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May 18, 2022

The Honorable Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E. Room 1A  
Washington, D.C. 20426

*Re: PJM Interconnection L.L.C., Docket Nos. ER22-957-000 and EL22-26-000  
Informational Filing on Status of Transmission Constraint in the Northern Neck Peninsula*

Dear Secretary Bose:

In compliance with the January 20, 2022 Order of the Federal Energy Regulatory Commission (“Commission”) in the above referenced proceeding,<sup>1</sup> PJM Interconnection, L.L.C. (“PJM”) submits informational update to the Federal Energy Regulatory Commission (“Commission”). More particularly, PJM is providing the Commission with an update as to the congestion patterns on the Northern Neck Peninsula since February 15, 2022. In addition, this informational filing provides an update on the ongoing work with stakeholders that may potentially further reform the existing application of the Transmission Constraint Penalty Factor.

**A. Status of Congestion Patterns on the Northern Neck Peninsula**

Since the last informational filing on congestion patterns in the Northern Neck Peninsula,<sup>2</sup> PJM continued to observe a significant number of intervals where the transmission constraint bound on the Greys Point-Harmony Village line until March 15, 2022. Specifically, there were

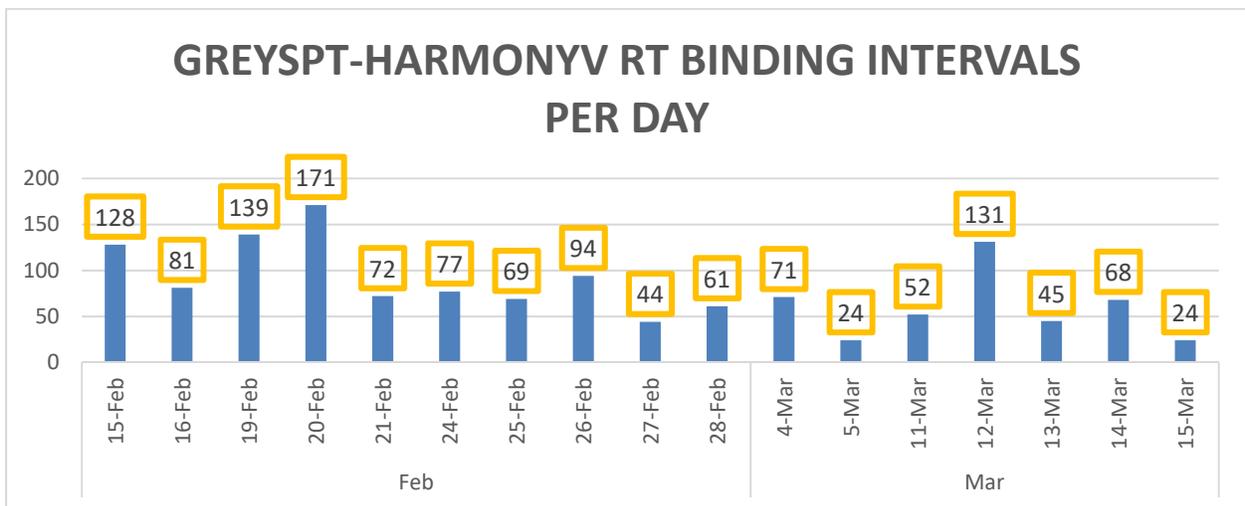
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<sup>1</sup> *PJM Interconnection, L.L.C.*, 178 FERC ¶ 61,104, at P 72 (Feb. 18, 2022) (“February 18 Order”).

<sup>2</sup> See *PJM Interconnection L.L.C.*, Informational Update on Status of Transmission Constraint in the Northern Neck Peninsula, Docket Nos. ER22-957-000 and EL22-26-000 (Feb. 15, 2022). This informational filing provided congestion patterns from February 1 through February 14, 2022.

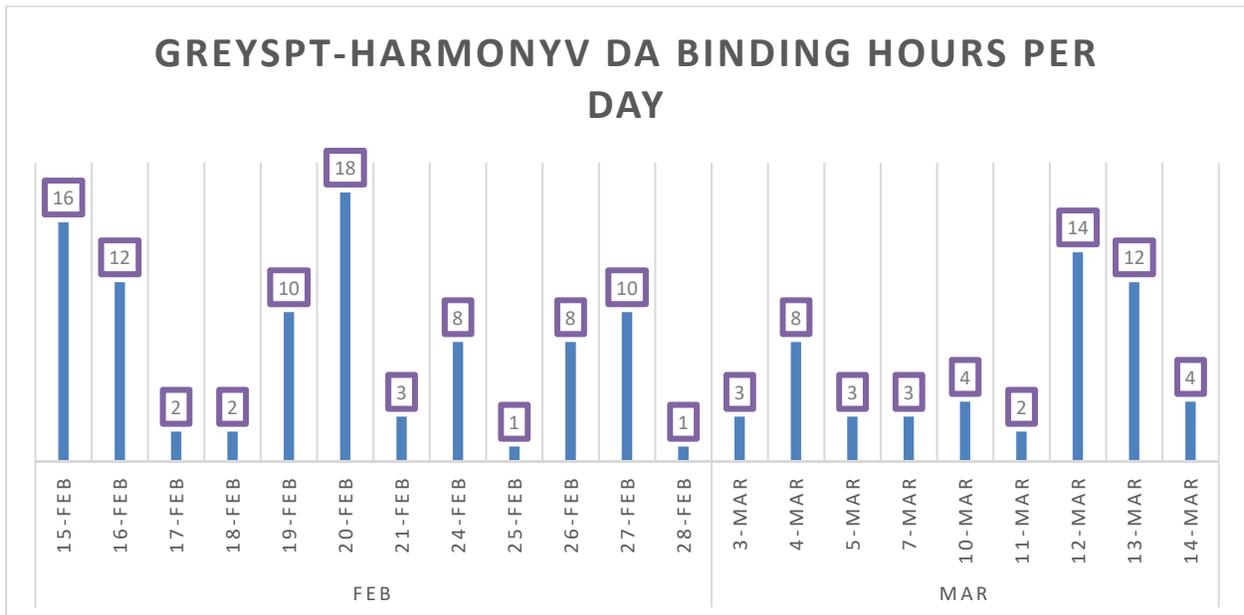
over one thousand five-minute intervals in the Real-time Energy Market where congestion on the Greys Point-Harmony Village line resulting in the constraint binding between February 15, 2022 and March 15, 2022. The number of intervals on corresponding days where the transmission constraint bound are further shown in Figure 1 below.

**Figure 1. Number of Binding Intervals in the Real-time Energy Market on Days Where the Transmission Constraint Bound on the Greys Point-Harmony Village line.**



In addition, the constraint on the Greys Point-Harmony Village line also bound in the Day-ahead Energy Market for a significant number of hours during this same time period as shown in Figure 2 below.<sup>3</sup>

**Figure 2. Number of Binding Hours in the Day-ahead Energy Market on Days Where the Transmission Constraint Bound on the Greys Point-Harmony Village line.**



Had the Commission not accepted the revised Transmission Constraint Penalty Factor rules as applied to the Northern Neck Peninsula, PJM would have been required to apply the default \$2,000/MWh Transmission Constraint Penalty Factor for each interval that the constraint bound during this time. Thus, the Commission’s February 18 Order enabled PJM to reduce the penalty factor from the default \$2,000/MWh amount to a value set by the marginal cost of the unit that is online to help alleviate the congestion (typically around \$300/MWh) on the Northern Neck Peninsula. This is the correct outcome for the congestion occurring on the Northern Neck

<sup>3</sup> The Day-ahead Energy Market is an hourly market so the figure below reflects the number of hours, rather than five-minute internals.

Peninsula given that no additional economic incentive is needed in this limited instance where (1) a long term fix to the transmission constraint is already underway and (2) no additional supply exists along with no available load response observed in the Northern Neck area significantly large enough to help resolve the congestion.

Since March 15, 2022, there has not been any additional congestion observed on the Northern Neck Peninsula due in part to milder temperatures and lower Northern Neck Peninsula load. More importantly, the Harmony Village-Greys Point and Rappahannock-White Stone 115 kV lines were taken out of service on March 28, 2022 while the Lanexa-Dunnsville 230 kV line was temporarily placed back into service. This was necessary to effectuate an upgrade that was part of the most recent Regional Transmission Expansion Plan that was approved by the PJM Board. Specifically, this project required Dominion to reductor approximately 0.57 miles of the Harmony Village-Greys Point 115 kV line and reductor approximately 0.97 miles of the Rappahannock-White Stone 115 kV line. The reductoring of these two lines increases the summer emergency rating to 237 MVA on these lines and was completed on April 26, 2022.

No congestion was observed while the Lanexa-Dunnsville 230 kV line was temporarily placed back in service as it is capable of handling more power than the Harmony Village-Greys Point and Rappahannock-White Stone 115 kV lines. Since the completion of the reductoring upgrade to the Harmony Village-Greys Point and Rappahannock-White Stone 115 kV lines and the Lanexa-Dunnsville 230 kV line was taken back out of service, congestion on the Northern Neck Peninsula has been significantly alleviated. However, it is unclear whether all congestion on the peninsula would be relieved on high peak days in the upcoming summer and/or winter periods before the completion of the Lanexa-Dunnsville 230 kV line upgrade. As a result, PJM

intends to retain the existing Tariff and Operating Agreement provisions for congestion that may continue to occur on the Northern Neck Peninsula in the meantime.

**B. Status of Ongoing Stakeholder Efforts to Potentially Reform the Application of the Transmission Constraint Penalty Factor.**

Consistent with the Commission’s February 18 Order,<sup>4</sup> PJM is reviewing the existing application of the Transmission Constraint Penalty Factor and exploring potential reforms to these rules with its stakeholders through the Energy Price Formation Senior Task Force (“EPFSTF”). Notably, the EPFSTF meetings held on April 5 and May 6, 2022 were dedicated to discussions on potential enhancements to the application of the Transmission Constraint Penalty Factor.<sup>5</sup> To date, PJM has provided education on the existing rules and is now soliciting potential solution options to amend the existing Transmission Constraint Penalty Factor provisions.<sup>6</sup> In addition to this stakeholder discussion, a new issue charge and problem statement was recently approved by PJM’s Operating Committee<sup>7</sup> in accordance with the February 18 Order,<sup>8</sup> which will review issues related to outage scheduling and coordination. This effort is intended to help mitigate impacts caused by future outages.

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<sup>4</sup> See February 18 Order at P 72.

<sup>5</sup> See Energy Price Formation Senior Task Force Agenda for April 5, 2022, available at: <https://www.pjm.com/-/media/committees-groups/task-forces/epfstf/2022/20220405/20220405-agenda.ashx>; and Energy Price Formation Senior Task Force Agenda for May 6, 2022, available at: <https://www.pjm.com/-/media/committees-groups/task-forces/epfstf/2022/20220506/20220506-agenda.ashx>. An additional meeting is scheduled for May 23, 2022, where PJM’s proposed circuit breaker package will be reviewed prior to a vote at the EPFSTF. See Energy Price Formation Senior Task Force Agenda for May 23, 2022, available at: <https://www.pjm.com/-/media/committees-groups/task-forces/epfstf/2022/20220523/20220523-agenda.ashx>

<sup>6</sup> See Transmission Constraint Penalty Factor Matrix, available at: <https://www.pjm.com/-/media/committees-groups/task-forces/epfstf/2022/20220405/20220405-item-05-tcpf-matrix.ashx>.

<sup>7</sup> See Outage Coordination Issue Charge, available at: <https://pjm.com/-/media/committees-groups/committees/oc/2022/20220512/item-06---outage-coordination---issue-charge.ashx>.

<sup>8</sup> See February 18 Order at P 73.

It is difficult to gauge if and when stakeholders will endorse a potential package to enhance the existing Transmission Constraint Penalty Factor rules. At this point, however, PJM is focused on enhancements in the form of a circuit breaker that could be applied more generally in the event there are similar congestion patterns caused by line upgrades such as the one on the Northern Neck Peninsula. Should PJM stakeholders advance such an amendment to the existing Transmission Constraint Penalty Factor rules, PJM intends to remove the existing provision related to the Northern Neck Peninsula as part of the broader circuit breaker proposal.

In the meantime, consistent with the Commission's directive, PJM will continue to provide informational updates every ninety days on both the congestion patterns on the Northern Neck Peninsula, as well as developments in the stakeholder process to potentially reform the application of the existing Transmission Constraint Penalty Factor rules more generally.

Respectfully submitted,

/s/ Chenchao Lu

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*On behalf of  
PJM Interconnection, L.L.C.*

## CERTIFICATE OF SERVICE

I hereby certify that I have this 18<sup>th</sup> day of May, 2022 caused a copy of the foregoing document to be served upon each person designated on the official service lists compiled by the Secretary in this proceeding.

/s/ Chenchao Lu

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