

American Council of Engineering Companies (ACEC) – Energy Committee Position Statement on Data Center Growth related to U.S. Energy Infrastructure

Overview

The rapid expansion of data centers and electricity demand due to the development of Artificial Intelligence services represents both a strategic opportunity and a systems challenge for the United States. America faces a defining infrastructure moment; the Electric Power Research Institute's 2026 Powering Intelligence report projects data centers could consume between 9 and 17 percent of U.S. electricity generation by 2030 — more than double current use and 60 percent higher than EPRI projected just two years ago. The five largest technology companies plan to spend between \$660 and \$690 billion on AI infrastructure in 2026 alone. That level of private capital commitment is roughly five times greater than peak federal spending on the Interstate Highway System as a share of GDP. AI is fast on its way to becoming the largest coordinated investment mobilization in the history of capitalism.

ACEC member firms — the engineers designing the power plants, transmission and water systems, and data infrastructure at the center of this transformation — have and will continue to be in a critical position to deliver these projects and design solutions around energy savings, water usage and other challenges.

Advanced computing is increasingly energy and resource intensive. Large facilities can require power at the scale of a mid-sized city that can significantly strain existing energy and resource infrastructure. This growth is occurring amid:

- Tight regional capacity margins
- Transmission constraints and interconnection backlogs
- Heightened public concern over retail rates, water use, and emissions
- Ongoing federal, state, and local discussions over jurisdiction, zoning, and permitting

ACEC represents the engineering firms that design, deliver, and maintain the Nation's energy infrastructure. Rather than advocating for any single technology, industry, or project the organization advocates for infrastructure that strengthens U.S. economic competitiveness, national security, and community resilience.

Core Principles

Economic Strength and National Security

Energy infrastructure underpins economic growth and technological leadership. The ability to build generation, transmission, and supporting infrastructure in a timely and responsible manner is a matter of long-term national and economic security.

Reliability and Resource Adequacy

Large, concentrated loads must be carefully matched to verified transmission capability. Interconnection policy should be grounded in system physics, realistic project timelines, and real-world supply chain constraints so that grid reliability is preserved throughout both the upgrade process and ongoing operations.

Fair and Transparent Cost Allocation

Costs associated with infrastructure upgrades required to serve major new loads should be allocated transparently and in a manner consistent with established cost-causation principles. This protects existing ratepayers while enabling responsible growth.

Balanced Governance

Effective policy will require coordination across federal, state, and local authorities. Clear roles, predictable processes, and reduced duplication can accelerate infrastructure delivery while maintaining environmental and community protections.

Permitting Reform

Lengthy and sequential permitting processes remain a primary barrier to timely infrastructure development. ACEC supports bipartisan efforts to establish clear timelines, improve interagency coordination, ensure responsible environmental protections, rigorous environmental review, and provide greater certainty for communities and investors. Predictability strengthens both public trust and private investment.

The ACEC Energy Committee supports infrastructure advancing policies like the SPEED Act. The bill reflects principles like concurrent reviews; clear, enforceable timelines; early alignment on the scope and schedule of the review; fixing judicial review; and harnessing technology are all part of the solution.

Advancing Solutions Through Dialogue

At ACEC, we recognize that the concerns communities raise regarding data center development are legitimate and that their input is vital to the long-term stewardship of our shared environmental, economic, and social resources. The dialogue between communities, engineers, and developers is the primary catalyst for arriving at the very solutions that communities and policymakers are demanding. For this reason, it is our position that measures which preclude this critical dialogue—such as data center moratoriums—stifle the innovation and engineering partnerships essential to developing sustainable solutions for not only data centers, but our nation's industrial infrastructure more broadly.

The more advisable path forward is one already being forged by ACEC member firms, whose decades of expertise in energy efficiency, power systems, regulatory standards, and water resource engineering have consistently helped data center developers reduce consumption, deliver projects, and integrate technical challenges with community priorities.

The Role of Engineers

We understand generation performance, transmission design, environmental mitigation, water systems, constructability risks, and the practical limits imposed by supply chains and grid physics. As engineers, we are the boots on the ground.

ACEC stands ready to serve policy makers as an analytical, nonpartisan resource in navigating the complex policy questions surrounding data center growth and energy supply. By grounding discussions in engineering reality and system-level thinking, we believe the United States can meet rising digital demand while preserving reliability, protecting communities, and ensuring that infrastructure development proceeds in a disciplined and responsible manner.

America's economic growth and national security depend on its ability to continue building. ACEC and the engineering community are prepared to help policymakers advance practical, balanced solutions that enable the timely development of the energy infrastructure required for long-term competitiveness.