



P.O. Box 278  
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## **Committee: Environment and Transportation**

**Testimony on: HB0040 “Public Utilities - Transmission Lines - Advanced Transmission Technologies”**

**Position: Support**

**Hearing Date: February 3, 2026**

The Maryland Chapter of the Sierra Club supports HB 0040 and urges the Committee to adopt a favorable report. This bill would modernize Maryland’s transmission planning and deployment process by ensuring that advanced transmission technologies (ATTs), including hardware and software upgrades that increase capacity on existing lines, are systematically evaluated and used where cost-effective.

### **Maryland needs smarter, faster grid capacity without unnecessary new construction**

Maryland’s electric grid is part of the PJM regional network, where rapid load growth is stressing existing transmission infrastructure. Large new lines can take years before they can be planned, permitted and built. Meanwhile, congestion costs, which occur when limited transmission capacity forces expensive generation to run, cost consumers billions nationwide. In 2022 alone, grid congestion costs in the U.S. were estimated at over \$20.9 billion<sup>1</sup>.

ATTs address this challenge by increasing the effective capacity of the existing grid without waiting for new rights-of-way, lowering the risk of delay and disputes that accompany transmission lines.

### **What Are Advanced Transmission Technologies (ATTs)?**

ATTs include a suite of hardware and software upgrades that improve the operation, capacity, and reliability of existing transmission infrastructure. These include<sup>2</sup> :

- 1- Dynamic Line Ratings (DLR):** Processes that adjust thermal line ratings using real-time weather data, enabling operators to safely transmit more power under favorable conditions compared with static ratings.
- 2- Advanced Power Flow Control:** Devices that dynamically reroute electricity around congestion points, increasing grid utilization.
- 3- Transmission Topology Optimization:** Software that identifies optimal switching configurations to reduce congestion impacts without physical upgrades.

State and federal research identifies ATTs as a key method to modernize the grid. Fifteen states across the US have already enacted policy measures to advance ATT to reduce congestion and accelerate renewable integration<sup>3</sup>. However, because ATTS do not necessarily increase the rate base (either because they can result in less need for capital or are expenses rather than capital investments) utilities can have less incentive to explore and implement ATTs without legislation directing them to do so.

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<sup>1</sup> Pew Charitable Trusts: *Advanced Transmission Technologies Can Help States Meet Growing Energy Demand* (Jan. 15, 2025). <https://www.pew.org/en/research-and-analysis/fact-sheets/2025/01/advanced-transmission-technologies-can-help-states-meet-growing-energy-demand/>

<sup>2</sup> Bipartisan Policy Center: *Unlocking the Potential of Grid Enhancing Technologies: Pathways to Widespread Adoption* (Jan. 8, 2026). <https://bipartisanpolicy.org/issue-brief/unlocking-the-potential-of-grid-enhancing-technologies-pathways-to-widespread-adoption/>

<sup>3</sup> Climate Policy Dashboard: *Enabling ATTs and GETs*. <https://www.climatepolicydashboard.org/policies/electricity/transmission-atts-gets/>



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### **Aligning planning with grid modernization**

Policy literature emphasizes that integrating ATT into formal planning processes is essential. A joint report by the Clean Air Task Force and The Brattle Group recommends that planners “maximize the value of the existing power system” by rapidly deploying ATTs alongside proactive planning and interconnection reforms<sup>4</sup>.

Similarly, national grid policy analyses show that states that require utilities to study or incorporate ATT options benefit from clearer, more transparent decision-making and faster grid improvements<sup>5</sup>.

### **Benefits to Maryland ratepayers, reliability, and clean energy goals**

Deploying ATTs can reduce congestion costs borne by ratepayers, lower the likelihood of reliability disruptions caused by constrained transmission lines, and expedite the integration of new clean generation. By increasing capacity on existing infrastructure, ATTs reduce the need for expensive and disruptive new construction projects that often entail lengthy siting battles, community opposition, and environmental concerns. A growing body of evidence suggests that ATTs can be deployed more quickly and at significantly lower cost than building new transmission corridors<sup>6</sup>.

ATT deployment supports both grid reliability and decarbonization objectives. House Bill 0040 takes an important step by ensuring that Maryland’s transmission planning reflects modern solutions, not solely traditional overhead line construction. The bill defines “advanced transmission technologies” broadly to include grid-enhancing technologies, high-performance conductors, and energy storage used as transmission—recognizing that meaningful capacity and reliability benefits can come from upgrading existing infrastructure with ATTs.

HB 0040 requires that any applicant seeking approval for a new overhead transmission line provide evidence that ATTs and other alternatives were evaluated as part of internal planning, including whether these solutions could enhance efficiency, reduce costs, and provide greater value to ratepayers. The bill also establishes a recurring congestion reporting requirement, ensuring that transmission owners identify areas of congestion, quantify the associated ratepayer costs, and, where feasible, propose implementation plans for advanced technologies to address these constraints.

### **Conclusion**

HB 0040 provides a prudent framework to modernize Maryland’s transmission planning by embedding ATTs into the evaluation and siting process. This will help reduce congestion costs, improve reliability, and support clean energy integration without imposing unnecessary environmental or ratepayer costs.

For these reasons, the Maryland Chapter of the Sierra Club urges a favorable report on HB 0040.

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<sup>4</sup> Clean Air Task Force: *New CATF/Brattle report identifies untapped solutions to address rising electricity demand and avert grid bottlenecks* (July 22, 2025). <https://www.catf.us/2025/07/new-catf-brattle-report-identifies-untapped-solutions-address-rising-electricity-demand-avert-grid-bottlenecks/>

<sup>5</sup> Climate Policy Dashboard: *Enabling ATTs and GETs*. <https://www.climatepolicydashboard.org/policies/electricity/transmission-atts-gets/>

<sup>6</sup> World Resources Institute: *How Advanced Transmission Technologies Can Revamp the Aging US Power Grid* (July. 10, 2025). <https://www.wri.org/insights/advanced-transmission-technologies-us-power-grid/>