



Draft 2023 National Transmission Needs Study

The U.S. Department of Energy’s Grid Deployment Office (GDO) released a draft of the 2023 National Transmission Needs Study (“Needs Study”) in February 2023 for public comment (the public comment period closed on April 20, 2023). The Needs Study is the Department’s **triennial state of the grid** report. Formally known as the [National Electric Transmission Congestion Study](#), the Needs Study identifies high impact needs and provides information about current and anticipated future capacity constraints and congestion on the nation’s electric transmission grid.

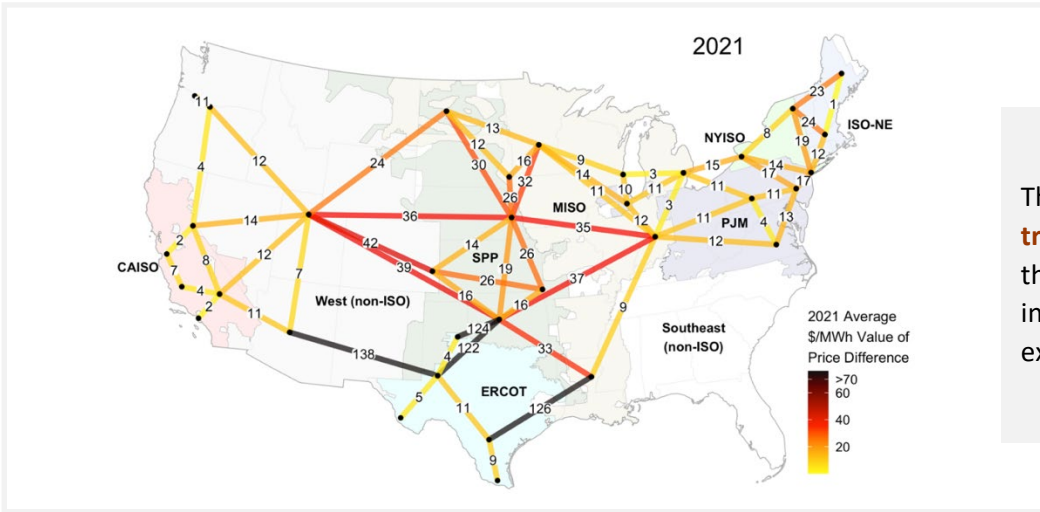
Draft Findings

- ▶ **There is a pressing need for additional electric transmission infrastructure.** Nearly **all regions** in the United States will benefit from improved reliability and resilience given additional investments. Regions with high electricity costs—notably the **Plains, Midwest, Mid-Atlantic, New York, and California**—will also benefit from transmission that delivers cost-effective generation.
- ▶ **Increasing interregional transmission results in the largest benefits.** Historically, the largest benefit in new interregional transfer capacity additions is across the interconnection seams—**between the Mountain and Plains regions and between Texas and all its neighbors** (Southwest, Plains, and Delta regions). Large interregional transmission benefit is also found **between the Plains and its two eastern neighbors, the Midwest and Delta regions**.
- ▶ **Needs will shift over time.** The clean energy transformation, evolving regional demand, and increasingly extreme weather events must all be accommodated by the future power grid. Significant transmission deployment is needed as soon as 2030 in the **Plains, Midwest, and Texas regions**. By 2040, large deployments will also be needed in the **Mountain, Mid-Atlantic, and Southeast regions**. The same is true for interregional transmission deployment; By 2040 there is a significant need for new interregional transmission between **nearly all regions**.

Helpful Links

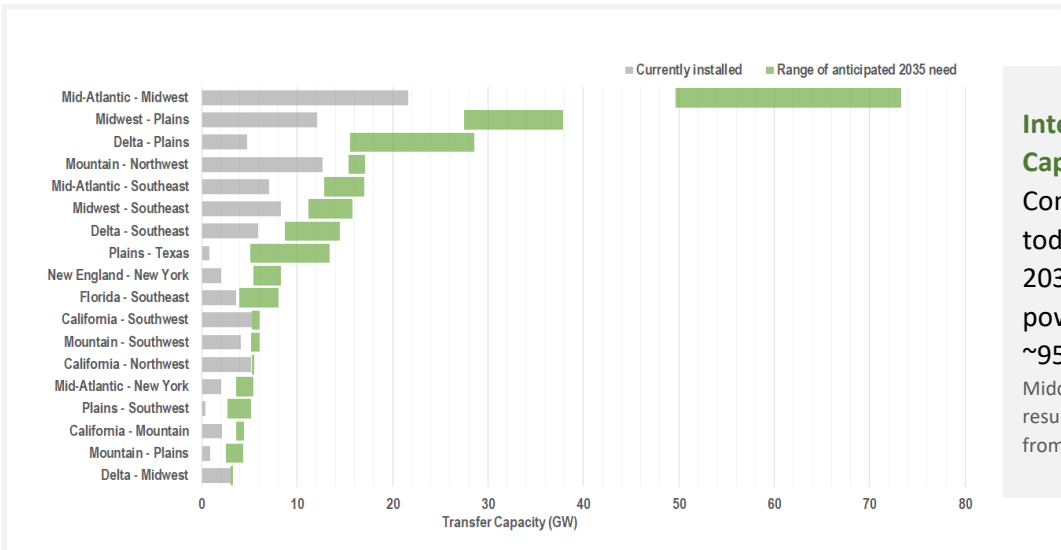
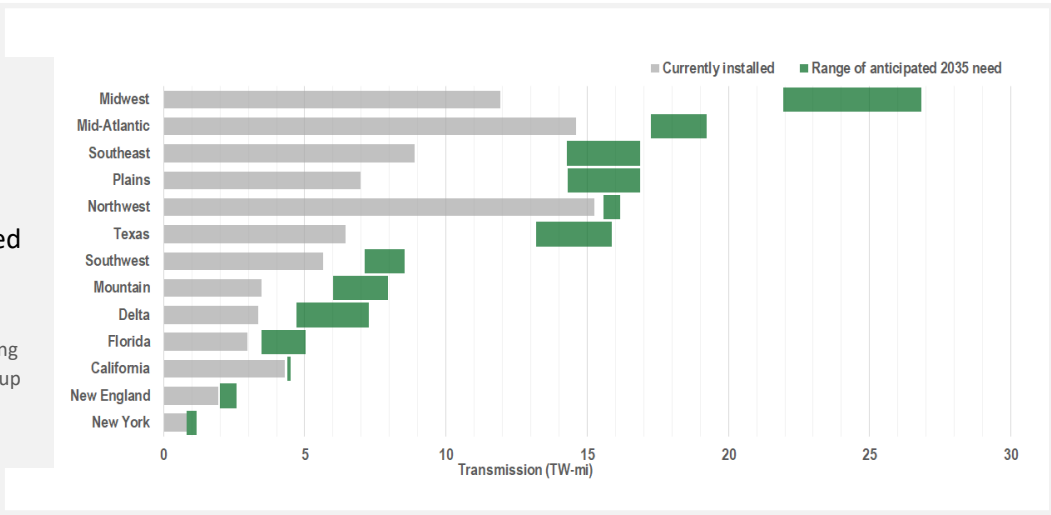
- Read the draft study at <https://www.energy.gov/gdo/national-transmission-needs-study>
- Contact GDO with additional questions: transmission@hq.doe.gov

Draft Findings at a Glance



The highest **value of new transmission** is across the three electrical interconnections and during extreme weather events.

Regional Transmission:
 Comparison of what exists today to anticipated need in 2035 for a ~70% decarbonized power sector in 2030 and ~95% in 2035.
 Middle 50% capacity expansion modeling results for Moderate/High scenario group from Needs Study



Interregional Transfer Capacity:
 Comparison of what exists today to anticipated need in 2035 for a ~70% decarbonized power sector in 2030 and ~95% in 2035.
 Middle 50% capacity expansion modeling results for Moderate/High scenario group from Needs Study