Committee: Education, Energy and the Environment
Testimony on: HB0829 - Public Utilities - Transmission Lines - Advanced Transmission Technologies
Organization: Maryland Legislative Coalition Climate Justice Wing
Submitting: Laurie McGilvray, Co-Chair
Position: Favorable
Hearing Date: March 26, 2025

Dear Mr. Chair and Committee Members:

Thank you for allowing our testimony today in support of HB829. The Maryland Legislative Coalition Climate Justice Wing, a statewide coalition of nearly 30 grassroots and professional organizations, urges you to vote favorably on HB829.

HB829 strengthens the Public Service Commission (PSC) process for issuing a certificate of public convenience and necessity (CPCN) for construction of an overhead transmission line to include analyses of "advanced transmission technologies" and alternate routes. The bill also requires each owner or operator of an overhead transmission line to submit a periodic report to the PSC that identifies: 1) areas of transmission congestion; 2) the projected or actual costs to ratepayers of that congestion; 3) the feasibility and cost of alternatives to address congestion; 4) the economic, environmental, and social issues posed by each alternative; and (5) proposes an advanced transmission technology implementation plan to address areas of congestion.

Maryland is faced with challenges regarding the adequacy of our transmission system to deliver the right amount of power to the right regions of the state. Building new transmission lines is extremely expensive and highly controversial. Case in point, Maryland ratepayers will bear the $796 million cost for making transmission upgrades to handle the planned retirement of the Brandon Shores and Wagner power plants. In addition, the Maryland Piedmont Reliability Project is extremely controversial with opposition from landowners, farmers, communities and elected officials.

Getting more out of the grid we have is a practical and cost-effective way to address these challenges. While our grid operator, PJM, and the Federal Energy Regulatory Commission have the ultimate say over transmission lines, Maryland's PSC approves aspects of the transmission line through their CPCN process. HB829 will promote greater consideration of "advanced transmission technologies" - a fancy term for infrastructure, hardware, or software that increases the capacity, efficiency, reliability, or resilience of a new or existing transmission line. Maryland will be in good company as twenty other states are taking steps to squeeze every amp possible out of existing lines (see *Utility Dive* - **21 states, DOE launch initiative to spur grid-enhancing technologies, advanced conductors**).

Grid-enhancing technologies (GETs) are a suite of software and hardware technologies that boost the ability of transmission lines to carry more power and are typically deployed faster and at a lower cost than traditional options, such as new lines and substations. GETs include:

- **Dynamic Line Ratings (DLR) -** a methodology that uses sensors to calculate the rating or maximum electricity flow allowed on a line, based on real-time weather conditions, which allows grid operators to safely boost the line capacity when weather conditions allow, rather than using the more conservative static rating.
- **Advanced Power Flow Control (APFC) -** are devices that allow grid operators to direct electricity flows to avoid congested areas of the grid – akin to air traffic control.
- **Topology Optimization (TO) -** a software technology that allows grid operators to reroute power flows to avoid congested areas, like using WAZE to find driving routes to avoid traffic.

Advanced conductors are a modern, commercialized technology that increases line capacity up to two-fold. Advanced conductors use composite cores instead of steel (making them stronger and lighter) and denser annealed aluminum for conductors instead of aluminum strands. "Reconductoring" is the term used for re-stringing existing transmission towers with new cables, without having to permit and build expensive new transmission towers and power lines.

In addition line upgrades, an applicant for a CPCN for construction of an overhead transmission line must provide an analysis of the transmission line route selection, including the risks associated with cost estimates; cost containment efforts; construction schedule; rights-of-way acquisition; outage coordination; and experience working with communities and stakeholder on route consideration.

HB829 is a common-sense and cost-effective approach to improving Maryland transmission grid. For all of these reasons, we strongly support HB829 and urge a **FAVORABLE** report in Committee.

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Adat Shalom Climate Action
Cedar Lane Unitarian Universalist Church Environmental Justice Ministry
Chesapeake Earth Holders
Chesapeake Physicians for Social Responsibility
Climate Parents of Prince George's
Climate Reality Project
ClimateXChange – Rebuild Maryland Coalition
Coming Clean Network, Union of Concerned Scientists
DoTheMostGood Montgomery County
Echotopia
Elders Climate Action
Fix Maryland Rail
Glen Echo Heights Mobilization
Greenbelt Climate Action Network
HoCoClimateAction
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Maryland Legislative Coalition
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Montgomery County Faith Alliance for Climate Solutions
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