TRANSMISSION

The (Wonderful) Wired World

November 2025

Concern around the affordability and reliability of the electricity system has created an incredible amount of pressure to find solutions for both; but how? The electricity system needs greater investment in order to shore up reliability, but that investment has the potential to exacerbate an ongoing (and deepening) affordability crisis. We must invest in the energy system in ways that make it more efficient and more reliable for everyone while unlocking a vast array of low-cost resources. Here's how transmission buildout can be a key to that goal.

Regulators role in transmission

Smart transmission expansion and modernization is a critical component of meeting the grid's growing needs reliably and affordably. At RMI, we believe that proactive transmission planning paired with advanced transmission technologies (ATTs) can help to reduce costs for ratepayers while streamlining interconnection for new generation and load.

State regulators have an essential role to play in advancing affordable transmission buildout. RMI has prepared several resources to help regulators better understand the transmission landscape and what smart grid investments look like.

We remain available to provide regulators with additional analytical, technical, or advisory support — please reach out to Claire Wayner (cwayner@rmi.org) if you are interested.

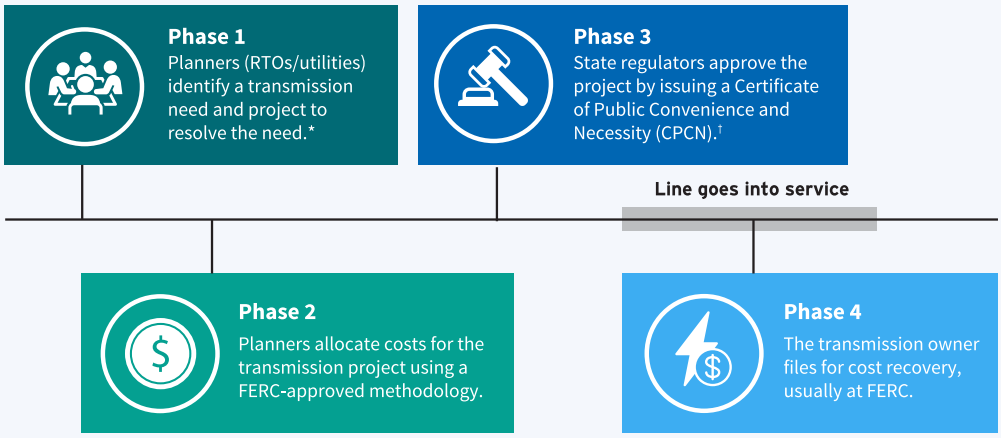
The State Regulator's Role in Transmission: A Handbook

This resource provides regulators with a framework for understanding the transmission "life cycle," from planning and cost allocation to permitting and cost recovery.

At each life cycle stage, the handbook details actions that regulators can take to ensure affordable and reliable transmission outcomes.

Use the QR code to read The State Regulator's Role in Transmission.

Transmission project life cycle



* Regional and interregional projects are generally identified via a competitive bidding process. Local projects are built by the utility by default.
† Some states may not require a CPCN or may refer to it by other names. For more information, see Exhibit 6.
Note: RTO = regional transmission organization.

RMI Graphic. Source: RMI analysis

Advanced Transmission Technologies Planning Guide

This set of three planning guides, co-authored with Quanta Technology, details how Advanced Transmission Technologies (ATTs) can be incorporated into transmission planning, interconnection studies, and integrated resource planning.

Regulators can use these as a resource to learn more about where and how ATTs can be utilized on the system to save ratepayers money.

Use the QR code to read more about the Advanced Transmission Technologies Planning Guide.

Mind the Regulatory Gap: How to Enhance Local Transmission Oversight

This report lays out the trend of increased spending on local transmission projects, many of which are not subject to state regulatory review. The report includes recommended actions that federal and state regulators can take to close the regulatory gap and reduce costs to ratepayers.

Use the QR code to read more about how to enhance local transmission oversight.

High Voltage, High Reward Transmission

This report uses an ex post technical analysis approach to quantify the multiple benefits that high voltage transmission projects can provide, using seven case studies from across the United States. The report helps regulators learn more about the range of transmission benefits and how to quantify them.

Use the QR code above to read High Voltage, High Reward Transmission.