

North America Microgrid Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

<https://marketpublishers.com/r/N41768EB2002EN.html>

Date: August 2018

Pages: 120

Price: US\$ 3,250.00 (Single User License)

ID: N41768EB2002EN

Abstracts

North America Microgrid Market was valued at USD 5.7 billion in 2024 and is estimated to grow at a CAGR of 7.7% to reach USD 13.3 billion by 2034. This growth is being propelled by ongoing innovations in energy storage systems, renewable energy technologies, and advanced microgrid control platforms that enhance performance, integration, and resilience. Policies supporting energy resilience and sustainable infrastructure at both federal and state levels, along with financial incentives and procurement schemes, continue to drive the regional market forward. The microgrid model—an integrated local system combining renewables like solar and wind with batteries and conventional grid infrastructure—offers a versatile and dependable energy solution for communities and commercial areas alike.

A growing emphasis on reliable power delivery in response to regional vulnerabilities has prompted investments in microgrids across the U.S., while Canada remains focused on carbon reduction and grid independence, especially in off-grid and rural communities. As the demand for decentralized energy grows, microgrids present a compelling option to meet energy reliability, sustainability, and autonomy needs, reflecting a clear shift toward modern, efficient energy ecosystems across North America.

The combined heat and power (CHP) systems segment held a 40.3% share in 2024 and is expected to maintain a CAGR of 7.7% through 2034. Their ability to deliver both power and thermal energy with improved efficiency, while operating autonomously or in tandem with renewable sources, has made them an appealing solution during disruptions or outages. This segment continues to benefit from demand for energy solutions that offer cost-effective performance and reduced emissions compared to

traditional systems.

The AC-based microgrids segment held a 49.5% share in 2024 and is projected to grow at a CAGR of 7.5% between 2025 and 2034. Their ease of integration with conventional power grids, compatibility with commercial infrastructure, and widespread adoption of inverters that support both grid-forming and grid-following capabilities contribute to their rising use. Consumers are increasingly leaning toward AC configurations for their affordability, established infrastructure, and regulatory alignment.

U.S. Microgrid Market held 82.7% share in 2024 and will reach USD 10.3 billion by 2034. Major investments in energy generation, grid controls, and storage technologies are reshaping the market outlook. Government-backed financial incentives—ranging from tax credits to grants—support the acceleration of these projects, aligning closely with national grid modernization strategies while driving greater renewable adoption and energy security.

Key players include PowerSecure, Eaton, Siemens Energy, GE Vernova, and Schneider Electric. Major industry participants are leveraging a range of strategies to enhance their market presence. These include expanding microgrid portfolios through integration of advanced digital controllers, smart sensors, and hybrid energy systems. Partnerships with utilities and regional governments allow companies to deploy community-focused solutions that support resiliency and clean energy goals. Companies are also investing in modular microgrid platforms to enable rapid deployment and scalability. Localization of manufacturing and service infrastructure further strengthens operational agility. Additionally, targeted acquisitions and joint ventures are enabling access to new markets and customer segments while aligning solutions with evolving regulatory frameworks and sustainability targets.

Comprehensive Market Analysis and Forecast

Industry trends, key growth drivers, challenges, future opportunities, and regulatory landscape

Competitive landscape with Porter's Five Forces and PESTEL analysis

Market size, segmentation, and regional forecasts

In-depth company profiles, business strategies, financial insights, and SWOT analysis

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