Reliability Analysis Update

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PJM Transmission Planning

Transmission Expansion Advisory Committee
April 30, 2024

Outline

- 2023 Window 2 proposal summary
- 2024 Window 1 updates
- 2023 Window 2 DOM project first read
- PPL upgrade (B3800.3) scope change

2023 RTEP Window 2 Updates

Baseline Reliability Projects

2023 RTEP Window 2 – Background

2023 Window 2 opened on March 6 and closed on April 5

Window to address the following needs:		
▪ AEP forecasted load growth in the Columbus, Ohio area.	▪ Thermal issues in PSEG around Hinchmans area	▪ 500kV line #588 Fentress -Yadkin End of Life (EOL) in Dominion

- 2022 Window 3 selected solutions are included in the base cases.

PJM received 21 proposals from six entities (15 Upgrades and 6 Greenfield)

Three non-incumbents:		
AEP Footprint: 3 x proposing entities	PSEG Footprint: 2 x proposing entities	Dominion Footprint (EOL): No competing proposals
Proposal costs range from $0.449M to $229.3M		

Five proposals with cost containment

2024 RTEP Window 1 Updates

Baseline Reliability Projects

2024 Window 1 – Progress and Timeline Update

- Current schedule
  - Internal initial 2029 model review still ongoing
  - Preliminary model posted on April 19th, 2024
  - Preliminary model posting to update models as needed basis – upcoming posting will be in early May
  - Requesting FERC Form 715 analysis results from transmission owners by the end of May
  - Targeting open 2024 RTEP proposal window 1 in the mid of July

2024 7/8-Year RTEP Window

Baseline Reliability Projects

2024 7/8-Year RTEP Window - NJ OSW 2.0 Update

- NJ SAA 2.0 Window – Planned to open in July for 90 days
  - Will use an 8-year RTEP needs and NJ SAA OSW integration impacts
    - Deliverability of full 7,500 MWs of SAA 1.0 capability (remaining 3,742 MW beyond the 2028-29 level) of generation from SAA 1.0 expected to be in service 2031-2032 (reliability)
    - Account for load growth (5 to 8 years gap) and longer–term impacts of deactivations
    - New 3,500 MW of generation requested with SAA 2.0 expected in service starting 2033 (public policy)
  - Solutions will focus on meeting both needs and opportunities for multi-driver solutions
  - Targeting NJ BPU will accept solutions in Spring 2025.
  - Solutions presented to the PJM Board targeted for July 2025

2023 RTEP Window 2 First Review

Baseline Reliability Projects

Dominion Transmission Zone: Baseline 500kV Line #588 Rebuild (End of Life Criteria)

Process Stage: First Review

Criteria: Dominion's FERC 715 Planning Criteria (C.2.9 – End of Life Criteria)

Assumption Reference: FERC 715 Planning Criteria

Model Used for Analysis: 2023 Series 2028 RTEP cases

Problem Statement:

- Line #588 is approximately 13.66 miles of 500kV single circuit transmission line from Yadkin to Fentress. It was built on series 5 Corten towers that have been problematic for many years and fallen into a pattern where Dominion can expect to return for future maintenance if the line is not rebuilt by the requested target date. These structures were installed in 1975 and are approaching the end of service life.
- Third party assessment has determined that the towers have corroded to a point where they exhibit pre-mature thinning of structure members and pack-out at joints. If left unaddressed these issues could result in failure of structures and potentially the collapse of the line. (DOM-O1)

Existing Facility Rating: 3397/3426 MVA Summer (Normal/Emergency)

3984/4018 MVA Winter (Normal/Emergency)

Proposed Facility Rating: 4357/4357 MVA Summer (Normal/Emergency)

5155/5155 MVA Winter (Normal/Emergency)

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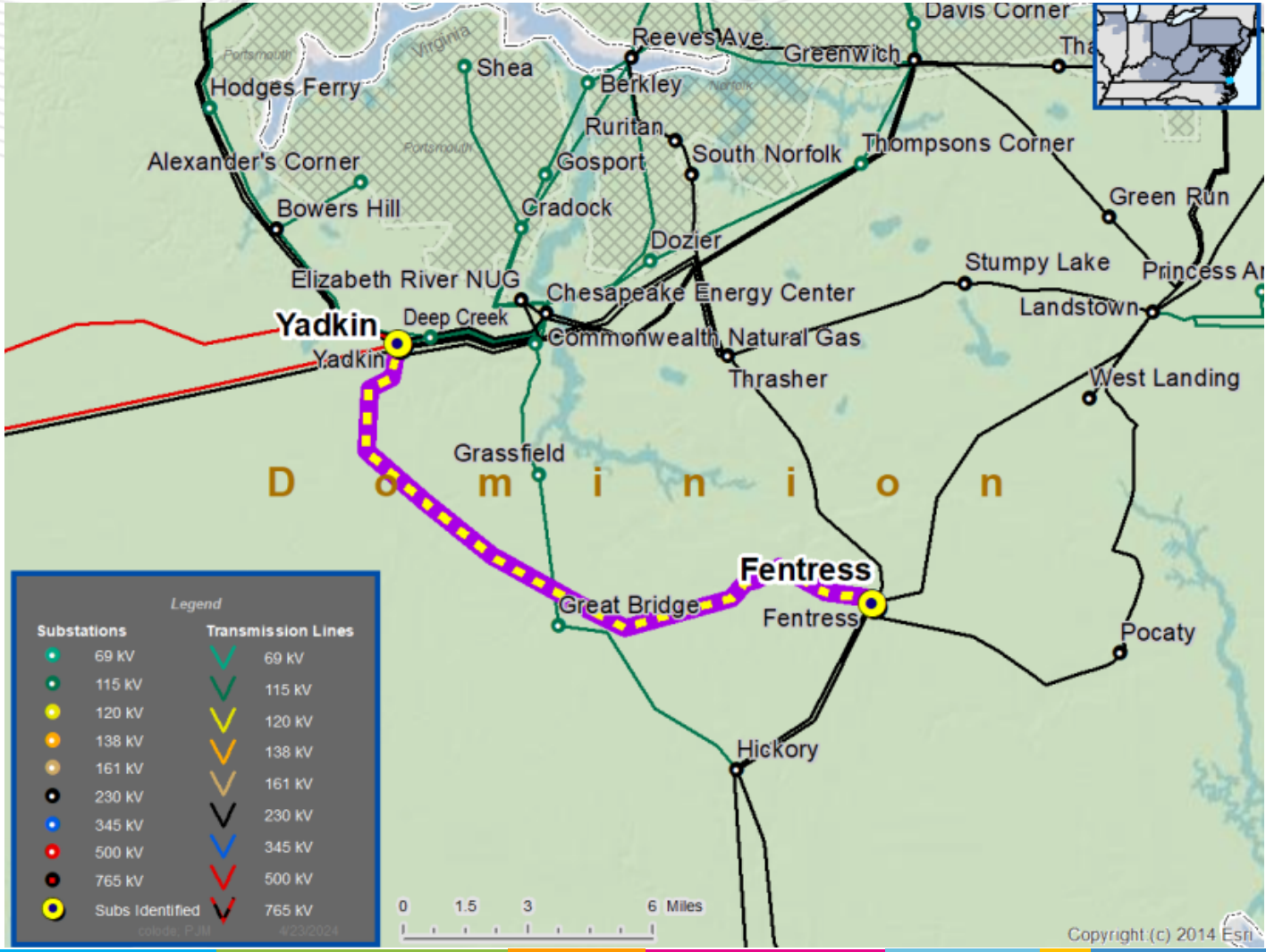


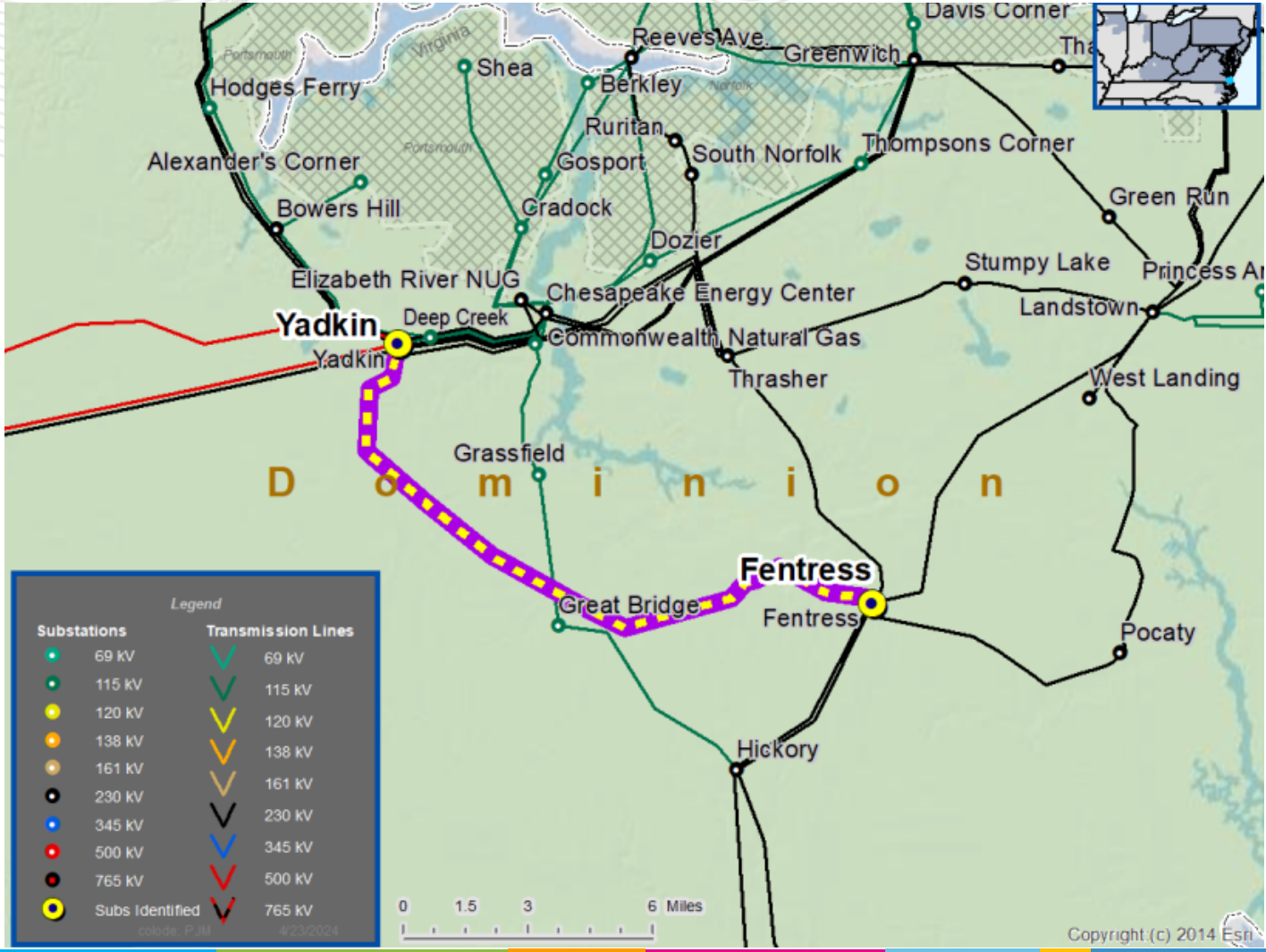
Dominion Transmission Zone: Baseline 500kV Line #588 Rebuild (End of Life Criteria)

Proposed Solution: Proposal 2023-W2-367:

- Rebuild approximately 13.51 miles of 500 kV line #588 from structure 588/184 inside Yadkin substation to structure 588/254 outside of Fentress substation.
- Line #588 terminal equipment at Yadkin substation will be upgraded to a rating of 5000A. Since the new 500kV line will be using fiber, the wave trap will be removed and the line protection scheme will be updated.
- At Fentress substation, since the new 500kV line will be using fiber, the wave trap will be removed and the line protection scheme will be updated.

Estimated Cost: $79.7 M

Required In-Service: 6/1/2028



2022 Window 3 Upgrades Scope Change Or Modify

Baseline Reliability Projects

PPL Transmission Zone: Baseline
Otter Creek – Conastone 500 kV (PPL portion)

Scope change for B3800.3 (Otter Creek – Conastone 500 and 230 kV)

Part of the 2022 Window 3 – PPL proposed to build a new 500 kV line from Otter Creek – Conastone by upgrading and replacing structures on the existing line corridor.

Current Proposed project:

Build New 500kV AC line from the new Otter Creek (Chanceford) 500 kV switchyard – towards PA/MD border ~12.5 miles

- Rebuild the existing Otter Creek - Conastone 230 kV line to become a double-circuit 500 kV and 230 kV line

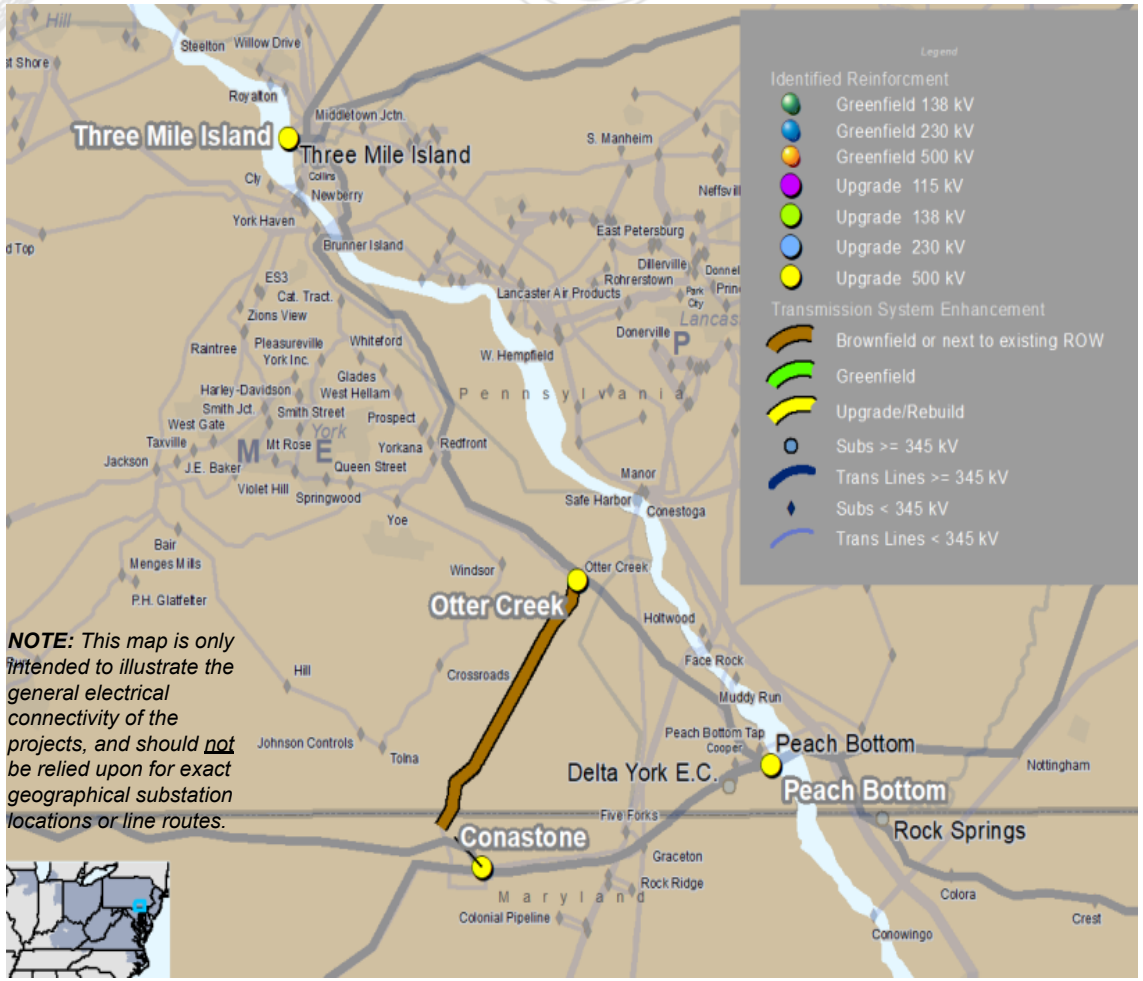
New Proposed Project:

Build New 500kV AC line from the new Otter Creek (Chanceford) 500 kV switchyard – towards PA/MD border ~12.5 miles

- Rebuild the existing Otter Creek - Conastone 230 kV line to become a double-circuit 500 kV line, operate Conastone circuit at 230 kV initially

Additional Cost Estimate: $19.5 M

Total Proposed Cost Estimate: $102.8 M

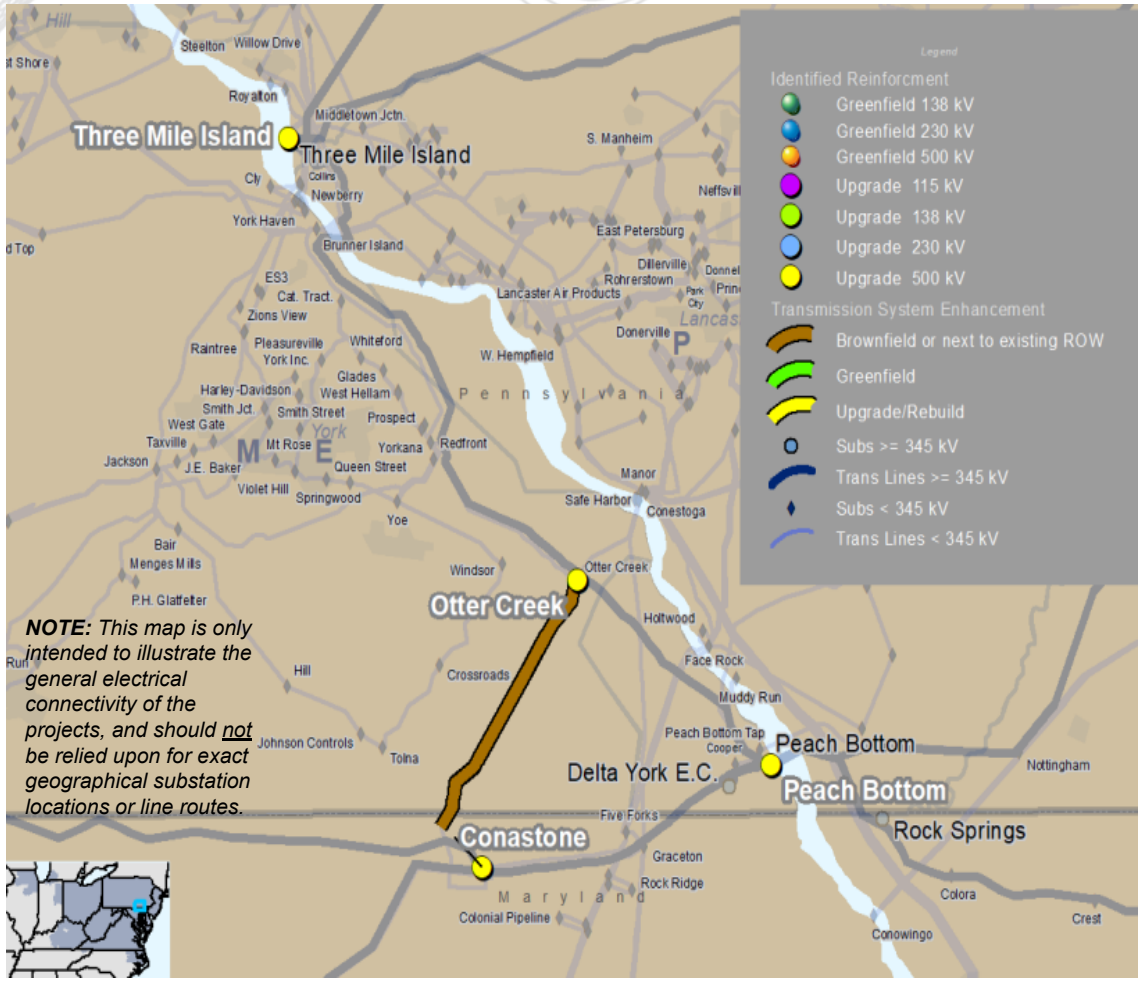


PPL Transmission Zone: Baseline
Otter Creek – Conastone 500 kV (PPL portion)

Scope change for B3800.3 (Otter Creek – Conastone 500 and 230 kV)

<u>Reason for Scope change:</u>

- **To prepare for future additional 500kV needs in corridor with minimum work**
  - Critical North-South corridor between PA and MD
  - Scalable to future needs and utilization
- **Minimize future impacts to the local community**
  - Largely uses existing ROW with minor expansion
  - Limit work in same area to the extent achievable
- **Efficiencies**
  - Incremental additional investment to support future synergies



PPL/ME/PECO Baseline Upgrades Scope Modification

Upgrade Id	Previous Project Description	Transmission Owner	Previous Cost Estimate ($M)	Upgrade Id	New Project Description	Transmission Owner	New Cost Estimate ($M)
b3800.2	Break the existing TMI-Peach Bottom 500 kV line and re-terminate into adjacent Otter Creek 500 kV Switchyard.	ME	18.3	b3800.2	Break the existing TMI-Peach Bottom line within the existing right of way and install new structures re-routing the line towards Chanceford Switchyard taps being constructed by PPL	ME	7.43
N/A*	N/A*	N/A*	N/A*	b3800.53	Construct a double-circuit 500kV line from the existing TMI-Peach Bottom 500kV right-of-way to the proposed Chanceford Switchyard approximately 1.0 miles in length	PPL	12.59
b3800.5	Peach Bottom-TMI 500 kV - Replace terminal equipment at Peach Bottom.	PECO	0	b3800.5	Peach Bottom-TMI 500 kV - Replace terminal equipment at Peach Bottom (install new line terminal relays and communication infrastructure within Peach Bottom and along the 5007)	PECO	2.5

* Upgrade was originally assigned to MetEd (B3800.2) and now portion of the scope is assigned to PPL (B3800.53)

Appendix
2023 RTEP Window 2 Proposals

2023 RTEP Window 2 Proposals

Proposal ID #	Project Type	Cluster	Project Description	kV Level	Total Componet Cost	Flowgate
367	UPGRADE	N/A	This project serves to rebuild approximately13.51 miles of 500 kV line 588 from structure 588/184 inside Yadkin Substation to structure 588/254 outside of Fentress Substation. In addition, there will be a rearrangement of Line 565 at Yadkin substation to create room for the additional Line 5XX circuit. The 5XX scope is associated with a different project. For this rebuild, the existing structures shall be replaced one for one within the existing ROW, using custom engineered steel poles that allows for the construction of a second 500 kV line, 5XX, being built within the same ROW as part of the scope for a different project. Line #588 will be rebuilt with 3-phase triple bundled 1351.5 ACSR (45/7) “Dipper” conductor and two (2) DNO-10100 shield wire.	500	$ 79,698,658.00	2023W2-DOM-O1
627	GREENFIELD	Cluster 1	New 230kV XLPE Circuit using (345kV rated 5000kcmil cable) from Jackson Road 230kV Station to Cedar Grove 230kV Station	230	$ 84,579,593.69	2023W2-PSEG-T15, 2023W2-PSEG-T14, 2023W2-PSEG-T13, 2023W2-PSEG-T9, 2023W2-PSEG-T8, 2023W2-PSEG-T5, 2023W2-PSEG-T6, 2023W2-PSEG-T3, 2023W2-PSEG-T4, 2023W2-PSEG-T1, 2023W2-PSEG-T10, 2023W2-PSEG-T2
998	GREENFIELD	Cluster 1	Construct a new dual manhole and conduit system out of Jackson Rd on Madison Street to Riverview Drive. The existing E-759 would be reconfigured to utilize the new duct back to Jackson Rd. The existing N-664 would be rerouted underground between Rt. 80 and Rt. 46 off ramp. This would free up part of the existing E-759 and N-664 circuit to be reconfigured and tap into the I-633. The other new circuit of approximately 4.5mi would exit Jackson Road underground and rise up overhead before the Vreeland Ave Railroad Crossing. The circuit would then continue overhead on the other side of Riverview Drive to run a new pole line and create a new circuit between Jackson and Cedar Grove. Open positions will be utilized at Jackson Road and Cedar Grove to accommodate the new circuits. The breakers at Cedar Grove will need to be replaced with 3000A continuous 63kA fault duty breakers.	69	$ 60,563,455.18	2023W2-PSEG-T15, 2023W2-PSEG-T14, 2023W2-PSEG-T13, 2023W2-PSEG-T9, 2023W2-PSEG-T8, 2023W2-PSEG-T5, 2023W2-PSEG-T6, 2023W2-PSEG-T3, 2023W2-PSEG-T4, 2023W2-PSEG-T1, 2023W2-PSEG-T10, 2023W2-PSEG-T2

2023 RTEP Window 2 Proposals

Proposal ID #	Project Type	Cluster	Project Description	kV Level	Total Componet Cost	Flowgate
496	GREENFIELD	Cluster 1	New 230kV XLPE Circuit using (230kV rated 3500kcmil cable) from Jackson Road 230kV Station to Cedar Grove 230kV Station	230	$ 78,893,180.69	2023W2-PSEG-T15, 2023W2-PSEG-T14, 2023W2-PSEG-T13, 2023W2-PSEG-T9, 2023W2-PSEG-T8, 2023W2-PSEG-T5, 2023W2-PSEG-T6, 2023W2-PSEG-T3, 2023W2-PSEG-T4, 2023W2-PSEG-T1, 2023W2-PSEG-T10, 2023W2-PSEG-T2
716	GREENFIELD	Cluster 1	Build a 7.6 mile 230 kV underground line from the JCPL Montville Substation to the PSEG Jackson Rd Substation. Expand the Montville 230 kV to a breaker and a half configuration by adding one new bay on the west side of the yard to terminate the new line. At Jackson Rd, terminate the new line in the open bay position next to transformer 40.	230	$ 211,082,384.60	2023W2-PSEG-T15, 2023W2-PSEG-T14, 2023W2-PSEG-T13, 2023W2-PSEG-T9, 2023W2-PSEG-T8, 2023W2-PSEG-T5, 2023W2-PSEG-T6, 2023W2-PSEG-T3, 2023W2-PSEG-T4, 2023W2-PSEG-T1, 2023W2-PSEG-T10, 2023W2-PSEG-T2
343	GREENFIELD	Cluster 2 - Scenario	This proposal includes the following system components: - Jester greenfield 765/345kV station approximately 18.5 miles south of Marysville 765kV and 12 miles west of Hayden 345kV station. This station contains a 765/345kV transformer with the following thermal ratings: 2742 / 3097 / 3097 / 3296 MVA (SN/SE/WN/WE) - Approx 12 miles of greenfield 345kV double circuit transmission line between Jester greenfield 765/345kV Station and Hayden 345kV stations. Each circuit is composed of 2 bundle, 1033 ACSR "Curlew" conductors, wired as a single-circuit 6-wire line.	765/345	$ 229,310,790.00	2023W2-N1-ST21, 2023W2-N1-ST20, 2023W2-N1-ST23, 2023W2-N1-ST22, 2023W2-N1-ST25, 2023W2-GD-S165, 2023W2-N1-ST24, 2023W2-N1-ST27, 2023W2-N1-ST26, 2023W2-N2-ST32, 2023W2-N1-ST19, 2023W2-N2-ST33, 2023W2-N2-ST30, 2023W2-N2-ST31, 2023W2-N2-ST38, 2023W2-N2-ST39, 2023W2-N2-ST36, 2023W2-N2-ST37, 2023W2-N2-ST34, 2023W2-N2-ST35, 2023W2-GD-S170, 2023W2-N1-ST10, 2023W2-N1-ST12, 2023W2-N1-ST11, 2023W2-N1-ST14, 2023W2-N1-ST13, 2023W2-N1-ST16, 2023W2-N1-ST15, 2023W2-N1-ST18, 2023W2-N1-ST17, 2023W2-N1-ST1, 2023W2-N2-ST21, 2023W2-N2-ST22, 2023W2-N1-ST3, 2023W2-N1-ST2, 2023W2-N2-ST20, 2023W2-N1-ST5, 2023W2-N1-WT1, 2023W2-N1-ST4, 2023W2-N1-ST7, 2023W2-N1-WT3, 2023W2-N1-ST6, 2023W2-N1-WT2, 2023W2-N2-ST29, 2023W2-N2-ST27, 2023W2-N2-ST28, 2023W2-N2-ST25, 2023W2-N2-ST26, 2023W2-N2-ST23, 2023W2-N2-ST24, 2023W2-GD-S4, 2023W2-GD-S3, 2023W2-GD-S186, 2023W2-N2-WT8, 2023W2-N2-WT7, 2023W2-N2-ST50, 2023W2-N2-WT6, 2023W2-N2-ST9, 2023W2-N2-WT5, 2023W2-N2-ST8, 2023W2-N2-WT4, 2023W2-N2-ST7, 2023W2-N2-WT3, 2023W2-GD-W154, 2023W2-GD-W155, 2023W2-GD-W153, 2023W2-GD-W156, 2023W2-GD-S115, 2023W2-GD-S114, 2023W2-N2-ST43, 2023W2-N2-ST44, 2023W2-N2-ST41, 2023W2-N2-ST42, 2023W2-N2-ST40, 2023W2-N2-ST49, 2023W2-N2-ST47, 2023W2-N2-ST48, 2023W2-GD-S6, 2023W2-N2-ST45, 2023W2-N2-ST46, 2023W2-GD-W162, 2023W2-GD-W165, 2023W2-GD-W163, 2023W2-GD-W164, 2023W2-GD-S122, 2023W2-GD-S121, 2023W2-GD-S123, 2023W2-GD-S126, 2023W2-GD-S125, 2023W2-GD-S116, 2023W2-GD-W59, 2023W2-GD-W58, 2023W2-N1-WT10, 2023W2-N1-WT13, 2023W2-N1-WT14, 2023W2-N1-WT11, 2023W2-N1-WT12, 2023W2-GD-W213, 2023W2-N2-ST6, 2023W2-N2-WT2, 2023W2-GD-W214, 2023W2-N2-ST5, 2023W2-N2-WT1, 2023W2-N2-ST4, 2023W2-N2-ST3, 2023W2-GD-S135, 2023W2-GD-W217, 2023W2-N2-ST2, 2023W2-N2-ST1, 2023W2-GD-W215, 2023W2-GD-W216, 2023W2-GD-S127, 2023W2-N1-ST9, 2023W2-N1-WT5, 2023W2-GD-S141, 2023W2-N1-ST8, 2023W2-N1-WT4, 2023W2-N1-WT7, 2023W2-N1-WT6, 2023W2-N1-WT9, 2023W2-N1-WT8, 2023W2-N2-ST11, 2023W2-N2-ST10, 2023W2-N2-ST17, 2023W2-N2-ST16, 2023W2-N2-ST19, 2023W2-N2-ST18, 2023W2-N2-ST13, 2023W2-N2-ST12, 2023W2-N2-ST15, 2023W2-N2-ST14, 2023W2-GD-W19, 2023W2-GD-W25

2023 RTEP Window 2 Proposals

Proposal ID #	Project Type	Cluster	Project Description	kV Level	Total Component Cost	Flowgate
27	GREENFIELD	Cluster 2 - Scenario	The Barron transmission project consists of a the following components: 1) new 765/345kV Barron substation, 2) A new double circuit 345kV transmission line from the new Barron Substation to the existing Hayden Substation, 3) Splitting the existing Conesville - Hyatt 345kV single circuit line and looping it into the existing Vassel substation, 4) Sag studys for the Genoa - Westar and Genoa - Spring Road 138kV transmission lines to increase their ratings, 5) Reconductoring the existing Maliszewski - Polaris and Polaris - Westar 138kV transmission lines.	765/345	$ 203,829,932.00	2023W2-N1-ST21, 2023W2-N1-ST20, 2023W2-N1-ST23, 2023W2-N1-ST22, 2023W2-N1-ST25, 2023W2-GD-S165, 2023W2-N1-ST24, 2023W2-N1-ST27, 2023W2-N1-ST26, 2023W2-N2-ST32, 2023W2-N1-ST19, 2023W2-N2-ST33, 2023W2-N2-ST30, 2023W2-N2-ST31, 2023W2-N2-ST38, 2023W2-N2-ST39, 2023W2-N2-ST36, 2023W2-N2-ST37, 2023W2-N2-ST34, 2023W2-N2-ST35, 2023W2-N1-ST10, 2023W2-N1-ST12, 2023W2-N1-ST11, 2023W2-N1-ST14, 2023W2-N1-ST13, 2023W2-N1-ST16, 2023W2-N1-ST15, 2023W2-N1-ST18, 2023W2-N1-ST17, 2023W2-N1-ST1, 2023W2-N2-ST21, 2023W2-N2-ST22, 2023W2-N1-ST3, 2023W2-N1-ST2, 2023W2-N2-ST20, 2023W2-N1-ST5, 2023W2-N1-WT1, 2023W2-N1-ST4, 2023W2-N1-ST7, 2023W2-N1-WT3, 2023W2-N1-ST6, 2023W2-N1-WT2, 2023W2-N2-ST29, 2023W2-N2-ST27, 2023W2-N2-ST28, 2023W2-N2-ST25, 2023W2-N2-ST26, 2023W2-N2-ST23, 2023W2-N2-ST24, 2023W2-GD-S4, 2023W2-GD-S3, 2023W2-GD-S186, 2023W2-N2-WT8, 2023W2-N2-WT7, 2023W2-N2-ST50, 2023W2-N2-WT6, 2023W2-N2-ST9, 2023W2-N2-WT5, 2023W2-N2-ST8, 2023W2-N2-WT4, 2023W2-N2-ST7, 2023W2-N2-WT3, 2023W2-GD-W154, 2023W2-GD-W155, 2023W2-GD-W153, 2023W2-GD-W156, 2023W2-GD-S115, 2023W2-GD-S114, 2023W2-N2-ST40, 2023W2-N2-ST49, 2023W2-N2-ST47, 2023W2-N2-ST48, 2023W2-GD-S6, 2023W2-N2-ST45, 2023W2-N2-ST46, 2023W2-GD-W162, 2023W2-GD-W165, 2023W2-GD-W163, 2023W2-GD-W164, 2023W2-GD-S122, 2023W2-GD-S121, 2023W2-GD-S123, 2023W2-GD-S126, 2023W2-GD-S125, 2023W2-GD-S116, 2023W2-GD-W59, 2023W2-N1-WT10, 2023W2-N1-WT13, 2023W2-N1-WT14, 2023W2-N1-WT11, 2023W2-N1-WT12, 2023W2-N2-ST6, 2023W2-N2-WT2, 2023W2-GD-W214, 2023W2-N2-ST5, 2023W2-N2-WT1, 2023W2-N2-ST4, 2023W2-N2-ST3, 2023W2-GD-S135, 2023W2-GD-W217, 2023W2-N2-ST2, 2023W2-N2-ST1, 2023W2-GD-W215, 2023W2-GD-W216, 2023W2-GD-S127, 2023W2-N1-ST9, 2023W2-N1-WT5, 2023W2-GD-S141, 2023W2-N1-ST8, 2023W2-N1-WT4, 2023W2-N1-WT7, 2023W2-N1-WT6, 2023W2-N1-WT9, 2023W2-N1-WT8, 2023W2-N2-ST11, 2023W2-N2-ST10, 2023W2-N2-ST17, 2023W2-N2-ST16, 2023W2-N2-ST19, 2023W2-N2-ST18, 2023W2-N2-ST13, 2023W2-N2-ST12, 2023W2-N2-ST15, 2023W2-N2-ST14, 2023W2-GD-W19, 2023W2-GD-W25
117	UPGRADE	Cluster 2 - Scenario	Connect and energize a second 765/345 kV bank at Vassell station. The proposal will perform work to be able to energize spare 765/345 kV units at the station to be operated normally in. Breakers will be added to the 765 kV and 345 kV yards at Vassell along with a 345 kV transformer tie being constructed between the two yards. This will establish a second 765/345 kV transformer at the station. Along with the work at Vassell, 765 kV circuit breaker 'D' at Maliszewski station will be replaced.	765/345	$ 33,728,938.70	2023W2-N1-ST21, 2023W2-N1-ST20, 2023W2-N1-ST23, 2023W2-N1-ST22, 2023W2-N1-ST25, 2023W2-GD-S165, 2023W2-N1-ST24, 2023W2-N1-ST27, 2023W2-N1-ST26, 2023W2-N2-ST32, 2023W2-N1-ST19, 2023W2-N2-ST33, 2023W2-N2-ST30, 2023W2-N2-ST31, 2023W2-N2-ST38, 2023W2-N2-ST39, 2023W2-N2-ST36, 2023W2-N2-ST37, 2023W2-N2-ST34, 2023W2-N2-ST35, 2023W2-N1-ST10, 2023W2-N1-ST12, 2023W2-N1-ST11, 2023W2-N1-ST14, 2023W2-N1-ST13, 2023W2-N1-ST16, 2023W2-N1-ST15, 2023W2-N1-ST18, 2023W2-N1-ST17, 2023W2-N1-ST1, 2023W2-N2-ST21, 2023W2-N2-ST22, 2023W2-N1-ST3, 2023W2-N1-ST2, 2023W2-N2-ST20, 2023W2-N1-ST5, 2023W2-N1-WT1, 2023W2-N1-ST4, 2023W2-N1-ST7, 2023W2-N1-WT3, 2023W2-N1-ST6, 2023W2-N1-WT2, 2023W2-N2-ST29, 2023W2-N2-ST27, 2023W2-N2-ST28, 2023W2-N2-ST25, 2023W2-N2-ST26, 2023W2-N2-ST23, 2023W2-N2-ST24, 2023W2-GD-S4, 2023W2-GD-S3, 2023W2-GD-S186, 2023W2-N2-WT8, 2023W2-N2-WT7, 2023W2-N2-ST50, 2023W2-N2-WT6, 2023W2-N2-ST9, 2023W2-N2-WT5, 2023W2-N2-ST8, 2023W2-N2-WT4, 2023W2-N2-ST7, 2023W2-N2-WT3, 2023W2-GD-W154, 2023W2-GD-W155, 2023W2-GD-W153, 2023W2-GD-W156, 2023W2-GD-S115, 2023W2-GD-S114, 2023W2-N2-ST44, 2023W2-N2-ST41, 2023W2-N2-ST42, 2023W2-N2-ST40, 2023W2-N2-ST49, 2023W2-N2-ST47, 2023W2-N2-ST48, 2023W2-GD-S6, 2023W2-N2-ST45, 2023W2-N2-ST46, 2023W2-GD-W162, 2023W2-GD-W165, 2023W2-GD-W163, 2023W2-GD-W164, 2023W2-GD-S122, 2023W2-GD-S121, 2023W2-GD-S123, 2023W2-GD-S126, 2023W2-GD-S125, 2023W2-GD-S116, 2023W2-GD-W59, 2023W2-N1-WT10, 2023W2-N1-WT13, 2023W2-N1-WT14, 2023W2-N1-WT11, 2023W2-N1-WT12, 2023W2-N2-ST6, 2023W2-N2-WT2, 2023W2-GD-W214, 2023W2-N2-ST5, 2023W2-N2-WT1, 2023W2-N2-ST4, 2023W2-N2-ST3, 2023W2-GD-S135, 2023W2-GD-W217, 2023W2-N2-ST2, 2023W2-N2-ST1, 2023W2-GD-W215, 2023W2-GD-W216, 2023W2-GD-S127, 2023W2-N1-ST9, 2023W2-N1-WT5, 2023W2-GD-S141, 2023W2-N1-ST8, 2023W2-N1-WT4, 2023W2-N1-WT7, 2023W2-N1-WT6, 2023W2-N1-WT9, 2023W2-N1-WT8, 2023W2-N2-ST11, 2023W2-N2-ST10, 2023W2-N2-ST16, 2023W2-N2-ST19, 2023W2-N2-ST13, 2023W2-N2-ST12, 2023W2-N2-ST15, 2023W2-N2-ST14, 2023W2-GD-W19, 2023W2-GD-W25

2023 RTEP Window 2 Proposals

Proposal ID #	Project Type	Cluster	Project Description	kV Level	Total Component Cost	Flowgate
596	UPGRADE	Cluster 3	Project will mitigate clearance issues on Westar - Genoa 138 kV line to allow line to operate to conductor's designed rating	138	$ 2,814,629.60	2023W2-GD-S186, 2023W2-GD-S141, 2023W2-N2-WT1, 2023W2-N2-ST4, 2023W2-N2-ST2, 2023W2-N1-ST15, 2023W2-N2-ST1, 2023W2-N2-ST30, 2023W2-N2-ST31, 2023W2-N2-WT4, 2023W2-N2-ST7, 2023W2-N2-ST28, 2023W2-N2-ST39, 2023W2-N2-ST37, 2023W2-N2-ST48, 2023W2-N2-ST46
561	UPGRADE	Cluster 4	Project will reconductor the 9.4 mile 345 kV line between RP Mone and Maddox Creek stations.	345	$ 16,718,576.40	2023W2-GD-S170, 2023W2-GD-S142, 2023W2-GD-W213, 2023W2-GD-W58
957	UPGRADE	Cluster 4	Project will rebuild the 9.4 mile 345 kV line between RP Mone and Maddox Creek stations.	345	$ 39,033,568.40	2023W2-GD-S170, 2023W2-GD-S142, 2023W2-GD-W213, 2023W2-GD-W58
729	UPGRADE	Cluster 3	Project will rebuild the approximately 2 mile 138 kV line between Westar and Genoa stations.	138	$ 8,788,984.60	2023W2-GD-S186, 2023W2-GD-S141, 2023W2-N2-WT1, 2023W2-N2-ST4, 2023W2-N2-ST2, 2023W2-N1-ST15, 2023W2-N2-ST1, 2023W2-N2-ST30, 2023W2-N2-ST31, 2023W2-N2-WT4, 2023W2-N2-ST7, 2023W2-N2-ST28, 2023W2-N2-ST39, 2023W2-N2-ST37, 2023W2-N2-ST48, 2023W2-N2-ST46
188	UPGRADE	Cluster 5	Project proposes to reconductor the 2.8 mile 138 kV line between Maliszewski and Polaris stations.	138	$ 7,230,861.11	2023W2-N2-ST6, 2023W2-N2-ST5, 2023W2-N1-ST14, 2023W2-GD-S165, 2023W2-N1-ST13, 2023W2-N2-ST3, 2023W2-GD-S135, 2023W2-N2-ST32, 2023W2-N2-ST43, 2023W2-N2-ST22, 2023W2-N2-ST44, 2023W2-N2-ST40, 2023W2-N2-WT5, 2023W2-N2-ST8, 2023W2-N2-WT3, 2023W2-N2-ST17, 2023W2-N2-ST49, 2023W2-N2-ST18, 2023W2-N2-ST13, 2023W2-N2-ST25, 2023W2-N2-ST47, 2023W2-N2-ST24
340	UPGRADE	Cluster 5	Project proposes to rebuild the 2.8 mile 138 kV line between Maliszewski and Polaris stations.	138	$ 8,883,662.80	2023W2-N2-ST6, 2023W2-N2-ST5, 2023W2-N1-ST14, 2023W2-GD-S165, 2023W2-N1-ST13, 2023W2-N2-ST3, 2023W2-GD-S135, 2023W2-N2-ST32, 2023W2-N2-ST43, 2023W2-N2-ST22, 2023W2-N2-ST44, 2023W2-N2-ST40, 2023W2-N2-WT5, 2023W2-N2-ST8, 2023W2-N2-WT3, 2023W2-N2-ST17, 2023W2-N2-ST49, 2023W2-N2-ST18, 2023W2-N2-ST13, 2023W2-N2-ST25, 2023W2-N2-ST47, 2023W2-N2-ST24
683	UPGRADE	Cluster 6	Project will mitigate three clearance issues on Allen - RP Mone 345 kV line to allow line to operate to conductor's designed rating.	345	$ 449,638.50	2023W2-GD-W12
169	UPGRADE	Cluster 6	Project will reconductor approximately 18.6 miles of 345 kV line between Allen and RP Mone stations.	345	$ 32,486,233.62	2023W2-GD-W12
819	UPGRADE	Cluster 6	Project will rebuild approximately 18.6 miles of 345 kV line between Allen and RP Mone stations.	345	$ 49,875,052.88	2023W2-GD-W12
11	UPGRADE	Cluster 4 & 6	Project will install 345 kV Phase Shifting Transformer at East Lima station on line towards Fostoria Central.	345	$ 40,300,623.80	2023W2-GD-S170, 2023W2-GD-S142, 2023W2-GD-W12, 2023W2-GD-W213, 2023W2-GD-W58
334	UPGRADE	Cluster 4 & 6	The project will perform work to string the open positions of the 345 kV line between Maddox Creek and Sorenson stations in order to establish a new 345 kV circuit between the two stations (42.6 miles). As part of the proposal the existing conductors on the line will be reconductored. To accommodate the new 345 kV circuit and address additional loading on the Maddox Creek-East Lima 345 kV line, work will be performed at Maddox Creek, Sorenson, and East Lima stations.	345	$ 134,396,664.35	2023W2-GD-S170, 2023W2-GD-S142, 2023W2-GD-W12, 2023W2-GD-W213, 2023W2-GD-W58
426	UPGRADE	N/A	Project will mitigate clearance issues on Genoa - Spring Rd SW 138 kV line to allow line to operate to conductor's designed rating. In addition a station riser will be replaced at Genoa station.	138	$ 3,461,345.20	2023W2-N2-ST50, 2023W2-N2-ST9, 2023W2-N2-ST16, 2023W2-N2-ST34, 2023W2-N2-ST45
92	UPGRADE	N/A	Project will rebuild the majority of the 3.7 mile 138 kV line between Polaris and Westar stations. 12 structures installed in 2023 will be reused. Work will also be performed at Polaris station to replace station equipment to raise the overall rating of the line.	138	$ 12,195,695.10	2023W2-N2-ST11, 2023W2-N2-ST41, 2023W2-N2-WT8, 2023W2-N2-ST10, 2023W2-N2-WT7, 2023W2-N2-ST36, 2023W2-N2-ST12, 2023W2-N2-ST23, 2023W2-N2-ST14

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Revision History

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1	4/23/2024	• Original slides posted

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