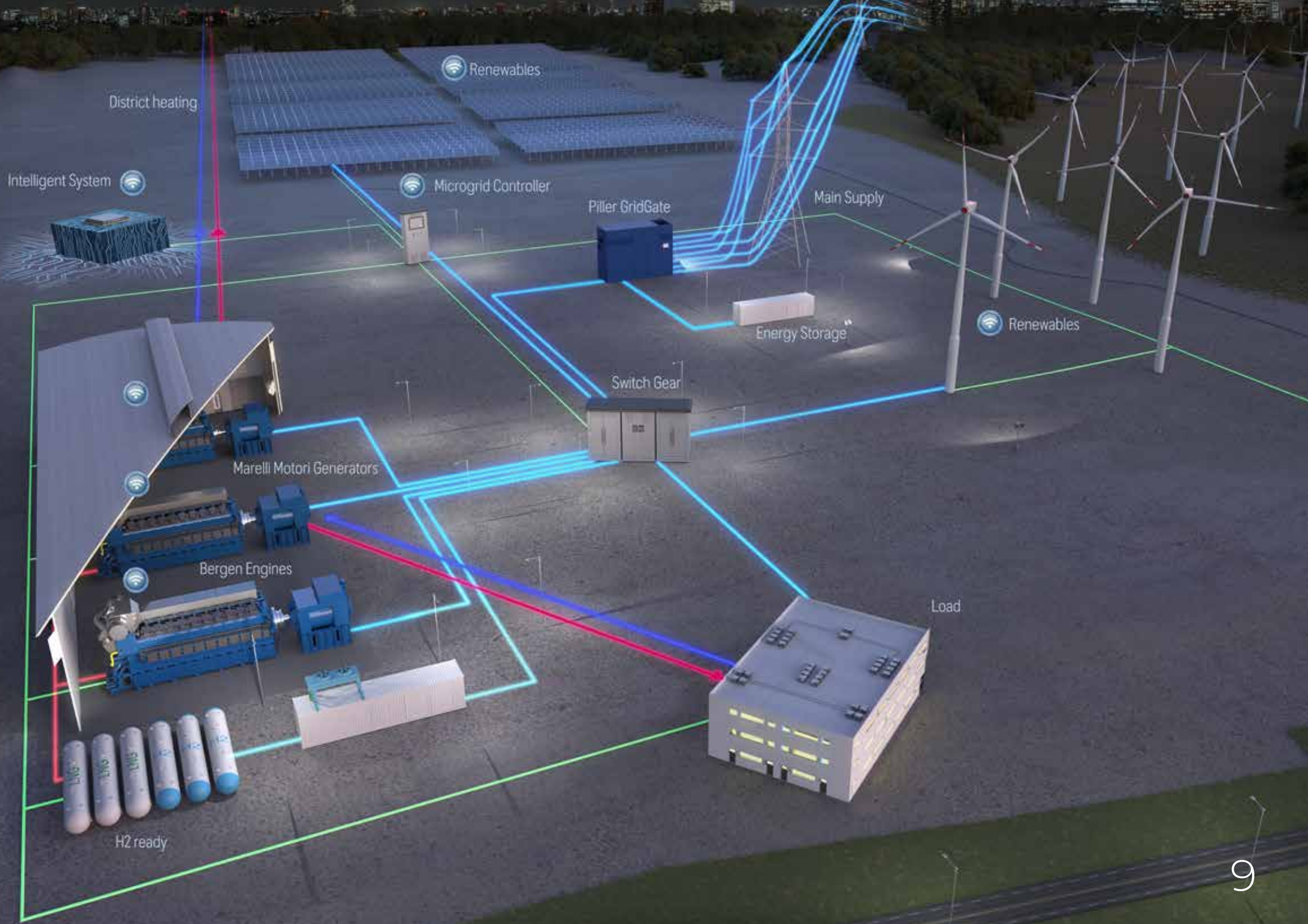
A Microgrid partnership

The combined microgrid offering of Bergen Engines, Marelli Motori and Piller Power Systems, all subsidiaries of Langley Holdings plc, ensures a reliable power solution that enables an increased penetration of renewables in the electricity supply system. Microgrids are a resilient solution to the typical challenges that come with national grids, such as power outages, patchy and unstable renewable supply, and energy losses.

Bergen Engines from Norway, Marelli Motori from Italy and Piller Power Systems from Germany create a partnership able to support many aspects of microgrid implementation and management, including balancing power and stabilisation. H₂-Ready combustion engines from Bergen Engines, incorporating Marelli Motori alternators, can start up fast and maintain high efficiency levels at part-load operation, always keeping emissions and fuel consumption low.

Piller's stabilisation and storage systems make it possible to optimise the various power sources in a microgrid, thereby reducing investment and operational costs. The combined offering will ensure flexible, reliable and cost-effective power supply at all times.







Manufacturing and service

Every Bergen engine is manufactured at our factory in Bergen. With R&D, manufacturing and service located at the same place, our level of expertise is exceptionally high, and we collaborate with our subsidiaries to support customers worldwide.

Manufacturing

Our well-invested facilities are situated on a 23 hectares (50 acres) freehold site and extend to over 20,000 square metres (2,000,000 square feet) of production and office accommodation.

Facilities include a state-of-the-art foundry, machine shops, assembly areas, paint shops and test-beds where all of the engines we build are extensively tested prior to dispatch.

We also have permanent test-beds for research and development engine testing and an extensive overhaul shop. We even have a museum showcasing the evolution of Bergen engines over the decades.

Alongside our facility is a deep-water wharf where finished engines and generating sets weighing up to 170 tonnes can be loaded directly on-board ships.

Service

Our services are developed with you in mind, and we support your equipment throughout its lifetime. We know that you want to concentrate on the business you know best – your own.

Bergen Engines customers have unlimited access to specialists who'll provide assistance for any request. From spare parts supply to troubleshooting and mobilisation of multi-disciplined service engineers for urgent on-site support worldwide, you can rely on us.

We are proud of the performance of our systems and are keen to ensure that they continue to operate at their peak throughout their lifetime.

Did you know: 80% of Bergen engines currently in service are covered by a Long-Term Service Agreement (LTSA).

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