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AI scaling race accelerates investments in microgrid technology

By **Anna Flávia Rochas**

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Summary

Surging data center demand is spurring acquisitions in microgrid companies and day-and-night power providers, creating opportunities from construction to services.

October 26 - Soaring demand from data center developers, widespread integration of clean power and dwindling grid capacity on regional networks has spurred investment and development in microgrid solutions.

The U.S. microgrid market is forecast to rise from $8 billion in 2025 to $21.2 billion by 2030, according to data analytics and market research firm Global Data.

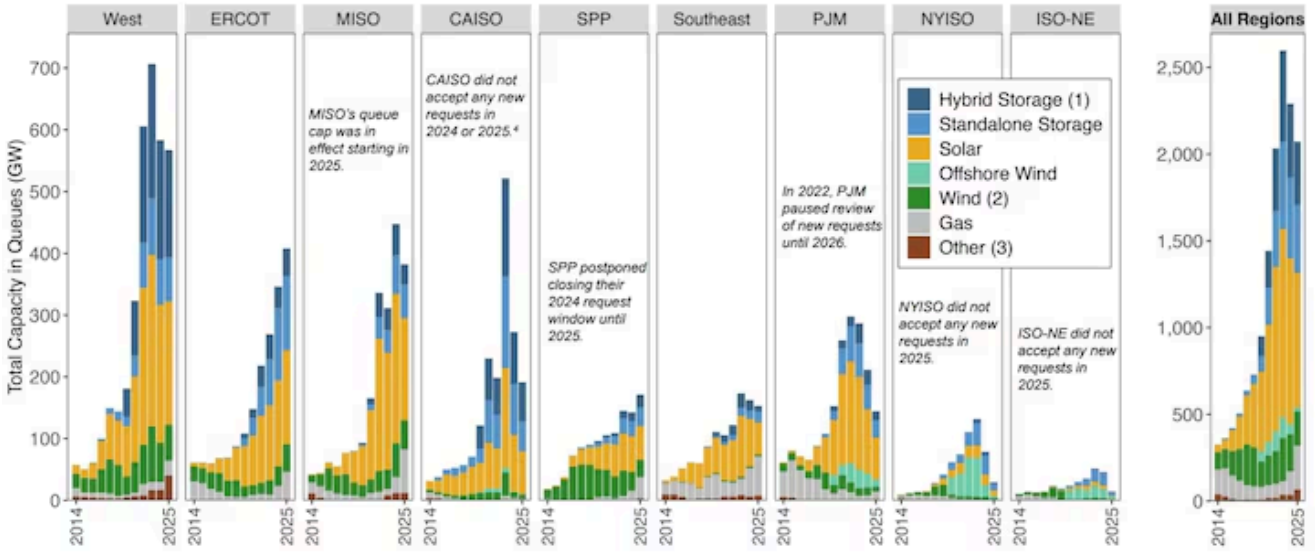
Recent investments include the $2.6 billion acquisition in September of U.S. microgrid solutions provider Utility Innovation Group by digital infrastructure company Vertiv, and the purchase in 2025 of U.S.-based microgrid developer Scale Microgrids by global investment firm EQT.

Suppliers of microgrids and behind-the-meter (BTM) power systems are ramping up investments, partnerships and acquisitions to expand supply power solutions tailored to data center and AI customers.

Large digital loads require fast power availability and a need for reliable power supplies and cost management along with extreme weather risks, renewable-energy integration, battery storage deployment and aging grid infrastructure, are also fueling microgrid growth, Global Data Power analyst Bhavana Sri Pullagura told Reuters Events.

A wide range of companies will benefit, including microgrid developers, turnkey engineering procurement construction (EPC) groups, system integrators, power equipment suppliers and distributed-generation companies, Pullagura said.

CHART: Power capacity in US grid queues at end of 2025



Source: Lawrence Berkeley National Laboratory, June 2026 Purchase Licensing Rights

Integrated solution providers that assume contractual responsibility for delivering a reliable, round-the-clock microgrid system are also capturing significant value in this market, according to analyst Fengrong Li, senior managing director at FTI Consulting.

"We view the demand for data centers as really the rising tide for the whole ecosystem. Of course, the generation providers benefit, but so do all the key components, and most importantly, the

party that can integrate all the components into a solid 24/7-solution," Li said.

M&A and investment

Data center demand has prompted acquisitions and equity funding in microgrid providers as companies scale up capabilities for integrated solutions.

Following its acquisition by EQT, Scale Microgrids acquired Reload, a company focused on siting, designing, and permitting gigawatt-scale data center campuses paired with on-site power infrastructure.

Scale has provided reliable on-site power generation and backup systems to industrial clients for almost a decade and expanding into the data center business was a natural progression, according to the company's General Manager of Data Centers, Mike Grunow.

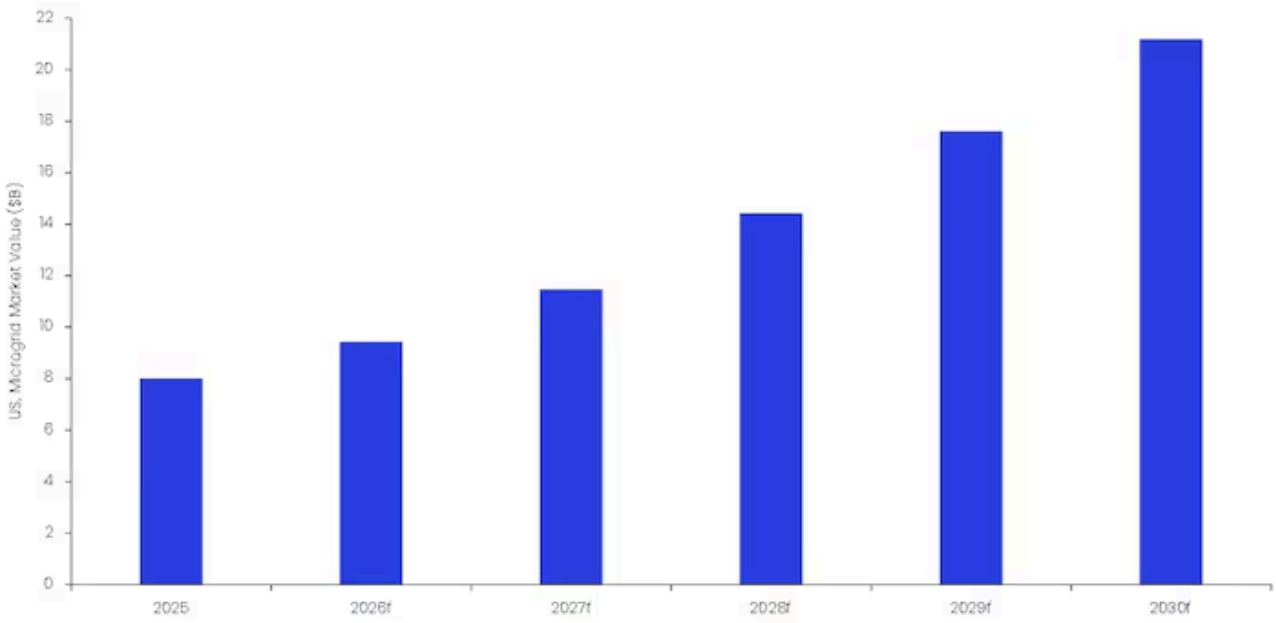
Scale is working on multiple new data center projects ranging from 200 to 500 MW, with several expected to exceed 1 GW as demand grows.

"We are currently evaluating and developing and preparing to execute multiple gigawatts before the end of the decade across several sites, some of which are contracted, some of which are in late stages of being contracted," Grunow told Reuters Events.

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One project under development is a fully-islanded energy system for a hyperscaler customer in Ohio. The project is under construction and will be publicly announced by the end of this year, Grunow said.

CHART: Forecast US microgrid market value



Source: GlobalData Power Intelligence Center Purchase Licensing Rights

Data center demand is also drawing new entrants to the market. Digital infrastructure and energy company Keel Infrastructure is shifting away from Bitcoin mining, converting its sites into high-

performance computing and AI data center hubs.

Keel is targeting investment-grade tenants with long-term 10 to 20-year contracts to maximize shareholder value, EVP of Operations Alex Brammer said.

The commercial opportunity from data center demand is "too substantial to ignore," he said.

Keel is building engineering and internal power origination capabilities to support data center clients while also pursuing partnerships with developers of power generation and behind-the-meter systems for its sites.

In September, the company announced an agreement with PowerSecure, a subsidiary of energy utility Southern Company, which will provide Keel with an integrated standby power solution tailored to the needs of its Moses Lake data center campus in Washington state.

The Moses Lake system provides reliable backup power and enables peak shaving, offsetting power drawn from the utility grid during high-system load periods and reducing the impact on regional networks.

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At its Panther Creek site in Pennsylvania, Keel has secured grid connection rights and is also working with partners to build system flexibility for data center tenants' needs.

Keel has secured 350 MW of power for the site from a utility and plans to develop the site in phases, with the potential for over 500 MW of total capacity.

"We are also looking at options around on-premise storage and potentially certain types of generation on-premise in order to increase the reliability and the optionality for ourselves and our tenants," he told Reuters Events.

Technology advances

Fluctuating power demands of large AI data center sites is accelerating investment in research and development (R&D) of solutions that reduce energy losses and address grid stability challenges.

"What happened with AI is that we are growing and we are speeding our innovation in a tremendous way," said Giampiero Frisio, president of ABB Electrification. "We are like in a space race, every single day we build up something that's brand new."

ABB launched a portfolio of direct current solutions, including a microgrid-ready uninterruptible power supply (UPS) that enables AI data centers to connect directly to the network without voltage conversion. This avoids the need for transformers and the associated conversion energy losses.

On another front, ABB is supplying microgrid developer VoltaGrid with synchronous condensers with flywheel technology and pre-fabricated electrical housing units with power control, to enhance grid stability.

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AI data centers have unique power demand profiles that can ramp up from 0% to 100% in seconds and fluctuate repeatedly within minutes, on a scale and speed unprecedented in power grids, Mahmoud Kabalan, associate professor of Electric Engineering with the University of St. Thomas and director of the Center for Microgrid Research, said.

Such rapid shifts create mechanical stress on equipment and risk premature failure.

The University of St. Thomas is researching how large-scale system fluctuations on its own microgrid, connected to the local utility Xcel Energy, affect individual grid components and how to better manage these shifts across the system.

AI data centers are currently competing with utilities and other power developers for equipment, putting upward pressure on prices and lengthening lead times.

Kabalan hopes that data center investments in microgrid innovations will help to reduce prices for this technology over time, including for non-AI applications.

"My hope is that this microgrid push for AI data centers becomes significant enough to push prices down to make micro solutions more mainstream," he said.

--Editing by Robin Sayles

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