Nationwide Transmission Congestion Costs Rise to $20.8 Billion in 2022

American customers paid three times more than they did on average for 2016-2020

July 13, 2023, WASHINGTON D.C. - Today, a new report from Grid Strategies shows that transmission congestion grew drastically across U.S. electricity markets in 2022. By extrapolating data from Independent Market Monitor reports to include regions that do not transparently report congestion costs, Grid Strategies estimates that total transmission congestion costs reached $20.8 billion nationwide last year.

On average transmission congestion cost $7.1 billion between 2016-2022, but 2021 began a striking growth trend to $13.1 billion which continued in 2022. The key driver of increasing congestion costs is the failure of transmission expansion to keep up with the growth of low-cost renewable energy. Rising fuel costs increase congestion values when thermal generators are dispatched in place of curtailed renewables. This macro trend was exacerbated by transmission outages, extreme weather, and increasing electricity demand.

Grid Enhancing Technologies (GETs) unlock additional capacity on the existing grid, and could reduce congestion by 40% per research by the Brattle Group. In 2022, GETs could have saved U.S. customers $8.3 billion. On July 16, the Joint Federal State Task Force on Electric Transmission will meet to discuss GETs in Austin, Texas at 2:30 pm.

Richard Doying, Vice President at Grid Strategies, said:

“While there are multiple drivers for increasing congestion costs, the fundamental constraint is transmission capacity. Because the grid often cannot deliver the cheapest available electricity, customers pay billions more for power. Grid Enhancing Technologies can be deployed to reduce congestion in the near term and supplement future traditional transmission infrastructure development, which can take a decade or longer to move from planning to operations. The congestion cost increases over the last two years show that it is time to act with urgency to increase transmission capacity.”

Julia Selker, Executive Director of the WATT Coalition, said:

“Today, utilities are not rewarded or required to manage congestion or make more efficient use of grid assets. I hope that the Federal Energy Regulatory Commissioners and state utility commissioners have a productive discussion about how to address this ballooning cost.”

About the WATT Coalition:

The Working for Advanced Transmission Technologies (WATT) Coalition advocates for policy that supports wide deployment of Grid-Enhancing Technologies (GETs), to accelerate the clean energy transition and lower energy costs. Dynamic Line Ratings determine the true, real-time capacity of power lines. Advanced Power Flow Control allows operators to reroute power to lines with available capacity. Topology Optimization identifies the best grid reconfigurations to reroute flow around bottlenecks. In operations, these technologies reduce congestion costs and improve economic dispatch, situational awareness and reliability. In planning, they reduce the time, cost and complexity of integrating new generation and load. WATT members include Ampacimon, EDF Renewables North America, Heimdal Power, Inenergy, LineVision, Lindsey Systems, NewGrid, Pine Gate Renewables, Prisma Photonics, Smart Wires, Sol Systems, VELCO. Learn about unlocking more value from the grid at watt-transmission.org.