



ELECTRICITY AFFORDABILITY TOOLKIT

Accelerating Network Upgrades

COST CONTROL

AT A GLANCE



TARGET COST DRIVERS

The policy can help to ease customer cost pressures created by these drivers

- Aging grid infrastructure
- Load growth



IMPACT TIME HORIZON

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How long it typically takes before changes materialize in utility behavior or customer bills



Medium-term (2–5 years)



POTENTIAL COST SAVINGS

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The level of cost savings that can reasonably be expected to result from this policy



Low

CONTEXT AND BACKGROUND

Accelerating network upgrade construction brings new, low-cost power supply resources online faster to meet growing demand.

Network upgrades refer to the grid infrastructure that must be built before a new generation or energy storage project can begin sending power to the grid. These upgrades can include new or upgraded transmission lines, transformers, substations, and other essential grid equipment. As electricity demand grows, timely completion of network upgrades has become an increasingly important part of the broader process of bringing new electricity resources online.

Across the country, grid operators are reporting longer timelines to complete network upgrade projects due to a variety of factors, including supply chain bottlenecks for critical grid components and lack of workforce. These longer timelines are delaying the addition of new, lower-cost electricity generation and storage resources that are otherwise ready to move forward.

Reforms to accelerate network upgrade construction are one component of a broader set of actions needed to bring generation online more quickly, alongside improvements to interconnection, permitting, and other project development processes.

State policies to accelerate network upgrades, explained in greater detail below, can include introducing better tracking of network upgrade construction progress and creating workforce development programs for needed construction workers. While their impacts on customer bills are often indirect and depend on market structure, network upgrades can best contribute to lower bills when paired with complementary reforms to interconnection, permitting, and other project development processes.

REAL-WORLD EXAMPLE

Legislative approaches to facilitate network upgrades are emerging. As of 2026, only one state has enacted related legislation.



California's [Senate Bill \(SB\) 410](#) requires electric utilities to analyze current and future staffing needs, ensure adequate qualified staffing, and maintain apprentice pipelines to accelerate network upgrades in line with state policy goals. It also requires the state public utilities commission to set target energization timelines for utilities to follow for interconnecting new loads. While these timelines do not apply to network upgrades for new generation or storage, this model could theoretically be extended to those upgrades as well.



LEGISLATIVE DESIGN AND IMPLEMENTATION CONSIDERATIONS

There are several ways in which states can help alleviate network upgrade construction delays. These include:

Transparency

States can increase transparency around construction timelines to identify bottlenecks and help drive more streamlined practices. Currently, network upgrades lack specific or transparent construction timeframes and may be deprioritized compared to other types of transmission projects. To help track upgrade construction timelines and trends, state legislators could require utilities to regularly post public data on network upgrade projects, including expected in-service dates, associated generation projects, and explanations for any construction delays. State legislators or state energy offices can also ask utilities to report on efforts to streamline supply chains for key grid components. This information is most useful when it is hosted on a state website (e.g., state energy office) and aligned with regional (RTO) transmission data (e.g., through project identifiers).

Target timelines

Related to the transparency approach, states can also set target energization timelines for network upgrades. Utilities would then need to report in their transparency metrics their progress relative to these target timelines. While states' ability to implement financial penalties for failure to meet target timelines is more limited by federal authority

over transmission ratemaking, states may have other options to encourage compliance that are within their authority, such as incorporating performance against target timelines into utility eligibility for state programs or tying incentives to on-average compliance with target timelines. Compliance could be measured as an average across all projects to ensure that individual projects delayed for exceptional circumstances do not result in overly restrictive penalties.

Oversight hearing

In addition to increased data transparency, state legislators can hold oversight hearings with their utilities to better understand how network upgrade construction is progressing in their states and what other steps can be taken to accelerate the construction. For instance, state legislators can ask how utilities are leveraging [advanced transmission technologies \(ATTs\)](#) as part of network upgrade project design and construction or how utilities are strengthening supply chains of key grid components through activities like advanced purchasing. Regular, public, and transparent conversations like these can help to ensure upgrades are being built in a timely fashion and identify what more legislators and state governments can do.



LEGISLATIVE DESIGN AND IMPLEMENTATION CONSIDERATIONS (CONTINUED)

Workforce development

Having a skilled workforce is essential for building network upgrades on time, but labor shortages today are limiting utilities' ability to place network upgrades in service on time. States can help by creating or strengthening dedicated workforce development programs related to the grid. State legislators can, for instance, fund the creation or expansion of workforce training and development programs for electrical workers, such as lineworkers. Such programs are most effective when developed in consultation with utilities, trade unions, community colleges, and other higher education institutions.



IMPACT TIME HORIZON

Medium-term (2–5 years)

The realization of bill savings may take a few years to first materialize after network upgrade reforms are enacted.

The table below provides examples of how authority and responsibility for network upgrades may be distributed across key entities.

VENUE	POTENTIAL ROLES
Legislature	• Require regular utility reporting on network upgrade construction status and grid component supplies • Establish and fund workforce training and development programs • Hold oversight hearings with utilities on network upgrade construction
Regulator	• Implement reporting requirements, including collecting and publishing data from all state utilities • Work with utilities through regular meetings to accelerate construction timelines
Administration	• Implement workforce training and development programs
RTO/ISO	• Collaborate with states and utilities to share relevant grid upgrade data, including information related to cases where the RTO/ISO is a driver of project delay



POTENTIAL COST SAVINGS

Low

Accelerating network upgrade construction can lower costs in two ways: by adding new generation and storage resources to the grid faster and by building the network upgrades themselves faster, which can lower construction costs. Shorter construction timelines can reduce projects' exposure to inflation and supply chain constraints for grid equipment.

On its own, however, accelerating network upgrades alone is unlikely to deliver significant cost savings. Network upgrade costs typically affect customer bills indirectly, and these upgrades are only one of several constraints on electricity deployment. Improvements to network upgrades are most effective as part of a more comprehensive strategy to address bottlenecks across the project deployment process that includes additional levers such as interconnection reform.



FURTHER READING

• [“Network Upgrades Are Delaying New Energy Generation – States Can Act to Accelerate Solutions”](#) —

RMI and National Caucus of Environmental Legislators (NCEL), 2025

• [“Independent Transmission Construction Monitor”](#) — Grid Strategies, 2024

• [“Unlocking America’s Energy: How to Efficiently Connect New Generation to the Grid”](#) — Grid Strategies and The Brattle Group, 2024