

Commercial and Industrial Onsite Power Solutions Market Forecasts to 2034 – Global Analysis By Ownership Model (Captive and Third-Party & Leased), Capacity Range, Technology, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Commercial and Industrial Onsite Power Solutions Market is accounted for \$82.5 billion in 2026 and is expected to reach \$176.8 billion by 2034 growing at a CAGR of 10.0% during the forecast period. Commercial and Industrial Onsite Power Solutions encompass localized energy generation systems deployed within business and manufacturing premises to produce electricity either independently or in coordination with the utility grid. Common technologies include rooftop solar arrays, cogeneration systems, energy storage batteries, and standby generators. These systems improve power security, lower energy expenses, and help organizations meet environmental targets by reducing emissions. Companies use onsite generation to avoid disruptions, control peak loads, and increase efficiency. Modern digital platforms and intelligent controls enhance optimization through real time monitoring, analytics, predictive servicing, and smooth integration with renewables and microgrid frameworks in varied sectors worldwide.

According to Bloom Energy's 2025 Data Center Power Report, U.S. data centres are expected to add 55 GW of IT capacities in the next five years, compared to 25 GW of existing capacity today. To meet this demand, 30% of all sites are projected to use onsite power as a primary energy source by 2030, more than double the share reported just months earlier.

Market Dynamics:

Driver:

Growing demand for energy reliability and resilience

The need for consistent and dependable electricity supply is accelerating the adoption of onsite power systems among businesses. Interruptions in grid power can lead to financial losses and operational inefficiencies, especially in critical industries like healthcare, manufacturing, and IT services. By implementing localized energy generation and storage solutions, organizations can maintain continuity during outages. These systems also strengthen preparedness against environmental disruptions and weak grid infrastructure. As enterprises increasingly depend on automation and digital technologies, ensuring a stable power supply becomes crucial, making onsite energy solutions a key strategy for enhancing resilience and minimizing operational risks.

Restraint:

High initial capital investment

A major challenge in adopting onsite power solutions for commercial and industrial use is the high initial investment required. Installing systems like photovoltaic panels, energy storage units, and cogeneration technologies involves considerable financial commitment. Additional costs linked to system design, installation, and integration further raise the overall expenditure. While these solutions can generate savings over time, the upfront financial burden discourages many organizations, particularly smaller enterprises. Difficulty in securing funding and extended return periods also hinder decision-making. This financial barrier significantly impacts adoption rates, especially in developing regions and industries that operate under tight budget constraints.

Opportunity:

Growth of microgrids and decentralized energy systems

The rise of microgrids and distributed energy systems is driving opportunities for onsite power solutions across commercial and industrial applications. These systems enable facilities to function autonomously or alongside traditional grids, improving reliability and operational control. By combining various energy sources such as renewables and storage, microgrids enhance flexibility and efficiency. Growing investments in advanced grid infrastructure and smart technologies further support this trend. Businesses gain advantages like reduced energy losses and better management capabilities. As

decentralized energy models gain traction, onsite solutions become essential for building adaptable and resilient energy networks.

Threat:

Competition from utility-scale renewable energy

The growth of large-scale renewable energy facilities creates strong competition for onsite power solutions. Utility providers can generate electricity at lower costs due to large-scale operations, making their offerings more appealing to businesses. Green tariffs and competitive pricing further reduce the incentive for companies to install their own systems. Enhancements in grid reliability and renewable integration also strengthen the appeal of centralized power. As a result, organizations may prefer purchasing energy from utilities rather than investing in onsite infrastructure, posing a challenge to the expansion of localized power generation solutions.

Covid-19 Impact:

The COVID-19 outbreak influenced the Commercial and Industrial Onsite Power Solutions Market in both negative and positive ways. During the early stages, restrictions and supply chain interruptions caused project delays and raised costs for essential components. Financial uncertainties forced many organizations to defer major investments. At the same time, the pandemic emphasized the need for reliable and continuous power, particularly in essential sectors. This realization increased interest in onsite energy systems to enhance operational stability. As economies recovered, supportive policies and a stronger focus on sustainability contributed to increased adoption, strengthening the market's growth trajectory in the long run.

The 500 kW–2 MW segment is expected to be the largest during the forecast period

The 500 kW–2 MW segment is expected to account for the largest market share during the forecast period because it aligns well with the energy requirements of sizeable commercial establishments and industrial units. This range provides a practical combination of affordability and sufficient power generation, making it ideal for sectors such as manufacturing, IT infrastructure, and large facilities. It allows smooth incorporation of renewable sources and storage systems, improving efficiency and reliability. Organizations favour this segment for its flexibility, ease of expansion, and capability to lower reliance on external power sources while maintaining stable and uninterrupted energy availability.

The solar PV with storage segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the solar PV with storage segment is predicted to witness the highest growth rate, driven by the rising focus on renewable energy adoption. Companies are increasingly investing in these systems to cut emissions and manage electricity expenses more effectively. Falling costs of solar technology and batteries, along with favorable regulatory support, are accelerating adoption. This solution also improves power stability by offering backup capabilities and efficient load handling. With growing emphasis on sustainability and reduced reliance on traditional grids, solar PV with storage is emerging as a key growth driver in this market.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, supported by its developed energy systems and widespread use of decentralized power technologies. The region experiences strong demand for dependable electricity and efficient energy management, encouraging businesses to invest in onsite generation. Incentive programs and clear regulatory frameworks make adoption more attractive. Companies also aim to lower expenses and improve reliability amid potential grid challenges. With continuous investments in renewable energy and innovation, along with the presence of major industry participants, North America maintains its leading role in driving growth within this market globally.

Region with highest CAGR:

Over the forecast period, the Asia-Pacific region is anticipated to exhibit the highest CAGR, driven by accelerating industrial expansion and urban development. Growing electricity demand and challenges in grid reliability encourage businesses to adopt localized energy generation systems. Governments across the region are promoting clean energy and efficiency through favourable policies and incentives. Organizations are turning to onsite solutions to manage expenses and ensure uninterrupted operations. The continuous growth of manufacturing industries and infrastructure projects further boosts demand, positioning Asia-Pacific as a key region for rapid market expansion.

Key players in the market

Some of the key players in Commercial and Industrial Onsite Power Solutions Market include ABB, Schneider Electric, Eaton, Vertiv, Delta Electronics, Siemens, Caterpillar, Cummins, BECIS, SunSource Energy, Fourth Partner Energy, CleanMax, Amplus Solar, Hero Future Energies, Jakson Group, Tata Power Renewable Energy, Enel Green Power and GE Power.

Key Developments:

In December 2025, ABB and HDF Energy have signed a joint development agreement (JDA) to co-develop a high-power, megawatt-class hydrogen fuel cell system designed for use in marine vessels. The project targets use of the system on various vessel types, including large seagoing ships such as container feeder vessels and liquefied hydrogen carriers.

In November 2025, Schneider Electric announced a two-phase supply capacity agreement (SCA) totaling \$1.9 billion in sales. The milestone deal includes prefabricated power modules and the first North American deployment of chillers. The announcement was unveiled at Schneider Electric's Innovation Summit North America in Las Vegas, convening more than 2,500 business leaders and market innovators to accelerate practical solutions for a more resilient, affordable and intelligent energy future.

In November 2025, Caterpillar Inc. and Vertiv announced the signing of a strategic undertaking to collaborate on advanced energy optimization solutions for data centers. This initiative will integrate Vertiv's power distribution and cooling portfolio with Caterpillar's, and its subsidiary Solar Turbines', product and expertise in power generation and CCHP to deliver pre-designed architectures that simplify deployment, accelerate time-to-power and optimize performance for data center operations.

Ownership Models Covered:

Captive

Third-Party & Leased

Capacity Ranges Covered:

Below 100 kW

100-500 kW

500 kW-2 MW

Above 2 MW

Technologies Covered:

Diesel Generators

Gas Generators

Fuel Cells

Solar PV with Storage

Microturbines

Applications Covered:

Continuous Power Supply

Backup & Standby Power

Peak Shaving & Load Management

Renewable Integration & Grid Support

End Users Covered:

Commercial Buildings

Industrial Facilities

Data Centers

Healthcare Facilities

Educational Institutions

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

Commercial and Industrial Onsite Power Solutions Market Forecasts to 2034 – Global Analysis By Ownership Model...

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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