Immediate Need Assessment:
Cut ‘5034’ 500 kV line in and out of Bramah

First Read

Background

- PJM and the New Jersey Board of Public Utilities (NJBPU) have reached an agreement to wind-down the NJ SAA Agreement via a Mutual Termination Agreement (MTA), through which:
  - Most of the SAA Projects will be terminated and removed from the RTEP; and
  - Six SAA Projects will remain in the RTEP
- The MTA provides that:
  - if the termination of any of the projects identified for cancellation results in reliability violations, PJM will address those violations consistent with established RTEP processes
  - if FERC does not accept the MTA by June 23, 2026, the MTA is void and all of the SAA Projects will remain in the RTEP

Background (cont'd)

- PJM filed the MTA at FERC on April 23, 2026 (Docket No. ER26-2294)
- In connection with anticipated FERC acceptance of the MTA, PJM has initiated analyses to evaluate potential reliability impacts associated with the anticipated cancellation of the identified SAA Projects
- PJM has determined that the cancellation of SAA Project b3737.50 would create reliability and operational concerns associated with the timely energization and operation of the retained Bramah substation (a multi-driver substation due to its expanded scope for the PJM RTEP above and beyond what was needed for NJ SAA) and related regional upgrades
  - The Bramah substation has a DEA required in-service date of Dec. 31, 2027 and a projected in-service date of Oct. 14, 2027

Background (cont'd)

- The identified reliability need is a direct result of the anticipated post-termination transmission system configuration associated with the proposed MTA
  - Since PJM and the NJBPU only agreed to the terms of the MTA in April 2026, PJM could not have previously identified the immediate reliability need.
- PJM has determined that the identified reliability need requires a solution with an in-service date within three years or less to support the timely completion and energization of the retained regional facilities

PECO Transmission Zone: Cut-in the '5034' 500 kV line in and out of the Bramah (North Delta) 500 kV Substation

Process Stage: Need Driver & First Read

Assumption Reference: 2025 RTEP Assumptions

Models Used for Analysis: 2028 & 2030 Base Cases

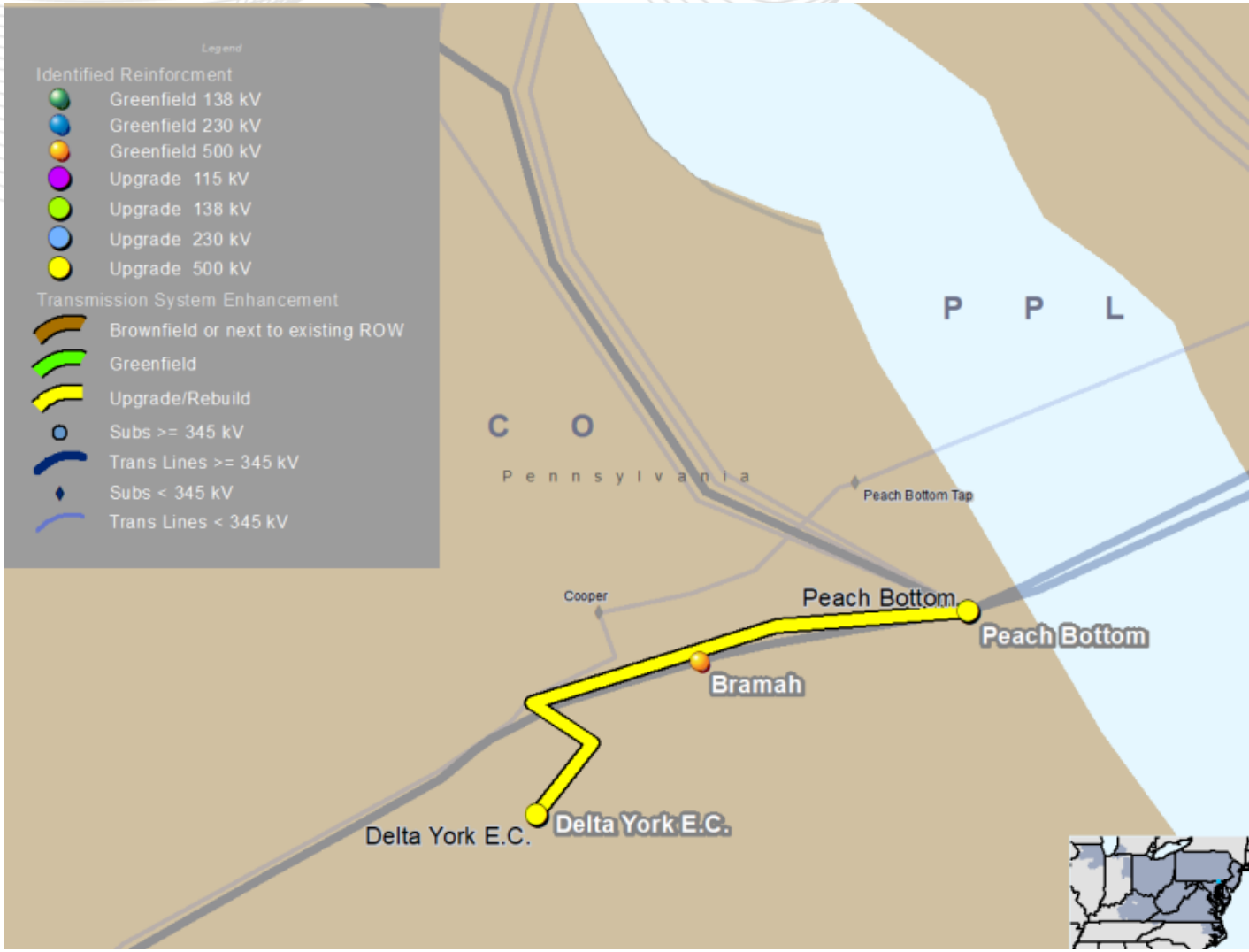
Proposal Window Exclusion: Immediate Need

Problem Statement:

NJ SAA Project b3737.50 involves bringing the Peach Bottom-Delta York 500 '5034' kV line "in and out" of Bramah substation by partially demolishing the 5034 line to construct a new Peach Bottom – Bramah – Delta York 500 kV line, with 0.87 miles of cut-in and cut-out lines. (**Projected In-Service Date:** 10/14/2027, **Estimated Cost:** $12M)

Cancellation of the b3737.50 project will result in the removal of the 500 kV line termination into Bramah that is intended to energize the Bramah substation resulting in a delay to the Bramah substation in-service date, as there are no other 500 kV line terminations into Bramah substation that will be in-service in the required timeframe. A delay is impactful because the Bramah substation project is required to mitigate generator deliverability violations in the Peach Bottom – Conastone area and provide needed upgrades to the Peach Bottom Conaston 500kV corridor that are observed in the RTEP study cases starting in 2028.

In summary, PJM has identified a reliability-driven need associated with transmission system configuration after the termination of the b3737.50 project.



PECO Transmission Zone: Cut-in the '5034' 500 kV line in and out of the Bramah (North Delta) 500 kV Substation

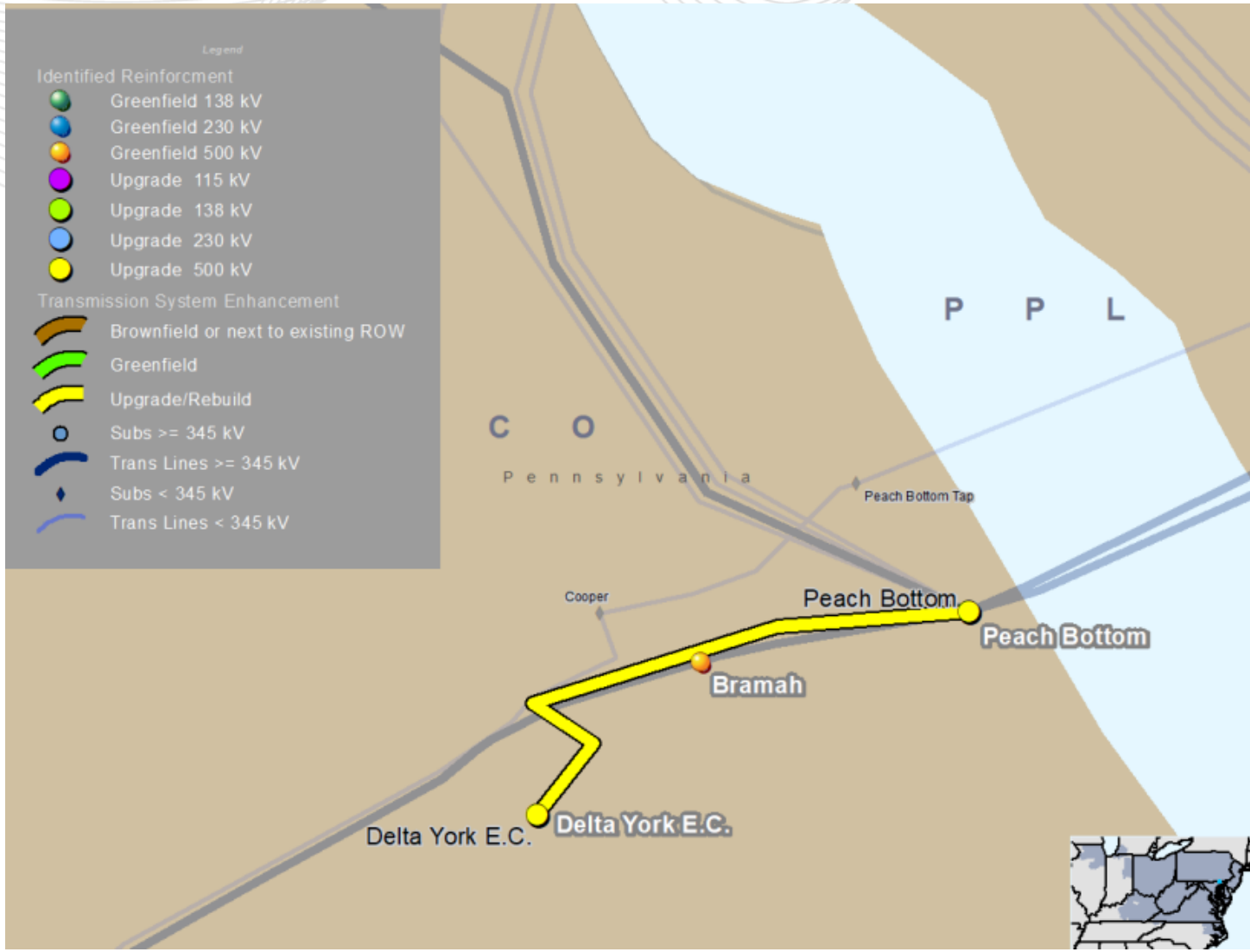
Proposed Solution*:
Construct transmission facilities necessary to support the timely energization of the Bramah substation by bringing the Peach Bottom-Delta York 500 '5034' kV line "in and out" of Bramah substation by partially demolishing the 5034 line to construct a new Peach Bottom – Bramah – Delta York 500 kV line, with 0.87 miles of cut-in and cut-out lines.

Estimated Cost: $11M

Alternatives:
PJM has not identified any other feasible alternative capable of meeting the required in-service timing. This proposed solution ensures efficient utilization of existing ROWs to enhance the capability of the Peach Bottom-Conastone 500kV corridor, enables the Brandon Shores deactivation mitigation projects, and connects the Delta York station to the upgraded 500kV corridor at Bramah.

Required IS Date: 10/14/2027
Projected IS Date: 10/14/2027

*This solution will only be required if FERC accepts the MTA by June 23, 2026, as requested



Conclusion and Next Steps

- PJM has identified that if FERC accepts the MTA, the cancellation of b3737.50 will cause an immediate reliability need requiring timely completion of transmission upgrades associated with the energization of the Bramah substation (projected to go in-service in October 2027)

- PJM has not identified any other transmission or non-transmission solutions that would address the immediate reliability need

- Subject to FERC acceptance of the MTA by June 23, 2026, PJM has determined to designate PECO with construction responsibility for the proposed solution, without a window, to address the immediate reliability need

Immediate Need Statement Posted

- Need Statement posted under the June 2, 2026 TEAC materials as an Informational item.
- PJM welcomes all stakeholders input and comments on its “Immediate Need Assessment.”

Contact

Facilitator:
Eric Hsia, Eric.Hsia@pjm.com

Secretary:
Joshua Stephenson, Joshua.Stephenson@pjm.com

SME:

Augustine Caven, Augustine.Caven@pjm.com
Michael Herman, Michael.Herman@pjm.com

‘5034’ 500 kV Line Cut-in Immediate Need Assessment

Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com

Revision History

Version No.	Date	Description
1	May 22, 2026	• Initial slides posted

PROTECT THE POWER GRID

THINK BEFORE YOU CLICK!

pjm

BE ALERT TO MALICIOUS PHISHING EMAILS

Report suspicious email activity to PJM.

Call (610) 666-2244 or email it_ops_ctr_shift@pjm.com