

Date of Meeting: December 2, 2025

Potential # 14

BOARD OF SUPERVISORS BUSINESS MEETING ACTION ITEM

SUBJECT: Dominion Energy's Heritage to Mosby High Voltage Direct Current Transmission Line Proposal

ELECTION DISTRICT(S): Countywide

STAFF CONTACT(S): Joe Kroboth, County Administration

PURPOSE: The purpose of this item is to request approval from the Board of Supervisors (Board) to submit a Letter of Support to PJM Interconnection, LLC (PJM) in relation to PJM's project proposal. The project involves developing a High Voltage Direct Current (HVDC) underground transmission line connecting Dominion Energy Virginia's (DEV) Heritage electric substation in Lawrenceville (Brunswick County), Virginia, to the Mosby substation in Loudoun County.

RECOMMENDATION(S): Staff recommends that the Board approve the draft Letter of Support (Attachment 1) to PJM and DEV, endorsing PJM's project proposal for a HVDC underground transmission line connecting DEV's Heritage electric substation in Lawrenceville (Brunswick County), Virginia, to the Mosby substation in Loudoun County.

BACKGROUND: PJM is the regional transmission organization responsible for coordinating the movement of power across the electric utility grid in the northeastern portion of the United States. PJM operates the electric grid serving the states of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia.

Aligned with the [Federal Energy Regulatory Commission \(FERC\) Order No. 1000](#), PJM annually opens a submission window for project proposals aimed at strengthening and expanding the electric grid in their defined service area. This process facilitates continuous evaluation of system operations and fosters innovative solutions to address system deficiencies and challenges tied to growing electrical demand. PJM's process has consistently proven to be effective in delivering cost-efficient solutions that meet the system's needs. The current PJM Regional Transmission Expansion Plan (RTEP) process began in November 2024 with preliminary engineering analysis and planning projection assumptions for the growth in demand. This planning facilitated a request for proposals period being opened from June 2025 through August 2025. PJM subsequently proceeded with the proposal review process and shortlisted a series of projects for further consideration. The shortlisted candidate projects will be decided at a planned December 1, 2025, meeting, with final approval by the PJM Board expected in the first quarter of 2026. County staff alerted DEV that our Board meeting schedule prohibited our ability to deliver a letter of support

prior to the December 1st PJM meeting. DEV staff advised the letter of support would still be meaningful given the final action by PJM will not occur until early 2026.

Among the project proposals received by PJM was a DEV project to construct a new HVDC transmission link¹ from Dominion's Heritage Substation located in Lawrenceville (Brunswick County), Virginia, to the Mosby Substation located at 26118 Auburn Farm Road in Loudoun County, PIN 251-38-1066. According to DEV the project components are summarized as follows:

- Originates in a power generation-rich area of DEV's service territory, terminates in Loudoun County, near DEV's largest load center:
 - Approximately 186 miles long
 - Only short-listed project that terminates directly in the load center;
- Installation is planned as 100 percent underground leveraging existing right-of-way (underground build under existing overhead transmission lines);
- Reduces community disruption;
- Adds electrical capacity with no overhead impacts;
- Deemed to be the most constructible solution; and
- Most long-term cost-effective solution to solve the growing electrical demand issue in Loudoun County.

ISSUES: Staff has identified two issues to bring to the Board's attention.

New proposal with limited information available: The details regarding the PJM project were recently shared with County staff following a November 24, 2025, request to submit a Letter of Support for the project. Since the challenges related to electrical capacity and demand growth in Loudoun County first arose in the fall of 2022, County staff and elected officials have consistently urged DEV to consider a project resembling the proposed Heritage-to-Mosby HVDC transmission line; this project is noted for its capacity to deliver substantial amounts of electrical energy while minimizing cultural and environmental impacts on nearby communities. A letter of support is to express the Board's conceptual support, pending future collaboration and public involvement.

HVDC Transmission Line Benefits: General benefits of HVDC transmission systems include being the most efficient method to transmit electrical energy over long distances, more environmentally friendly due to the permissible construction techniques, smaller footprint, proven technology used in numerous locations around the world including the United States and the ability for use of smaller conductors.

FISCAL IMPACT: There are no fiscal impacts associated with the item.

¹ PJM Proposal ID 2025-W1-326 (1B-HVDC), 2025-W1-547 (1C-HVDC), and 2025-W1-352 (1D-HVDC)

ALTERNATIVES:

1. The Board may approve the draft letter of support and direct staff to forward the communications to DEV and PJM.
2. The Board may approve the draft letter of support, with revisions, and direct staff to forward the communications to DEV and PJM.
3. The Board may choose not to approve the draft letter of support and direct staff to monitor the PJM project development process and report back to the Board should additional information become available.
4. The Board may take no action.

DRAFT MOTIONS:

- 1a. I move that the Board of Supervisors suspend the rules.

AND

- 1b. I move that the Board of Supervisors approve the Letter of Support, provided as Attachment 1 to the December 2, 2025, Board of Supervisors Business Meeting Action Item, and direct staff to send the signed letter to PJM Interconnect, LLC, and Dominion Energy Virginia.

OR

2. I move an alternate motion.

ATTACHMENT(S):

1. Draft letter to support to be sent to PJM Interconnect, LLC and Dominion Energy, Virginia.



Loudoun County

VIRGINIA

Board of Supervisors

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Date

PJM Interconnect, LLC
2450 Monroe Boulevard
Audubon, PA 19403
Attn: Mr. Sami Abdulsalam

Dominion Energy, Virginia
120 Tredegar Street
Richmond, Virginia 23219-4306

Ref: PJM project proposal 2025-W1-275(1A-HVDC), 2025-W1-326(1B-HVDC), 2025-W1-547(1C-HVDC), 2025-W1-352(1D-HVDC), Heritage to Mosby High Voltage Direct Current Transmission line

Dear PJM Interconnect, LLC & Dominion Energy, Virginia:

Since first addressing the challenges of a constrained electrical grid in Loudoun County, the Board of Supervisors has consistently urged Dominion Energy Virginia and PJM Interconnection, LLC to pursue innovative and minimally disruptive solutions to meet electrical demand, including the implementation of underground transmission networks.

After learning about the newly proposed projects on the PJM Regional Transmission Expansion Plan list, which include an underground High Voltage Direct Current (HVDC) transmission line connecting the Heritage Substation in Brunswick County, Virginia, to the Mosby Substation in Loudoun County, the Loudoun County Board of Supervisors voted on December 2, 2025, to approve this Letter of Support. These electrical infrastructure projects aim to enhance capacity in Loudoun County to sustain the growing residential and commercial developments.

The letter of support is offered with the expectation of continued collaboration and public engagement as the project advances through further planning and engineering stages. The Board of Supervisors strongly supports the advancement of these projects and encourages an affirmative vote by the PJM Board.

Thank you for considering the Board's support.

Sincerely,

Loudoun County Board of Supervisors

Phyllis J. Randall
Chair At-Large