

Policy Approaches to Advanced Transmission Technologies

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Pew

Advanced Transmission Technologies (ATTs)

- **Unlock more capacity** out of our existing grid
- **Upgrade the grid faster and for less cost** than traditional transmission infrastructure
- **Reduce congestion costs** for consumers
- **Minimize land use impacts** by increasing capacity within existing rights-of-way



Dynamic Line Ratings (DLRs)

- **Small devices** installed onto existing transmission lines
 - Individual devices can be deployed in under 30 minutes
- DLRs **continuously monitor** real-time weather and temperature conditions
- Allow grid operators to **safely increase** the flow of power on lines



Topology Optimization

- **A software solution** that helps determine the best available routes for power
- Looks for ways to **reroute power** to relieve congestion and **test reconfigurations** quickly
- Allow grid operators to **safely increase** the flow of power on lines

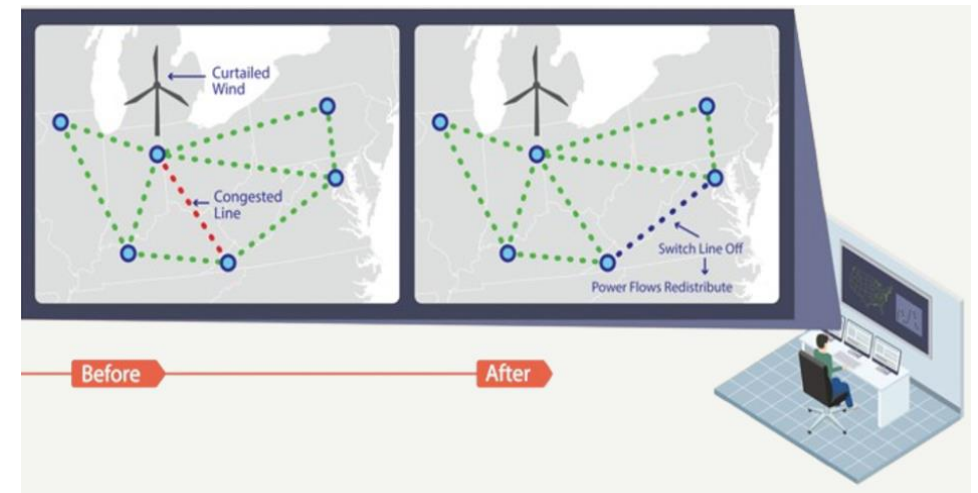
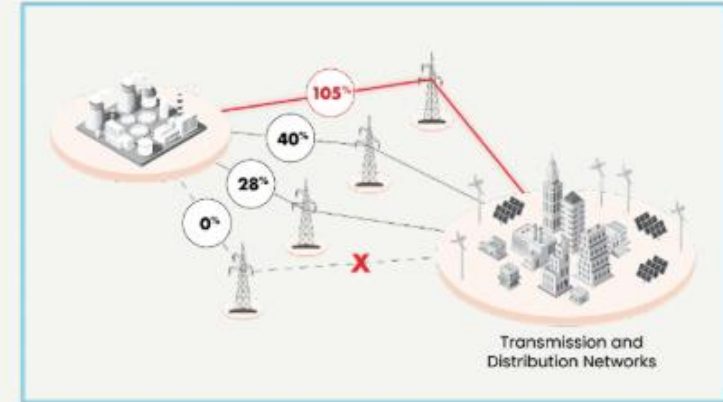


Photo credit: WATT Coalition

Advanced Power Flow Control (APFC)

- **Modular devices** that can push and pull power off overloaded circuits and onto underutilized lines.
- Can **control voltage**, which enhances grid stability
- Can be **scaled or redeployed** due to their modular nature

BEFORE POWER FLOW CONTROL



WITH POWER FLOW CONTROL

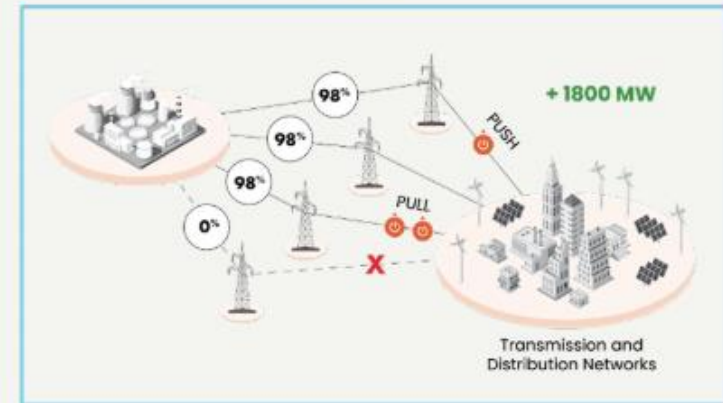


Photo credit: WATT Coalition

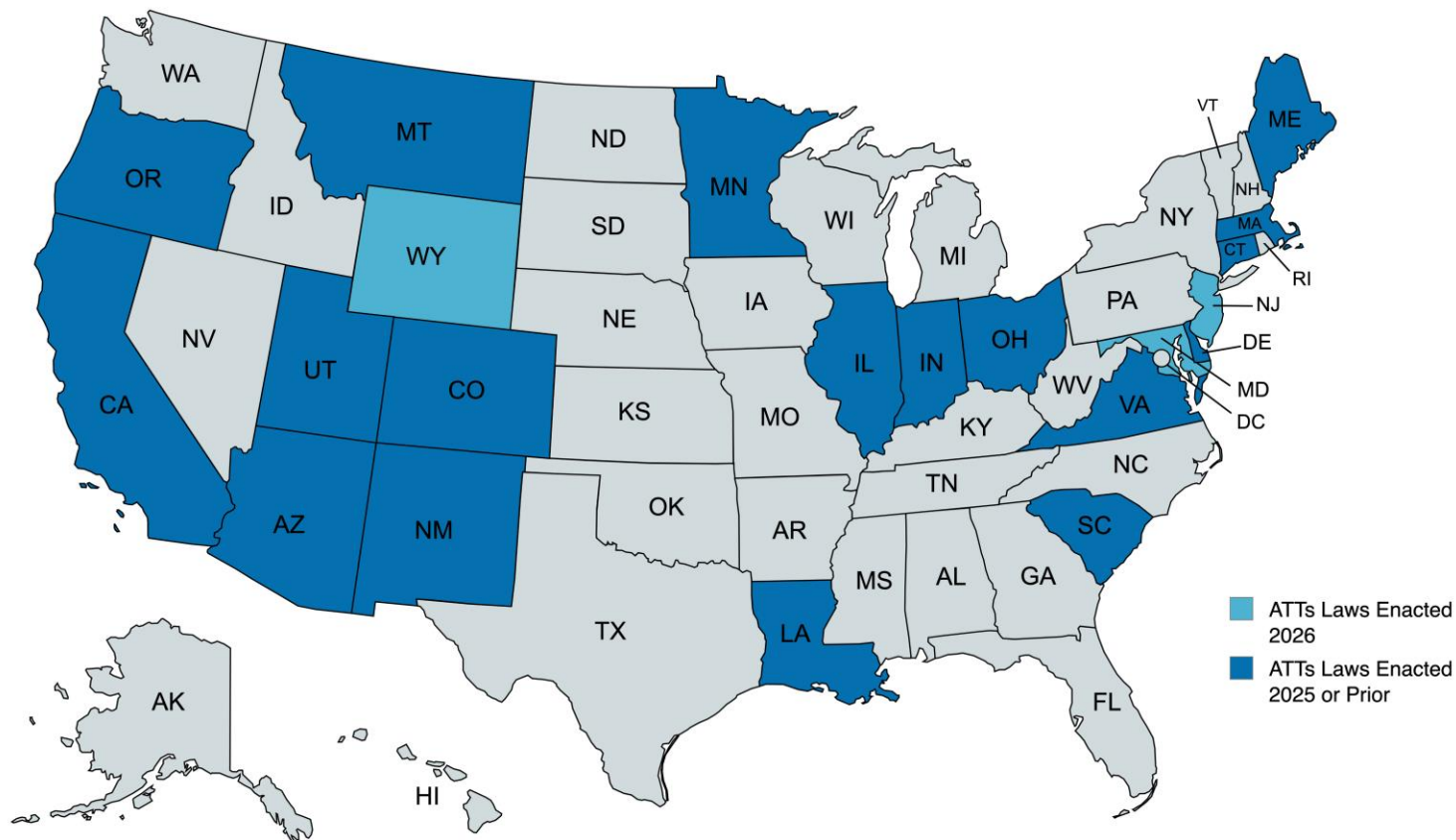
Advanced Conductors

- Modern wires that use **more efficient and resilient materials** to boost carrying capacity
- Can carry **50-110% more power** than conventional lines
- Advanced conductors **do not "sag"** like traditional lines, and **can be deployed on existing rights of way**



Photo credit: CTC Global

National ATTs Policy Landscape



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Policy Approaches

Policy Approach	Description	States
<i>Studies</i>	Tasks state agencies or regulatory bodies to investigate the use case of ATTs.	IN, ME, CO, LA
<i>Utility Planning</i>	Requires utilities to evaluate ATTs in their planning, such as integrated resource plans (IRP).	MN, VA, IN, UT
<i>Congestion Targeting</i>	Requires utilities to identify specific highly congested areas on the transmission system.	OH, MN
<i>Streamline Permitting</i>	Expedites applications or reduces permitting requirements for ATTs.	AZ, CO, SC
<i>Cost Recovery</i>	Allows utilities to recover costs associated with ATTs from their rate bases.	MT, MN
<i>Commission Assessment</i>	Requires utility commissions to consider ATTs when determining how to complete certain new transmission projects.	VA

Thank You!



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