

Transmission Modernization Work Group Meeting #1

February 10, 2026
11:00 am - 1:00 pm



Executive Order 01.01.2025.27: Building an Affordable and Reliable Energy Future

G. Transmission Modernization



Background

On December 19, 2025, Governor Wes Moore signed the “[Building an Affordable and Reliable Energy Future](#)” executive order (EO).

- **G. Transmission Modernization.** The Chair of the Energy Subcabinet shall convene a Workgroup under the Subcabinet to identify opportunities to modernize Maryland’s transmission infrastructure.

(G)(2) The Workgroup shall identify priorities and make recommendations regarding:

- (a) Transmission needs and how ATTs can cost-effectively relieve transmission congestion.**
- (b) State-Owned Right-of-Way (ROW) suitable for high-voltage transmission and co-located energy infrastructure, including battery energy storage where appropriate and permitted by federal law.



(a) Transmission needs and ATTs

1. The Workgroup shall consider mechanisms...
2. The Workgroup shall identify priority transmission corridors and projects where GETs/ATTs can cost-effectively relieve congestion and support Maryland's reliability and clean energy goals.
3. The Workgroup shall deliver recommendations to the Governor on GETs/ATTs, a process for selecting candidate projects, expected benefits, and coordination with PJM planning.
4. The MEA shall request Commission proceedings or approvals necessary to implement deployments and to align PJM regional planning with identified GETs/ATTs benefits.

(a) Transmission needs and ATTs

1. The Workgroup shall consider mechanisms to:
 - a. encourage transmission developers to evaluate and use ATTs;
 - b. create shared savings incentive mechanisms; and
 - c. for transmission and distribution applicants to
 - i. demonstrate how ATTs are evaluated in the planning and siting of new or upgraded transmission or distribution facilities;
 - ii. provide transparent justification when ATTs are not deployed;
 - iii. file regular ATT deployment plans and reporting metrics.



(a) Transmission needs and ATTs (cont.)

2. The Workgroup shall **identify priority transmission corridors and projects** where GETs/ATTs can cost-effectively relieve congestion and support Maryland's reliability and clean energy goals.
3. The Workgroup shall **deliver recommendations to the Governor** on GETs/ATTs, a process for selecting candidate projects, expected benefits, and coordination with PJM planning.
4. The **MEA shall request Commission proceedings or approvals** necessary to implement deployments and to align PJM regional planning with identified GETs/ATTs benefits.



(G)(2) The Workgroup shall identify priorities and make recommendations regarding:

- (a) Transmission needs and how ATTs can cost-effectively relieve transmission congestion.
- (b) State-Owned Right-of-Way (ROW) suitable for high-voltage transmission and co-located energy infrastructure, including battery energy storage where appropriate and permitted by federal law.
 - Any recommendations from the Workgroup shall be subject to the Secretary of Transportation's exclusive authority to approve or deny access to State-Owned Rights-of-Way.

(b) State-Owned Right-of-Way (ROW)

1. MDOT shall conduct a study for establishing siting transmission and co-located energy infrastructure along state highways and other agency-owned properties.
2. MDOT, with MEA, DNR, PPRP, and Commerce, shall participate in the study and seek market feedback through an RFI to identify properties of interest to the Utility companies.
3. The study shall evaluate the existing and planned uses of existing state-owned ROW, including but not limited to MS4, pollinator program, solar siting, future project purposes, and existing safe work operations, to identify remaining potential excess lands that may be suitable.

(b) State-Owned Right-of-Way (ROW)

4. The Workgroup shall compare the potential excess lands with properties of interest with Utility companies to **deliver a statewide inventory of state-owned ROW suitable for high-voltage transmission, distribution, and co-located energy infrastructure**, including storage where appropriate.
5. The Workgroup shall **consider mechanisms to encourage transmission developers to use suitable State-Owned ROW from the inventory** for PJM Regional Transmission Expansion Plan (“RTEP”) projects.
6. Applicable Agencies shall, in coordination with PSC Staff, **propose fast-track permitting workflows for projects sited on state-owned ROW**, maintaining strict environmental protections and community engagement requirements.



2. The Workgroup shall identify priorities and make recommendations regarding:

- (c) The Workgroup shall **explore partnerships with nonprofit organizations** to support its tasks and responsibilities.
- (d) The Administration shall undertake best efforts to **identify funding** to support the whole-of-government implementation of initiatives in this section.

Questions?

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Transmission Modernization

Maryland Energy Administration

Transmission Modernization Work Group
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MEA Mission and Vision

- Promote **clean, affordable, reliable energy** and energy-related greenhouse gas **emission reductions** to benefit Marylanders in a **just and equitable** manner.
- Advance impactful energy **policies and programs** to help achieve Maryland's clean energy and GHG reduction goals.

The Need for Transmission Modernization

- Transmission and distribution **constraints remain a key barrier to meeting growing demand**, as evidenced by steadily rising congestion costs across most grid operators.
- Advanced transmission technologies such as GETs can **reduce congestion** on existing lines and **improve efficiency** in delivering energy to customers.
- By leveraging these technologies, **utilities can make better use of existing infrastructure** and reduce the need for costly, time-consuming new transmission projects.

Regional Transmission Congestion

- Congestion occurs when available least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy, causing the price of energy in the constrained area to be higher than in an unconstrained area.
- PJM's Locational Marginal Pricing (LMP) system is designed to reflect the value of energy at a specific location and time of delivery, thus measuring the impact of congestion throughout the PJM system.
- Total congestion costs for the PJM RTO increased by 61.2 percent (\$848 million) between the first nine months of 2024 and the first nine months of 2025.

National Transmission Needs Study

- Published in October 2023, the Needs Study is an assessment of existing data and current and near-term future transmission needs **through 2040**
- Significant congestion and constraints exist in the eastern, coastal Mid-Atlantic
- High-priced areas persist in **eastern Maryland**, eastern Virginia, and both Maryland and Delaware portions of the **Delmarva Peninsula**; additional transmission to bring cost-effective generation to demand would help reduce these prices

Top 10 constraints by total congestion costs (\$/MWh)

2021 - cited in 2023 NTNS

2025 - IMM 2025 State of the Market Report

Figure 11-4 Location of the top 10 constraints by total congestion costs: 2021

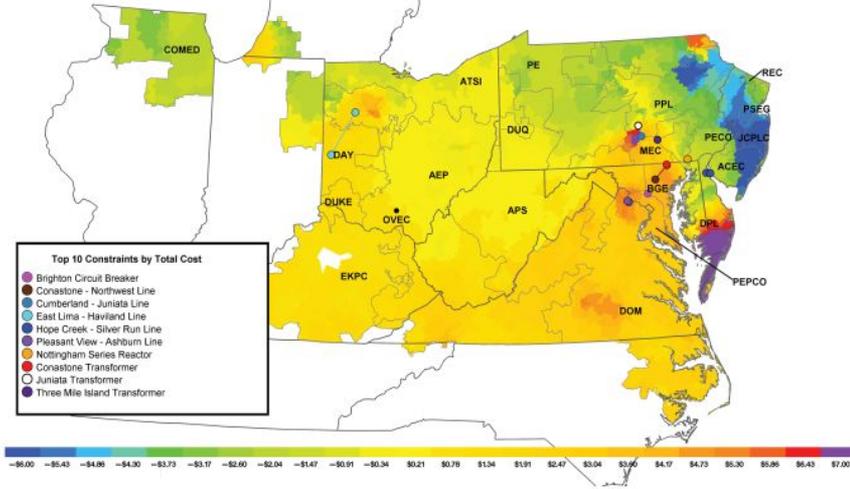
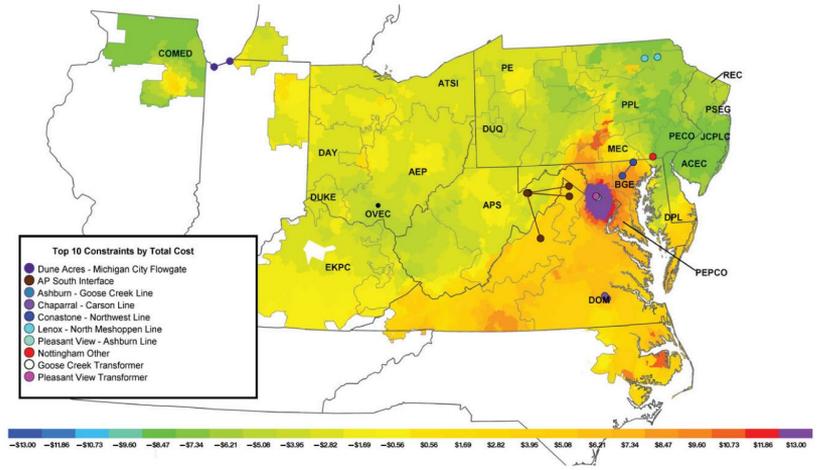


Figure 11-7 Location of the top 10 constraints by total congestion costs: January through September, 2025



National Transmission Needs Study

- Uses the term the “transmission” as a technology-neutral term and applies this term to **both wire and non-wire transmission facilities**, unless explicitly stated otherwise.
- Acknowledges the role GETs can play in **optimizing the transmission system** and complementing existing grid infrastructure.
- Notes that advanced transmission solutions could **help reduce, but are unlikely to eliminate, the need for new “poles and wires”** transmission infrastructure.
- Includes a recommendation that planning entities may wish to **incorporate advanced transmission solutions** as part of their **existing planning processes**.



FERC Order No. 1920

- Order No. 1920 required transmission providers to **consider** the following alternative transmission technologies:
 - **dynamic line ratings,**
 - **advanced power flow control devices,**
 - **advanced conductors,** and
 - **transmission switching.**
- The rehearing orders state that transmission providers must **outline and explain** how they will consider these technologies in their long-term and existing regional transmission planning to increase transparency for stakeholders.

Building A Better Grid

- The Brattle Group's paper, **Building a Better Grid: How Grid-Enhancing Technologies Complement Transmission Buildouts** outlines the following benefits of GETs before, during, and after construction:
 - Before: **GETs can reduce congestion** by at least 40%.
 - During: **Outages can be avoided**, with similar reductions in congestion as above.
 - After: **Utilization on new lines can increase** by 16%.

Tsuchida B, Bai L, and Grove J. 2023. Available at

<https://www.brattle.com/wp-content/uploads/2023/04/Building-a-Better-Grid-How-Grid-Enhancing-Technologies-Complement-Transmission-Buildouts.pdf>

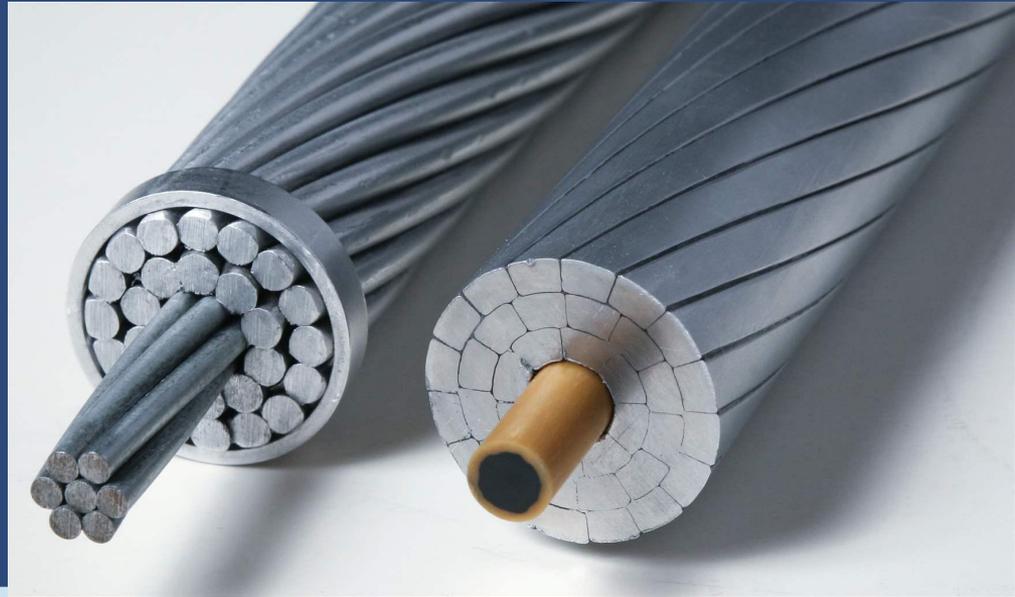
Dynamic Line Rating Activated by PPL

- In October 2022, PPL Electric Utilities activated dynamic line rating (DLR) technology to expand capacity and promote market efficiency on three historically congested 230 kV lines.
 - PPL estimated that this DLR project can **save customers \$23 million annually** in congestion costs.
- **Stakeholder Collaboration:** PJM and its stakeholders implemented manual changes to enable the PPL Electric Utilities DLR project.

Accelerating transmission capacity expansion by using advanced conductors in existing right-of-way

- Utility companies in the United States could double electric transmission capacity by 2035 by replacing existing transmission lines with those made from advanced materials, according to a September 2024 study published in the Proceedings of the National Academy of Sciences.

Emilia Chojkiewicz et. al, 2024. Available at <https://doi.org/10.1073/pnas.2411207121>



State Technical Assistance Program



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The **Resources and Assistance for State Energy Offices and Regulators** program provides public utility commissions (PUC) and state energy offices (SEO) with high-impact technical assistance and resources at three different levels of depth and duration: Help Desk, Expert Match, and Deep Dive. Current hot topic areas for technical assistance include load forecasting for data centers; FERC 1920 compliance filings; integrated grid planning; **grid modernization**; and interconnection process improvements.

SEP Reconductoring Study

- Created by the **Climate Solutions Now Act**, the **Energy Resilience and Efficiency Working Group** (EREWG) was primarily composed of representatives of electric energy companies.
- Members focused on energy infrastructure improvements, **transmission efficiency**, and battery backups.
- Recommendations included:
 - **4) a. Study on transmission line reconductoring opportunities in the State**

Thank you!

Questions?

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Overview of PPRP and the Certificate of Public Convenience and Necessity (CPCN) Process

February 10, 2026

Presented by: Ginny Rogers, PPRP

The Power Plant Research Program



- Created in 1972 as a “one-stop shop” for CPCN review and serves as a vital link between reviewing state agencies.
- Conducts comprehensive, objective assessments based on sound science of generation and transmission projects, coordinate with agencies and provides assessment and recommendation to the PSC in the CPCN process.

The Power Plant Research Program



- 8 Project Managers and 2 half-time attorneys
- Currently reviewing:
 - ~50 solar cases
 - 4 transmission line cases, including 2 greenfield lines
- Pending:
 - Battery energy storage
 - Natural gas



The CPCN Process



- A Certificate of Public Convenience and Necessity (CPCN) provides authority for a person to construct or modify a new generating station or high-voltage transmission lines and is issued by Maryland's Public Service Commission.
- PPRP is responsible for coordinating the state's comprehensive review of proposed power generating and transmission facilities and presents a consolidated relevant state agencies' position to the Public Service Commission in licensing cases (*i.e. PPRP reviews, coordinates and recommends to the PSC and the PSC grants or denies a CPCN based on the record*).

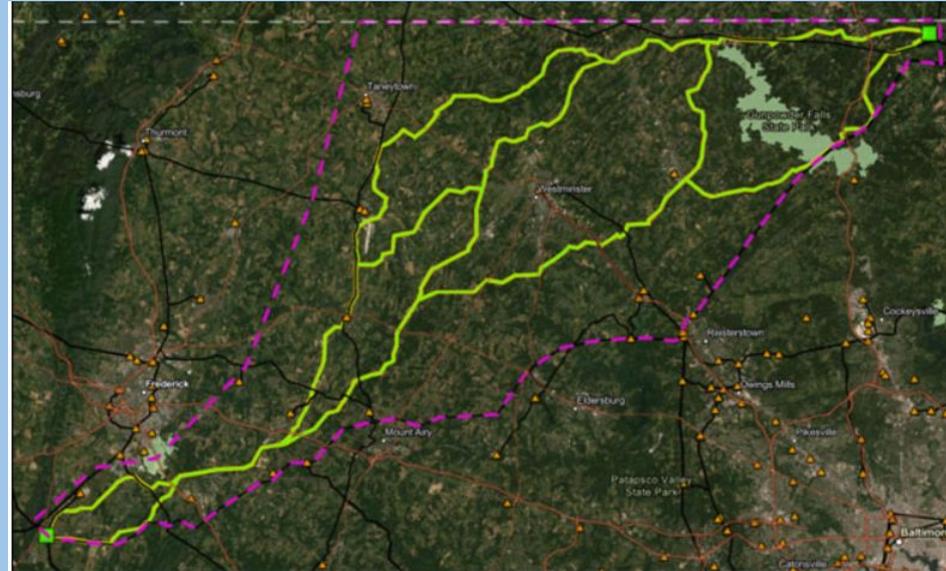
PPRP's CPCN Process



- Pre-application meeting with applicant (not required by law for Transmission).
- Application completeness review (not required by law for Transmission)
- Prehearing Conference/ set a Procedural Schedule
- Discovery and Analysis of Project and potential impacts
- Coordinate with relevant State agencies re: recommendation.
- File PAR, Secretarial Letter and RLCs and testimony w/ PSC
- Public Hearing
- Evidentiary Hearing

Transmission CPCN Differences

- Analysis specific to transmission lines (7-207(f)):
 - Alternatives
 - Physical routes
 - Alternatives
 - Advanced technologies
 - Need
 - Cost



CPCN Rqmts. Greenfield Lines



- PUA, Section 7- 209 requires consideration of existing transmission infrastructure for construction of a new transmission line, regardless of ownership of the existing line.

The CPCN Process



- Interagency Coordination
 - DNR
 - Forestry, Critical Area, Wildlife and Heritage, Parks
 - MDE
 - MEA
 - Commerce
 - MDOT
 - Planning
 - Agriculture



CPCN Waivers



- Transmission Waivers
 - Mandatory if:
 - Applicant does not need to obtain any real property or additional rights of way
 - Applicant does not need larger or higher structures to accommodate increased voltage or larger conductors
 - Discretionary (Good Cause) – at the discretion of the PSC upon a showing of good cause.

Executive Order

01.01.2025.27



- Section G. “Transmission Modernization”
Workgroup (p. 8-10)
 - Transmission Needs and ATTs
 - State-Owned ROWs and Transmission and
Generation Infrastructure

Related Legislation



- HB0040/SB201 – Advanced Transmission Technologies
- HB0143/SB0092 – Advanced Transmission Technologies
- HB0723 – Cost Containment Plans Requiring GETS
- HB0897/SB0386

Questions?



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