Press Release

AI Data Centers: Why Are They So Energy Hungry?

ALLIE WATSON | JULY 15, 2025

Several tech giants including Microsoft and Google have announced billions of dollars of investment projects in artificial intelligence (AI) data centers, which are critical in supporting generative AI. In a new insight, Director of Energy and Environmental Policy Shuting Pomerleau and Technology and Innovation Policy Analyst Angela Luna provide an overview of the capabilities of AI data centers compared to traditional data centers, analyze why AI data centers are so energy intensive, and explore the projected future electricity demand from the sector.

Key points:

- *AI data centers have two unique energy-related features compared to traditional ones: They require enormous amounts of electricity, with generative AI consuming 10–30 times more energy than task-specific AI, as well as advanced liquid-based cooling solutions as they generate substantially more heat.*
- *Electricity demand from AI data centers is expected to grow rapidly from 4.4 percent of total U.S. electricity in 2023 to between 6.7–12 percent by 2028, with faster growth expected in the future as AI data centers continue to grow as more industries discover new AI use cases and adopt the infrastructure to deploy the technology.*
- *How the U.S. electricity market can keep up with the soaring energy demand from AI data centers is key to the successful expansion of the technology.*

Read the analysis.