

Our View

Primer on Data Center Energy Use

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Much has been written on the energy use of data centers. Readers may be mystified by the units used to describe their capacity and consumption. Here, we provide conversion factors to make the data easier to understand.

Data center capacities—the maximum amount of electricity a center can draw from the grid and/or on-site generation—are generally listed in gigawatts (GW). Actual data center electricity use is often measured in terawatt-hours (TWh).

A 1 GW data center operating at full capacity 24/7 requires 8.76 TWh of electricity per year.

It takes 8.15 billion cubic feet of natural gas to produce 1 TWh per year.

It takes 1.69 million barrels (4.6 thousand barrels per day) of diesel to produce 1 TWh per year.

The United States produced 3,300 billion cubic feet (bcf) of natural gas in October 2025, according to the US Energy Information Administration.

The investment bank Jefferies estimates that perhaps 15 GW of data center capacity will be added in the United States in 2026. This would require 87.6 bcf per month of gas production (2.6% of output) to power the new facilities if natural gas were used exclusively ($8.15 \times 8.76 \times 15 / 12$).

Jefferies also estimates that, by 2030, 53 GW of data center capacity will be added. This could absorb 309 bcf per month (9.4% of US production) if all were powered by natural gas ($53 \times 8.76 \times 8.15 / 12$).