

Powering Growth
and Affordability

The Role of Transmission in Economic and National Security

PJM

PJM is at the center of America's data center boom, industrial growth, and defense enterprise. Expanding transmission can lower costs, improve reliability, and unlock more value here than in any other region studied.

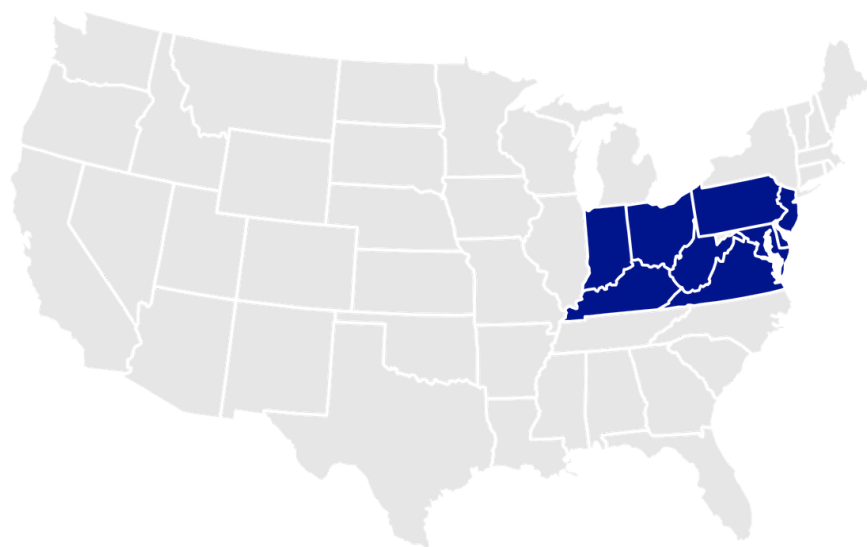
Why Transmission Matters

Reliability and resilience. Growing electricity demand is putting pressure on the grid. Northern Virginia hosts the world's largest concentration of data centers, while military facilities and defense-related industries continue to grow. A Virginia case study found that even a modest 5-10% increase in electricity demand from defense-related activities could require significant transmission upgrades.

Congestion relief. The grid cannot always move power where it is needed most. The study identifies several areas across Maryland, Pennsylvania, Ohio, and West Virginia where additional transmission would reduce congestion and lower costs for customers.

Interregional transfer. Connecting PJM to neighboring regions delivers the biggest gains. The study finds that without new transmission links to New York and the Southeast, PJM customers miss out on roughly two-thirds of the value created by transmission expansion.

Within-region need. The study shows that inside PJM, projects are consistently needed across both demand scenarios, reflecting a durable need through 2050.



Note: This map is an approximation of the region studied, and does not show the exact boundaries of the ISO.

Region at a Glance

Grid Region: PJM

States: VA, MD, DE, D.C., PA, OH, NJ, and parts of IL, IN, MI, WV, KY, NC, TN

Key Load Centers: Northern Virginia, Chicago area, Columbus

Demand Compound Annual Growth Rate (2025–35): 2.1%

Top Drivers of Transmission

Need: AI data centers, industrial/manufacturing growth

Key finding: No region delivers more value from transmission than PJM. The study finds that transmission expansion can generate up to \$8.9 billion in net value in PJM, returning up to \$2.30 in benefits for every dollar invested.

What's At Stake

Customer savings: PJM delivers the largest economic benefits of any region studied, helping lower the overall cost of meeting growing electricity demand.

Reliability: A stronger transmission network gives PJM more flexibility to move power, reduce congestion, and meet rapidly growing demand.

Economic growth: Home to the world's largest concentration of data centers, PJM's future growth increasingly depends on available transmission capacity and access to new power supplies.

National security: PJM has the largest defense footprint of any region studied, supporting approximately 530,000 military personnel, the Pentagon, major intelligence missions, and the world's largest naval station.

Defence & National Security

PJM is home to the Pentagon, major intelligence agencies, critical military installations, and the nation's largest defense-industrial footprint. Reliable transmission helps ensure these facilities, surrounding communities, and defense manufacturers have access to dependable electricity.

By the Numbers

\$8.9B

Maximum net value delivered by transmission expansion in PJM.

\$2.30

Returned. Benefits for every \$1.00 invested in PJM transmission expansion.

530,000

Military personnel supported by PJM's defense footprint.

2.1%

Annual electricity demand growth through 2035, the highest of any region studied.