



2026 INSIGHT REPORT EXECUTIVE SUMMARY

The Grid at a Crossroads

Flexibility, Demand, and the Choice for an Affordable Energy Future

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About Climate Vine

Climate Vine is a curated peer network that convenes senior leaders across clean energy, finance, regulation, and technology. These leaders share hard-won insights, compare notes on what is working, and accelerate solutions across the messy middle of the energy transition.

In late 2025, Climate Vine brought together experts spanning utilities, grid operators, data center developers, regulators, financiers, and community advocates to confront a shared diagnosis: the U.S. energy system is not limited by technology. It is limited by the policies, incentive structures, and governance frameworks that determine how existing capacity is used.

The insights in this report are drawn exclusively from Climate Vine's speakers, experts, and members. Learn more: climatevine.co

Executive Summary

The United States is entering an energy crunch unlike any in recent memory. Demand for energy is spiking while the grid remains governed by rules and incentives built for a slower, more predictable era. The problem is less about technology than about the policies and structures that determine how the grid operates.

In late 2025, Climate Vine convened leaders from clean energy, technology, finance, and policy to confront this reality and chart a path forward. The insights presented here are drawn exclusively from the voices of the speakers, experts, and members of the cohort. Their conclusion is clear: the U.S. does not lack capacity. It lacks the frameworks to use the capacity it already has.

Three Converging Crises

Affordability. Across the country, many households are already struggling to pay their utility bills. When utilities propose major new construction to meet rising demand, those costs ultimately fall on customers least able to absorb them. This creates a political conundrum: once people fall behind on their bills, there is little public tolerance for large, long-term spending plans. States facing aging infrastructure and rapid load growth are being forced to acknowledge that building their way out of the problem is too slow, too expensive, and too burdensome for ratepayers.

Underutilization. The U.S. grid was built to handle the most extreme hours of the year, not the typical ones. As a result, much of the system sits unused most of the time. In any other capital-intensive sector, operating far below capacity would trigger immediate reform. But current rules reward utilities for constructing new assets rather than optimizing existing ones. This misalignment drives up costs and leaves valuable capacity stranded, even as demand rises.

Breakdown in forecasting. For decades, electricity demand grew gradually and predictably. That era is over. New loads arrive in large, concentrated blocks — often hundreds of megawatts at a time — creating sudden pressure on specific substations or regions. A single facility can trigger

billions of dollars in unplanned upgrades. Traditional planning tools, which assume steady, systemwide growth, no longer reflect how demand actually materializes. Utilities are now forced into reactive, high stakes decisions that strain budgets and timelines.

The Political Bottleneck and Shifting Power Dynamics

The biggest barrier to progress is not engineering – it's governance. Regulatory commissions turn over frequently, slowing institutional learning. Utilities are still financially rewarded for capital investment, not for efficiency or flexibility. Elected officials often engage only when reliability or affordability becomes a crisis. These dynamics make it difficult to shift toward lower-cost, software-enabled solutions, even when they are proven.

At the same time, the rise of hyperscale computing has introduced a new force into grid politics. Large technology companies now require enormous amounts of power and have the resources to push aggressively for access. For the first time, utilities face counterparties with comparable influence. This is reshaping regulatory debates and raising urgent questions about how to balance private demand with public obligations.

Climate Vine's Key Takeaways: Use What We Have Before Building More

Through peer groups and focused working sessions, participants reached a common diagnosis: the grid's core challenge is not insufficient supply but insufficient flexibility. The system is structured around building new infrastructure rather than coordinating and optimizing what already exists. Rising demand should be an opportunity to use the grid more intelligently – not an automatic trigger for costly expansion.

A more affordable and resilient path is already emerging. States and utilities are beginning to evaluate traditional infrastructure upgrades alongside alternatives such as storage, switching technologies, and grid-enhancing tools. In many cases, these flexible approaches deliver the same reliability at far lower cost and in a fraction of the time. Virtual power plants are showing that distributed resources can support the grid at scale.

The tools to manage rising demand already exist. What's needed now is alignment among regulators, utilities, large customers, and the public. With updated rules and incentives, the U.S. can meet growing demand while protecting households, improving reliability, and avoiding unnecessary infrastructure spending.

Contact and Connect

This report was produced by Climate Vine based on insights from its fall 2025 expert cohort. Climate Vine convenes senior leaders working at the intersection of climate, energy, technology, and finance.

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Read the full report: climatevine.co/research/grid-at-crossroads