

State Strategies for Accelerating Transmission Development for Renewable Energy

Many states have established policies intended to increase the amount of electricity supplied to their citizens and business that is generated by renewable energy sources such as wind, solar and geothermal. Over the next decade, moving that electricity from generators to consumers will drive demand for significant amounts of new electric transmission capacity. Utilities and other developers of generation facilities and transmission lines are coming forward with proposals to meet that new demand, but the planning, siting, financing, and cost allocation of transmission lines present challenges to governors and other policymakers. Generation facilities that are fueled by renewable energy resources are often remotely located and building transmission lines that bring the electricity they generate to market requires the involvement of multiple state and federal players, increasing those challenges. **Figures 1 and 2** below, comparing the existing high-voltage transmission system to proposed new high-voltage lines, illustrates the broader growth picture: annual transmission additions in the period from 2009 through 2018 are expected to be three times the level of annual additions of the previous three years.

Governors have a key role to play in overcoming those challenges. Even though the siting of individual transmission lines is the task of independent utility regulators, state-level energy policies partly determine how generation resources and transmission will be developed. Those policies are often driven by the governor's office and related agencies, typically working with the state legislatures and utility regulators. It is critical that governors work with their utility regulators to clear the hurdles that impede transmission de-

velopment and advance solutions that cross state lines by engaging with other governors, regional authorities and federal agencies. States should develop strategies to improve project coordination and reduce uncertainty and delays in bringing renewable energy to market. These include:

- **Participate in existing interconnection-wide planning forums.** States can take advantage of opportunities for planning beyond the rigid boundaries and time horizons of traditional transmission plans. The U.S. Department of Energy (DOE) has initiated ways for states to contribute to the nation's transmission planning process on a broader scale. Those efforts—covering the three interconnections that traverse most of the United States—will model a variety of energy futures and provide a long-term resource and transmission analysis. States can use those efforts to better understand the transmission needs of the interconnections and help coordinate regional transmission planning authorities as renewable energy generation grows.
- **Plan and site renewable energy generation and transmission concurrently.** States can overcome uncertainties related to renewable energy by concurrently siting or, if applicable, concurrently planning transmission and generation. Several state and regional efforts are attempting to use coordinated planning or siting of energy facilities and transmission to accelerate the approval of new energy infrastructure. The Competitive Renewable Energy Zone (CREZ) process in **Texas** is on track to construct

Figure 1. Existing High-Voltage Transmission System

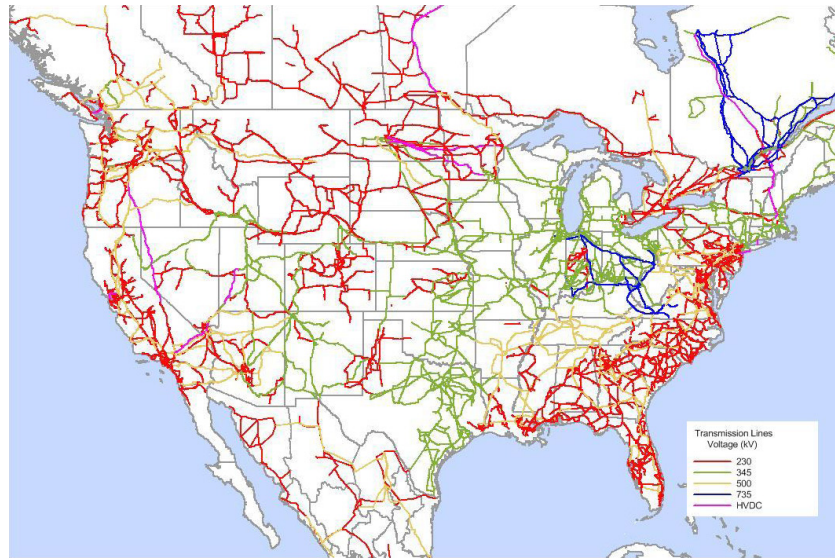
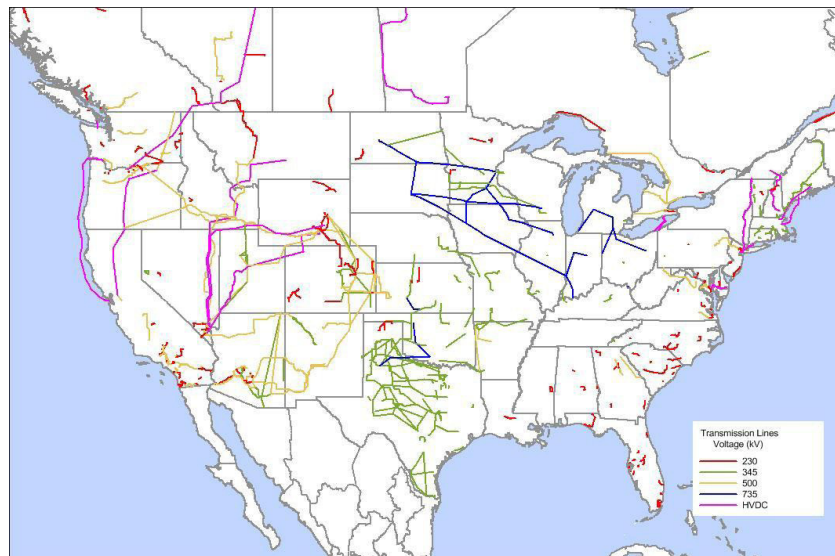


Figure 2. Proposed New High-Voltage Transmission Lines



2,300 miles of new transmission that will deliver nearly 18 GW of wind power to state population centers. The state coordinated the identification of cost-effective wind energy development areas with the selection of transmission providers and the permitting of transmission corridors.

- **Coordinate interstate siting with regional partners.** States can create or use existing regional forums to improve coordination in the siting and

permitting phase for interstate transmission projects. The six New England states—**Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont**—in 2009 adopted a *Renewable Energy Blueprint* that identified opportunities for coordinated renewable energy procurement and transmission siting. More recently, the six states created an Interstate Siting Collaborative to help implement the blueprint.

That effort involves exploring opportunities for coordination available under current state laws, such as the potential for common applications, concurrent timelines for siting proceedings, and information sharing among states.

- **Partner with federal agencies.** States can work directly with relevant federal agencies to improve the process for siting transmission across federal lands and waters. **California** has negotiated a memorandum of understanding with U.S. Department of the Interior (DOI) to expedite the siting of renewable energy projects and their associated transmission across federal lands. Subsequently, the state and DOI sited nine renewable energy projects totaling four GW of new renewable energy capacity, with sufficient transmission to connect the power to the grid.
- **Develop centralized infrastructure to support further expansion.** States can facilitate the expansion of transmission and renewable energy capacity through the planning and prioritization of underlying high-capacity transmission infrastructure. **Michigan** provided expedited approval for a backbone transmission line in an area of the state with significant wind resource potential. The construction of that line will ensure that adequate infrastructure and transmission capacity are available to connect existing and planned wind resources in the area.
- **Create and use infrastructure financing authorities.** States can use existing, or create new, bonding authorities to fill financing gaps and add certainty to priority transmission projects. **New**

Mexico created a bonding authority with the specific aim of financing renewable energy transmission projects. The state is using profits from the sale of wind power to customers in Arizona to pay back revenue bonds issued to finance the interconnecting transmission line. That financing mechanism allowed the state to develop a line it needed to meet renewable energy goals without spending its own resources.

- **Develop cost allocation methods for renewable energy projects.** States can work at the regional level to develop new or alternate cost allocation methods applicable to transmission projects that integrate renewable energy. For example, through a state-driven process involving **Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Montana, North Dakota, Ohio, South Dakota, and Wisconsin**, the Midwest electricity market developed a new alternative methodology for allocating the transmission costs of projects seen as having a broader regional benefit, such as those that connect new renewable energy.

Those and other successful state efforts show governors how they can accelerate transmission development for renewable energy and help meet a variety of energy diversity, economic development, and environmental goals.

For more detailed information on the challenges and solutions summarized here, please see the NGA white paper *State Strategies for Accelerating Transmission Development for Renewable Energy*, published in conjunction with this Issue Brief.

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