



WATT – Working for Advanced Transmission Technologies

Mission: 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.

BACKGROUND

Every year, US consumers pay more than \$6B in transmission congestion costs, and hundreds of GW of renewable energy are stuck in interconnection queues, waiting to connect to the grid. At the same time, grid utilization rates are often as low as 30-50%, meaning there is excess capacity on today's wires that could be leveraged to solve these problems.

The grid has not historically been considered a resource itself, but its capabilities are dynamic, not static. They vary based on ambient conditions and utilization. We can reimagine the grid by recognizing its dispatchable characteristics. We can unlock significant value from the existing grid and ensure that future investments in infrastructure can be fully utilized.

SOLUTIONS

Technologies >> *Grid Enhancing Technologies (GETs): Hardware or software that increases the capacity, efficiency and/or reliability of the transmission grid.*

Advanced Power Flow Control Power flow control technologies push or pull power away from overloaded lines and onto underutilized corridors in the transmission network. Advanced power flow control expands on this function with enhancements such as faster deployment, easy scaling to meet the size of the need, or being redeployable when needed elsewhere on the grid.

Dynamic Line Ratings (DLR) DLR set a transmission line's loading limit based on monitored ambient conditions rather than a fixed, static limit. DLR generally results in increased capacity due to cooling conditions (wind) and also identifies instances when flows should be reduced to ensure safe and reliable operation (extreme heat or other conditions).

Advanced Topology Control Advanced topology control is optimization software that identifies reconfigurations of the transmission grid to reroute power flow around congested or overloaded transmission elements. The reconfigurations are implemented through switching on/off existing high voltage circuit breakers.

Policies >>

Infrastructure stimulus GETs create jobs, improve infrastructure and save money – federal stimulus should invest to deploy these proven, common-sense tools.

Transmission policy reform Today, GETs are not integrated into transmission operations and planning, and the cost-recovery business model for transmission disincentivizes their use. The Federal Energy Regulatory Commission (FERC) can act to fix both problems.

Improve interconnection process Renewable developers should be allowed to request and have GETs offered as a least-cost solution to connect to the grid. Transmission providers and FERC could implement this change.

