

Gas Engine - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2020 - 2029

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Report description:

The Gas Engine Market size is estimated at USD 5.91 billion in 2024, and is expected to reach USD 7.81 billion by 2029, growing at a CAGR of 5.74% during the forecast period (2024-2029).

Key Highlights

- Over the medium term, the gas engine market is largely driven by high natural gas supply at the global level and the demand for the emissions-free fuel system in the power generation and automotive sector.
- On the other hand, the thriving future of gas engines is thwarted by the growing inclination towards renewable sources of energy.
- Nevertheless, the technical advancements to produce the better versions of gas engines create ample opportunities for market development. Recently, the German company MAN Energy Solutions Engines introduced a new MAN E3872 gas-engine series for the first time at Biogas Convention & Trade Fair in Nuremberg. It is designed as a four-stroke spark-ignition gas engine with a displacement of 29.6 liters, a bore of 138mm, and a stroke of 165mm. It has 44% greater efficiency from just 12 cylinders.

Gas Engine Market Trends

Power Utilities Expected to Witness Significant Growth

- Electric Utilities prefer gas engines to serve base electrical loads. In addition, the use of gas engine generators is also considered highly useful for handling peak load demand. Several utilities worldwide have faced a rapid spike in the peak load demand, especially during the morning and evening time periods.

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- Natural gas-based power generation stands at second place in the global electricity generation mix, after coal. The output was recorded as 6631.39 TWh in 2022, making around 23% of total power generation. The most highlighted reason for such a huge deployment of gas-based engines was the decarbonization of the power sector. Many gas-to-power projects are still on the way to be added to the global power generation portfolio.
- According to global energy monitor, over 600 gigawatts of natural gas power plants are in the development stage worldwide as of 2022, of which 160 gigawatts have already been constructed.
- In November 2022, Wartsila announced to receive order for two 34SG gas engines by the Tamilnadu Petroproducts Limited (TPL) for 15.5 MW captive power plant in Chennai, India.
- In October 2023, Jineng (Zhoushan) Gas Power Generation Co. placed an order with GE Vernova for two of its 9HA.02 combined-cycle gas turbines in collaboration with Harbin Electric Corporation. China's state-owned utility Jineng (Zhoushan) Gas Power Generation Co. announced starting construction of a new combined-cycle power plant on Zhoushan, the archipelago's largest island. Scheduled to begin operations by the end of 2025, the plant is expected to deliver a total of nearly 1.7 gigawatts (GW) of electricity for Zhoushan. The 9HA.02 DLN2.6e combustion system is designed to operate on up to 50% hydrogen by volume, well above the plant's initial goal to operate on up to 10% hydrogen.
- Owing to such kind of developments, the power utility segment is expected to have a significant share among all the applications of gas engine systems during the forecast period.

Europe Expected to Have a Significant Growth

- The European region has the maximum potential to allow high deployment of gas engines in various applications. The government policies to have a greener energy transition act as a catalyst for the growth of the market, as hydrogen and natural-gas-based technologies render an emission-free environment.
- Furthermore, the presence of industry-leading companies in the region propels a higher techno-growth of the gas engine industry. Many companies have come out with better gas engine systems with more versatility for new applications.
- In April 2023, Clarke Energy received order to deliver 50MW of hydrogen ready INNIO Jenbacher gas engines to VPI's expansion at Immingham energy hub. A 50MW gas reciprocating peaking facility installed by Clarke Energy, scheduled to begin operation early next year, and a 299MW open cycle gas turbine (OCGT), scheduled to begin operation by summer 2025, represent VPI's investment in capacity essential to the success of the energy transition.
- In January 2023, Rolls-Royce announced that it had conducted successful tests of a 12-cylinder gas variant of the mtu Series 4000 L64 engine running on 100% hydrogen fuel. In the tests carried out by the Power Systems business unit, the company stated that the engine showed excellent characteristics in terms of efficiency, performance, emissions, and combustion.
- Owing to such developments, the European region is expected to ace the market during the forecast period.

Gas Engine Industry Overview

The gas engine market is semi-consolidated. The key players in this market include (in not particula order) General Electric Company, Wartsila Oyj Abp, Rolls-Royce Holdings PLC, Caterpillar Inc., and Cummins Inc., among others.

Cummins Inc claims to participate in healthy competition with a variety of independent engine manufacturers and generator set assemblers as well as OEMs who manufacture engines for their own products. Some of the company's major competitors in the region include CAT, MTU (Rolls Royce Power Systems Group) and Kohler/SDMO (Kohler Group), Generac, Mitsubishi Heavy Industries (MHI), etc.

Additional Benefits:

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- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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