+357 96 030922
info@marketpublishers.com

Global Gas Turbine Combined Cycle Power Plants Market Growth 2026-2032

https://marketpublishers.com/r/G89B22102977EN.html
Date: July 2026
Pages: 138
Price: US$ 3,660.00 (Single User License)
ID: G89B22102977EN

Abstracts

The global Gas Turbine Combined Cycle Power Plants market size is predicted to grow from US$ 102765 million in 2025 to US$ 154506 million in 2032; it is expected to grow at a CAGR of 6.2% from 2026 to 2032.

Gas turbine combined cycle power plants are high-efficiency thermal power generation systems centered on gas turbine generator sets. They convert the high-temperature exhaust from the gas turbine into steam through a heat recovery steam generator and then use the steam to drive a steam turbine for additional power generation. This type of plant mainly addresses the limitations of conventional simple-cycle gas-fired generation, including insufficient fuel utilization, higher emissions per unit of electricity, limited peaking capability, and constrained system economics. A typical plant consists of gas turbines, compressors, combustors, generators, heat recovery steam generators, steam turbines, condensate and feedwater systems, flue gas treatment systems, grid interconnection systems, digital control systems, and auxiliary islands. It can be designed in 1x1, 2x1, multi-shaft, or single-shaft configurations, and can be adapted to grid frequency, unit capacity, fuel conditions, site constraints, and thermal demand to form utility-scale power plants, industrial captive plants, combined heat and power systems, and modular distributed power plants. Key technology paradigms include high-temperature heavy-duty gas turbines, aeroderivative gas turbines, triple-pressure reheat heat recovery steam generators, high-efficiency steam turbines, low-NOx combustion, fast start-up and shutdown, flexible load regulation, hydrogen-blend readiness, long-term service, and digital predictive maintenance. Major customers include utilities, independent power producers, industrial parks, oil and gas companies, chemical producers, steel companies, data center owners, and district energy operators. Delivery models include core equipment supply, power island packages, turnkey EPC, retrofit upgrades, and full life-cycle operation and maintenance services.

+357 96 030922
info@marketpublishers.com

Gas turbine combined cycle power plants are evolving from traditional gas-fired baseload assets into flexible power platforms that combine high efficiency, lower emissions, fast response, and system support capability. By coupling the Brayton cycle of a gas turbine with the Rankine cycle of a steam turbine, these plants convert exhaust heat from primary fuel combustion into additional steam power, thereby increasing total electricity output without a significant increase in fuel consumption. For utilities and independent power producers, GTCC plants can provide stable electricity while also supporting peak shaving when renewable output fluctuates, load differences widen, and reserve capacity becomes constrained. As high-temperature materials, low-NOx combustion, triple-pressure reheat heat recovery steam generators, digital controls, and fast start technologies mature, the competitiveness of combined cycle plants is no longer determined only by the efficiency of a single gas turbine. It increasingly depends on whole-plant thermal design, equipment matching, start-stop lifetime, part-load efficiency, long-term service capability, and fuel adaptability. Future projects will place greater emphasis on life-cycle cost of electricity, carbon intensity, grid friendliness, and operating flexibility.

The global competitive landscape is characterized by a small number of international leaders dominating core prime-mover equipment, while regional equipment groups and engineering companies continue to strengthen localized supply capabilities. High-end heavy-duty gas turbines, steam turbines, heat recovery steam generators, generators, and control systems form the main industry barriers. Hot-gas-path components, compressor aerodynamic design, combustion stability, coating materials, cooling technology, and accumulated long-term operating data determine the technical ceiling of suppliers. European, American, and Japanese companies retain first-mover advantages in large H-class and J-class gas turbines and long-term service agreements, while Chinese, Korean, and Indian companies are developing catch-up paths through domestic gas turbines, matched steam turbines, HRSGs, EPC delivery, and regional project services. For new entrants, supplying a single piece of equipment is not enough to create full competitiveness. Only companies with system capabilities in prime-mover manufacturing, engineering design, project management, spare parts supply, and digital maintenance can enter the qualified supplier systems of utilities and large industrial customers. Future competition will further differentiate around delivery cycles, efficiency indicators, hydrogen-blend capability, low-emission compliance, and operation and maintenance cost.

Demand-side growth is driven by rising electricity consumption, data center expansion, coal-to-gas replacement, captive energy systems in industrial parks, oil and gas and

+357 96 030922
info@marketpublishers.com

chemical energy supply, and district integrated energy projects. In North America, data centers and grid reliability needs are driving gas turbine demand, while turbine lead times and combined cycle project costs have become important constraints for project developers. In Asia and the Middle East, urbanization, industrial loads, natural gas import infrastructure, and the construction of high-efficiency, lower-emission power sources continue to support new installations and upgrades of older units. At the same time, the low-carbon transition is not simply weakening GTCC demand. Instead, it is pushing GTCC plants toward hydrogen blending, carbon capture readiness, flexible peaking, and coordinated operation with renewable energy. Over the long term, GTCC plants will be better positioned to provide reliable capacity, balancing capacity, and industrial heat and power loads in power systems with high renewable penetration. Market opportunities will expand from new installations alone to retrofit upgrades, fuel adaptation, digital services, and life-cycle efficiency improvement.

LP Information, Inc. (LPI) ' newest research report, the ?Gas Turbine Combined Cycle Power Plants Industry Forecast? looks at past sales and reviews total world Gas Turbine Combined Cycle Power Plants sales in 2025, providing a comprehensive analysis by region and market sector of projected Gas Turbine Combined Cycle Power Plants sales for 2026 through 2032. With Gas Turbine Combined Cycle Power Plants sales broken down by region, market sector and sub-sector, this report provides a detailed analysis in US$ millions of the world Gas Turbine Combined Cycle Power Plants industry.

This Insight Report provides a comprehensive analysis of the global Gas Turbine Combined Cycle Power Plants landscape and highlights key trends related to product segmentation, company formation, revenue, and market share, latest development, and M&A activity. This report also analyzes the strategies of leading global companies with a focus on Gas Turbine Combined Cycle Power Plants portfolios and capabilities, market entry strategies, market positions, and geographic footprints, to better understand these firms? unique position in an accelerating global Gas Turbine Combined Cycle Power Plants market.

This Insight Report evaluates the key market trends, drivers, and affecting factors shaping the global outlook for Gas Turbine Combined Cycle Power Plants and breaks down the forecast by Gas Turbine Technology Class, by Application, geography, and market size to highlight emerging pockets of opportunity. With a transparent methodology based on hundreds of bottom-up qualitative and quantitative market inputs, this study forecast offers a highly nuanced view of the current state and future trajectory in the global Gas Turbine Combined Cycle Power Plants.

+357 96 030922
info@marketpublishers.com

This report presents a comprehensive overview, market shares, and growth opportunities of Gas Turbine Combined Cycle Power Plants market by product type, application, key manufacturers and key regions and countries.

Segmentation by Gas Turbine Technology Class:

E-Class Combined Cycle Power Plant

F-Class Combined Cycle Power Plant

H-Class Combined Cycle Power Plant

J-Class and Above Combined Cycle Power Plant

Aeroderivative Combined Cycle Power Plant

Others

Segmentation by Output Capacity:

Below 100 MW Combined Cycle Power Plant

100 MW to 300 MW Combined Cycle Power Plant

300 MW to 700 MW Combined Cycle Power Plant

Above 700 MW Combined Cycle Power Plant

Others

Segmentation by Operating Function:

Baseload Power Generation

Peaking and Frequency Regulation

+357 96 030922
info@marketpublishers.com

Combined Heat and Power

Distributed Captive Power Plant

Emergency and Rapid Deployment Power Generation

Others

Segmentation by Application:

Utility Grid Power Supply

Industrial Park Captive Power Plant

Data Center Power Supply

Oil, Gas and Chemical Energy Supply

Steel and Industrial By-Product Gas Utilization

District Heating and Integrated Energy

Others

This report also splits the market by region:

Americas

United States

Canada

Mexico

Brazil

APAC

+357 96 030922
info@marketpublishers.com

China

Japan

Korea

Southeast Asia

India

Australia

Europe

Germany

France

UK

Italy

Russia

Middle East & Africa

Egypt

South Africa

Israel

Turkey

GCC Countries

The below companies that are profiled have been selected based on inputs gathered

+357 96 030922
info@marketpublishers.com

from primary experts and analysing the company's coverage, product portfolio, its market penetration.

GE Vernova

Siemens Energy

Mitsubishi Heavy Industries

Ansaldo Energia

Kawasaki Heavy Industries

Doosan Enerbility

Toshiba

IHI

Fuji Electric

Shanghai Electric

Dongfang Electric

Harbin Electric

Bharat Heavy Electricals

Baker Hughes

Caterpillar

Everllence

Key Questions Addressed in this Report
What is the 10-year outlook for the global Gas Turbine Combined Cycle Power Plants market?

+357 96 030922
info@marketpublishers.com

What factors are driving Gas Turbine Combined Cycle Power Plants market growth, globally and by region?
Which technologies are poised for the fastest growth by market and region?
How do Gas Turbine Combined Cycle Power Plants market opportunities vary by end market size?
How does Gas Turbine Combined Cycle Power Plants break out by Gas Turbine Technology Class, by Application?

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Global Gas Turbine Combined Cycle Power Plants Market Growth 2026-2032

Product link: https://marketpublishers.com/r/G89B22102977EN.html

Price: US$ 3,660.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/G89B22102977EN.html