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Pennsylvania Builds the Cloud:

Pennsylvania Energy, Manufacturing, and Data Center Development



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Executive Summary

Pennsylvania stands at the confluence of two megatrends reshaping the 21st-century economy: the explosive buildout of AI-driven data centers and the sweeping modernization of the electric grid across the PJM Interconnection.

While some states excel in hosting data centers, others in energy production, and others in advanced manufacturing, Pennsylvania is on track to uniquely possess all three advantages at scale. Powered by low-cost, highly reliable natural gas and nuclear generation and strengthened by investments in manufacturing and grid infrastructure, the Commonwealth faces a once-in-a-generation opportunity to capture extraordinary value, both by hosting large-scale data center growth, and by supplying the power and equipment that fuel data center expansion across PJM.

Pennsylvania's advantage combines energy dominance and manufacturing scale. The Commonwealth is the nation's largest electricity exporter and PJM's leading net power supplier. Equally important for durable employment and industrial revitalization, Pennsylvania also leads all PJM states in exports of data center-related goods and services to data center hubs in the PJM region, translating regional data center growth directly into jobs and investment at home.

Major Findings: Pennsylvania at the Center of Data Center Growth

- Pennsylvania leads all PJM states in manufacturing and raw-material exports to data center hubs in the PJM region (nearly \$14.6 billion in 2024).
- Exported products to PJM data centers currently support more than 1,900 jobs today and are projected to drive over 4,500 additional jobs and \$1.5 billion in new annual output by 2036.
- Data center capacity is projected to expand from 182 MW in 2026 to more than 7,196 MW by 2036, over 4,000% growth, outpacing every other PJM state.
- The decade-long buildout will sustain more than 8,500 skilled construction jobs statewide.
- By 2036, Pennsylvania-based data centers will directly create nearly 8,300 permanent operations jobs.
- In-state data center activity will generate approximately \$12 billion in new annual economic output and support nearly 19,400 additional jobs by 2036, spanning manufacturing, energy, services, and the broader economy.
- Reliable, low-cost power, continued grid modernization, and world-class manufacturing create a reinforcing advantage, positioning the Commonwealth as both a premier host for data center development and the industrial backbone powering AI and cloud growth across the PJM region.

Pennsylvania Leads in Exports of Goods and Services to the PJM Data Center Market

Pennsylvania is the leading exporter of data center-related goods and services in PJM (\$24.3 billion). Within those exports, manufacturing and raw materials account for nearly \$14.6 billion in exports, the largest share among PJM states. This positions Pennsylvania as a major supplier of

essential physical inputs for construction and operations, thereby converting regional data center growth into sustained jobs and industrial activity across Pennsylvania communities.

Major Pennsylvania exports from Manufacturing and Raw Materials (nearly \$14.6 billion) include:

- Architectural Metal Products
- Cables, Wiring, and Related Products
- Cement, Concrete, and Concrete Products
- Diesel Fuel
- Electrical Generators
- Electrical Transformers
- Fire Suppression Systems
- Machined Parts
- Metal Fixtures and Components
- Natural Gas
- Pipe and Pipe Fittings
- Sheet Metal Products
- Structural Metal Products
- Thermal Management Systems
- Uninterruptible Power Systems

Major Pennsylvania Services exports (\$5.9 billion) include:

- Accounting Services
- Architectural Services
- Engineering Services
- Legal Services
- Machinery and Equipment Leasing
- Machinery and Equipment Maintenance and Repair

Projected Data Center Expansion, 2026–2036: Unprecedented Growth

At the start of 2026, Pennsylvania has roughly 182 MW of operating data center capacity (colocation and hyperscale). An additional 49 MW is under construction for 2027, with more than 7,196 MW of announced projects planned through 2036, driving a cumulative capacity increase exceeding 4,000% and placing Pennsylvania as the fastest-expanding data center market in PJM.

This expansion is already fueling momentum: 1,547 direct construction jobs are active in 2026. At full buildout in 2036, Pennsylvania-based data centers will directly create nearly 8,300 permanent operations jobs and will have sustained more than 8,500 skilled construction trade positions throughout the decade. In addition, the buildout and ongoing operations will support nearly 19,400 additional jobs across manufacturing, energy, services, and the broader economy, generating approximately \$12 billion in new annual economic output by 2036.

Pennsylvania's Electric Grid: Primary Attraction for Data Center Developers (2026–2036)

Pennsylvania's electric grid offers a rare and highly competitive combination of scale, cost efficiency, and operational reliability, making it a central driver of data center investment. In 2024, the Commonwealth generated 241.5 million MWh of electricity and exported approximately 85 million MWh, representing more than one-third of total generation. This makes Pennsylvania the largest net exporter of electricity in the United States and within the PJM region. The presence of this surplus capacity provides developers with confidence that large, energy-intensive data center projects can be supported without compromising reliability for existing customers, while also enabling long-term growth at scale.

Equally important is the composition and performance of Pennsylvania's power generation portfolio. Natural gas and nuclear generation collectively account for 91 percent of in-state electricity production, delivering both low production costs and high reliability. As a result, Pennsylvania ranked fourth lowest in average commercial electricity rates among PJM states in 2024, an important consideration for data center operators whose long-term operating costs are heavily influenced by electricity prices. These generation sources also perform strongly under PJM's Effective Load Carrying Capacity (ELCC) framework, which measures reliability during periods of peak demand and grid stress. Nuclear generation achieves a 95 percent ELCC, while combined cycle natural gas is rated at 74 percent, closely aligning with the continuous, 24-hour operational requirements of modern data centers.

Beyond generation, Pennsylvania benefits from extensive transmission infrastructure and a geographically central position within the PJM system, enabling efficient power delivery to both in-state facilities and regional markets. Together, abundant surplus power, a low-cost and highly reliable baseload-heavy generation mix, and a well-developed transmission network create one of the most attractive grid environments in the region for large-scale data center development, supporting sustained investment, operational certainty, and Pennsylvania's broader role in powering the growth of AI and cloud infrastructure.



Pennsylvania Impact from Data Centers Outside the State: 2026–2036

Pennsylvania's leadership extends beyond in-state development. As PJM's dominant electricity exporter, the Commonwealth already powers major data center hubs in Virginia, Ohio, and Illinois. Its manufacturing leadership further amplifies this impact.

Today, Pennsylvania's exports of data center-related goods and services to out-of-state PJM data centers support more than 1,900 jobs. By 2036, exports to data centers are projected to generate over 4,500 additional jobs and \$1.5 billion in new annual economic output, extending the benefits of regional data center growth deep into Pennsylvania's industrial and manufacturing base.

The Road Ahead

This is a Pennsylvania moment. The convergence of surging AI demand, abundant reliable power, continued grid modernization, and world-class industrial capacity has created a self-reinforcing growth cycle.

By capturing value inside the state through unprecedented data center expansion—and across the region through energy and manufacturing exports—Pennsylvania is positioned to deliver thousands of high-quality jobs, revitalize manufacturing communities, strengthen the grid, and secure a commanding role in America's AI-era infrastructure.