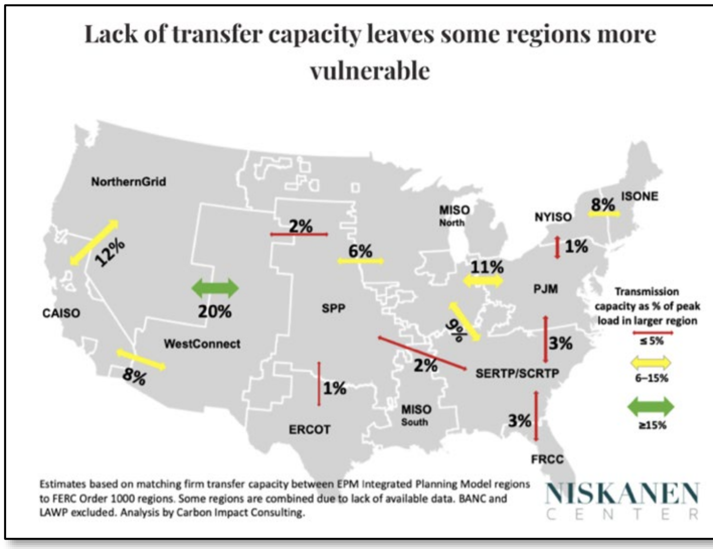
ACORE
AMERICAN COUNCIL ON RENEWABLE ENERGY

Minimum Interregional Transfer Capacity Requirement

Background

Many studies have shown that increased interregional transmission could reduce electricity costs and help keep the power on for American homes and businesses.[1] The urgent need for more interregional transmission has only increased in recent years, as increasingly frequent and severe weather events continue to leave tens of thousands without power in harsh weather conditions. **The lack of interregional transfer capacity between nearly every neighboring grid region is putting millions of Americans at risk.[2]**



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Recent extreme weather events provide stark examples. In 2021, additional interregional transmission capacity could have prevented widespread power outages in Texas that occurred during Winter Storm Uri. During the storm, significant interregional transmission ties allowed the Great Plains (SPP) and Midwest (MISO) grid operators to import 15 times more electricity than the Texas grid (ERCOT) was capable of importing, as ERCOT has minimal ties to its neighboring regions.[3] An ***additional gigawatt of interregional transmission availability during the storm would have saved Texans $1 billion on their power bills,*** reduced power outages, and potentially saved lives.[4]

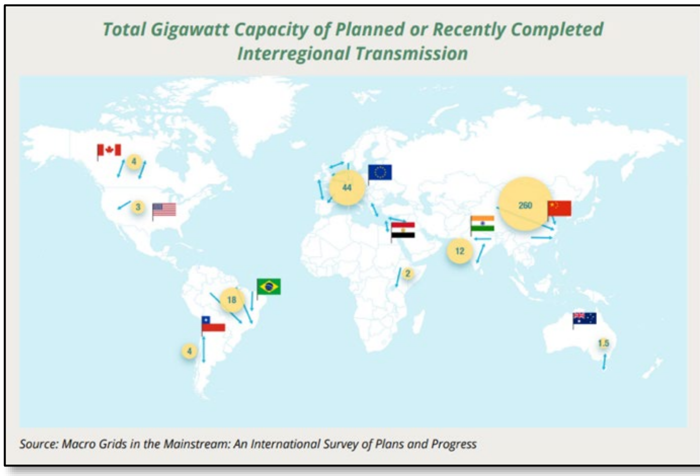
A similar result emerged during Winter Storm Elliott in 2022. Record winter electricity demand coincided with the large-scale loss of fossil power plants due to equipment failures and interruptions to natural gas supplies. Parts of the Southeast experienced rolling blackouts as electricity demand exceeded supply, while power prices spiked in many regions. In some areas **modest investments in interregional transmission capacity would have yielded nearly $100 million in benefits during the five-day event**, while most areas could have saved tens of millions of dollars.[5]

Looking ahead, similar results are predicted in both future heat waves and cold weather conditions. Stronger interregional ties in a simulated heat wave, based on real-world conditions observed during a three-day 2018 heat wave, would prevent nearly 740,000 customers in New York City and Washington, D.C. from losing power and saved $875 million, according to GE Energy Consulting.[6] More interregional ties during a simulated polar vortex, based on real-world conditions observed during the February 2014 polar vortex, would have prevented nearly 2 million customers across the east coast from losing power and saved $1 billion.[7] ***In short, interregional transmission is essential for ensuring a reliable and resilient U.S. grid now and in the future.***

Previous reforms to encourage more interregional lines, most notably in the Federal Energy Regulatory Commission's (FERC) Order 1000, have failed to deliver additional build. FERC is currently considering harmonizing the different cost allocation and benefit assessment methods and criteria used by Regional Transmission Organizations (RTOs) through a proposed rulemaking for regional transmission. A strong final rule could help resolve the "triple hurdle" challenge - where a new interregional transmission line must pass a benefit-cost ratio test in each RTO as well as across regions - but the draft rule does not require RTOs to standardize their calculations.

U.S. Infrastructure is Falling Behind Internationally

China, European nations, and other countries are modernizing their grids and developing large interregional transmission lines to benefit from their high economic value, ensure grid reliability, and take advantage of low-cost renewable resources. China has developed over 260 gigawatts (GW) of new interregional transmission capacity in a seven-year period, while only three GW of interregional capacity was developed in the U.S. during that time.[8]



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The European Union (EU) has set a target for EU countries to have the capability to transfer ***at least* 15 percent of their electricity production to neighboring countries by 2030**, **having already met the previous target of 10 percent by 2020**.

Current FERC Discussions

In December 2022, FERC convened transmission policy experts and modelers to discuss a potential U.S. interregional transfer capacity standard as a way to resolve these challenges. A minimum transfer requirement would ensure regions are able to import a set amount of their peak electricity demand from neighboring regions. The two-day discussion considered:

- How to determine the need for and benefit of setting a minimum requirement;
- What to consider in establishing a requirement, including responsibility for determining it;
- The objective and drivers of such a requirement;
- The process used in establishing a requirement to determine key data inputs;
- Modeling techniques, and relevant metrics;
- How to allocate costs for transmission facilities intended to increase transfer capability; and
- How to ensure a minimum amount of interregional transfer capability is achieved and maintained.

FERC is now accepting comments on that workshop, but has yet to take further action.

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[1] See, e.g. Americans for a Clean Energy Grid (ACEG) and Vibrant Clean Energy, (Oct. 2020) *available at* https://cleanenergygrid.org/wp-content/uploads/2020/11/Consumer-Employment-and-Environmental-Benefits-of-Transmission-Expansion-in-the-Eastern-U.S.pdf; National Renewable Energy Laboratory, (May 2022) "Interconnections Seam Study" *available at* https://ieeexplore.ieee.org/document/9548789; P. R. Brown and A. Botterud, "The Value of Inter-Regional Coordination and Transmission in Decarbonizing the U.S. Electricity System," Joule 5(1)(2020): 115-134, *available at* https://doi.org/10.1016/j.joule.2020.11.013.

[2] See, e.g. Niskanen Center, "FERC is coalescing around the idea of minimum transfer capacity but needs data and definitions," (Sept. 2022), *available at* https://www.niskanencenter.org/ferc-is-coalescing-around-the-idea-of-minimum-transfer-capacity-but-needs-data-and-definitions/.

[3] ACORE and Grid Strategies, Transmission Makes the Power System Resilient to Extreme Weather, (July 2021), *available at* https://acore.org/wp-content/uploads/2021/07/GS_Resilient-Transmission_proof.pdf.

[4] Id.

[5] ACORE and Grid Strategies, "The Value of Transmission During Winter Storm Elliott," (Feb. 2023), *available at* https://acore.org/wp-content/uploads/2023/02/The-Value-of-Transmission-During-Winter-Storm-Elliott-ACORE.pdf.

[6] GE Energy Consulting and the Natural Resources Defense Council, Economic, Reliability, and Resiliency Benefits of Interregional Transmission Capacity *available at* https://www.nrdc.org/sites/default/files/ge-nrdc-interregional-transmission-study-report-20221017.pdf.

[7] Id.

[8] ACEG, MGI, "Macro Grids in the Mainstream, An International Survey of Plans and Progress," (Nov. 2020) *available at* https://cleanenergygrid.org/wp-content/uploads/2020/11/Macro-Grids-in-the-Mainstream-1.pdf.