

Loomis Sayles

Disciplined Alpha:

Tech-Related Energy Demands Present Challenges and Opportunities for Utilities

By the Loomis Sayles Disciplined Alpha Team

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The rapid expansion of artificial intelligence (AI), cloud computing and digital infrastructure is reshaping global electricity demand. At the core of this shift are “hyperscalers”—large-scale data centers operated by major technology firms. As these operations grow in scale and sophistication, their energy needs are putting pressure on utility infrastructures and creating both challenges and opportunities for energy providers, regulators and investors.

Intense energy demand

The energy intensity of AI workloads, combined with the continued migration of enterprise operations to the cloud, is driving a significant increase in data center power usage. The International Energy Agency projects that global data center electricity consumption could more than double by 2026, potentially exceeding 1,000 terawatt-hours annually, which is equivalent to the electricity consumption of Japan.¹

Utilities adapting to new customer profile

This surge in demand is stretching the capabilities of existing power grids and requiring major investments in new generation and transmission infrastructures. The relationship between utilities and hyperscalers is also evolving. These technology companies are now among the largest and most consistent customers for electricity providers. Their scale gives them significant negotiating leverage to secure long-term power contracts.

A recent example of this trend occurred on 3 June 2025, when a significantly large supplier of power and energy announced a 20-year power agreement with a prominent social media

and communication technology company. The deal includes purchasing 1,121 megawatts of emissions-free nuclear energy, beginning in 2027. It will require increased output from an existing nuclear plant, in addition to, a potential build-out of a second reactor site. This agreement is similar to one signed with another technology company in 2024 that will involve restarting Three Mile Island to purchase 835 megawatts beginning in 2028. Unregulated nuclear operators are among the largest beneficiaries of this continued data center momentum.

Financing energy supply

Utilities are financing much of the capital expenditure to support this growth through the investment grade debt market. Utility sector issuance accelerated in 2023 and 2024, and current estimates suggest approximately \$130 billion of new debt in 2025 with about half of that already offered by 31 May.²

Upcoming deals from large issuers could potentially create both opportunities and risks for the Disciplined Alpha Team in the second half of the year. Electric utilities often issue large, liquid investment grade deals with well-understood fundamentals at relatively wide spreads compared to other investment grade

corporates. In some cases, new issue concessions—particularly for first mortgage and senior secured bonds—have the potential to contribute to attractive relative value.

While increased power demand has helped to fuel this industry’s growth, it has also contributed to increased leverage. In 2024, downgrades in the utility industry outpaced upgrades, driven by higher capital spending, regulatory uncertainties and risks such as wildfires in certain regions. As balance sheets expand, ongoing monitoring of credit quality and security selection will be important, in our view.

¹ Source: <https://www.iea.org/reports/electricity-2024/executive-summary>

² Source: Barclays estimates of investment grade bond issuance

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Authors



MIRSADA DURAKOVIC
Credit Portfolio Manager



SETH TIMEN
Portfolio Manager,
Co-Head of Disciplined Alpha



JONATHAN KIMBRO, CAIA
Investment Director