Meeting Demand and Load Growth

Initiatives and Investments by Our Members

By AEIC CEO Steve Hauser

Looking back on 2025, and the way in which demand and load growth came to dominate the headlines, it is almost impossible to remember that the electric power industry is only a few years removed from a roughly two-decade period of flat demand growth. Seemingly overnight, we began facing a rapidly accelerating electrification rush and a hard press for vast new load demand from widespread electrification efforts, AI data centers, and new energy technology manufacturing facilities.

AEIC is proactively focused on supporting our member utilities in navigating the unprecedented pace and complexity of load growth across the country. At our one hundred forty-first Annual Meeting this past November, senior utility leaders and industry partners gathered to share load growth challenges and to discuss innovative ways to scale infrastructure to meet growing energy demands while integrating bulk generation, growing demand for natural gas, and distributed energy resources. These industry experts addressed grid resilience and futureproofing for a 2035-ready system and examined the financial and technological barriers to scaling utility operations.

Through the AEIC Center for Operational Excellence, we've launched a multi-part workshop series dedicated to large load enablement, bringing together system planning, engineering, operations, and customer-facing leaders to identify practical strategies, barriers, and breakthroughs. These efforts aim to accelerate interconnection timelines, enhance cross-functional alignment, and ensure that grid infrastructure investment meets the moment safely, reliably, and affordably.

In addition to facilitating collaboration and knowledge-sharing among our member utilities, we are working to track and highlight the key initiatives and investments our members are making to address demand.

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Key Initiatives and Investments

Arizona Public Service recently announced plans to develop a new site capable of adding up to two thousand megawatts of reliable, flexible generation to the state's energy portfolio. The Desert Sun Power Plant will be a state-of-the-art natural gas facility designed to meet Arizona's rapidly growing needs, support unprecedented demand from extra-large energy users, and enhance integration of renewable energy resources – all while protecting affordability for residential and small business customers.

Pacific Gas and Electric Company is working on eighteen new data center projects totaling approximately 1.4 gigawatts that are projected to begin operations between 2026 and 2030. Most of these are in Silicon Valley and the greater San Francisco Bay Area, but some are also in the Central Valley and Sacramento.

New energy demand from data centers allows PG&E to utilize more of its existing power infrastructure. By spreading the costs over more units of energy, each customer's dollar can go further. PG&E estimates for every one thousand megawatts (or one gigawatt) of new electric demand from data centers it serves, PG&E electric customers

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Steve Hauser is CEO of the Association of Edison Illuminating Companies.

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may save between one to two percent on their monthly bills in the long term, while serving those customers with some of the cleanest electricity in the United States.

American Electric Power has a seventy-two-billion-dollar capital plan based on customer commitments and the infrastructure needed to meet unprecedented power requirements, driven by large load customers including data centers and industrials.

AEP's peak system demand is expected to surge to sixty-five gigawatts by 2030, up from a current peak of thirty-seven gigawatts, highlighting the robust long-term growth that the company is experiencing across its service territory. To meet this opportunity, the company is investing thirty billion dollars in transmission assets in the new capital plan.

AEP's pioneering transmission work, including developing the nation's largest seven hundred sixty-five-kilovolt transmission network, has played a significant role in securing customers who need reliable delivery of large load power. AEP also plans to invest more than twenty billion dollars in generation resources across the service territory in the next five years to meet the demands of customers in fast-growing regions. Nearly a quarter of the capital plan – seventeen billion – is dedicated to AEP's distribution network as the company builds on system enhancement programs.

Duke Energy's capital plan reflects eighty-three billion dollars of investments over the next five years – one of the largest in the regulated industry – to meet growing demand while increasing reliability and affordability for its customers. Driven by the state's economic success, electricity demand is rising at an unprecedented pace.

The company is making cost-effective investments to reliably power this growth by maximizing the value of existing generation, making it more efficient and able to generate more electricity to meet near-term growth needs at the lowest possible cost.

For example, Duke Energy is adding nearly three megawatts of clean capacity through power uprate projects at four nuclear stations by 2031 – part of a nuclear fleet that achieved the nation's lowest total operating cost per megawatt-hour in four of the past six years.

Duke is also adding new generation, such as the clean, highly efficient natural gas facilities and has plans to invest 1.7 billion dollars in battery storage projects across the region, complemented by nearly four hundred million in solar and solar paired with storage projects – two hundred seventy-six megawatts of solar and thirty-one megawatts of paired storage.

Looking Ahead

This is just a snapshot of some of the major initiatives and significant investments AEIC members are making to meet current and projected demand. AEIC's continued focus on operational efficiency will enable our members to address these unprecedented challenges while improving affordability, reliability, and resiliency.

New, innovative approaches are required to help achieve these results. Tools that can harness data are becoming a critical driver of transformation, enabling real-time decision making, investments for asset retrofits and upgrades, operational excellence, and sustainability. As we head into 2026, AEIC is focused on creating critical forums for discussion, collaboration, and shared resources to help our members lead the way. PUF

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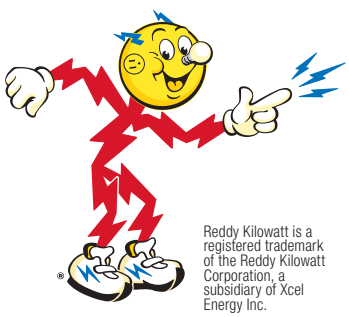
An 1890 electric meter on display at a Smithsonian museum in Washington, D.C.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