



2022 RTEP Window 3 Changes

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- 2022 RTEP Window 3 resulted in a historic level of new transmission system projects
- Numerous transmission needs in response to a rapidly changing system
 - 11,000 MW of deactivating generation
 - 7,500 MW of load growth in northern Virginia
 - Improved analysis methodologies
 - Suspension of the Market Efficiency 9A project



Competitive Process Background

- PJM selects the solution that solves the reliability need
 - Limited to proposals submitted through the Competitive Process
- Transmission Developers chose the “how” – how a new line will connect between points A and B on the system
 - Final solutions may change based on community engagement, local siting boards, and availability of right-of-way



Competitive Process Background

- PJM's competitive process evaluates proposals along several factors to find the best solution for the system
 - **Performance:** the ability to meet the identified system needs
 - **Scalability:** flexible design able to scale up and meet future needs
 - **Impact:** existing rights-of-way where possible
 - **Cost:** validated by third-party metrics, including consideration of cost-capping provisions voluntarily submitted by developers
 - **Risks:** factors that might trigger additional costs, difficulty securing the number or type of permits required, inability to meet in-service date (Reference PJM Manual 14F, Section 8.1.3 and Attachment C)
 - **Efficiencies:** avoidance of redundant capital investment, including recognizing synergies with retiring facilities and overlaps with previously approved or imminent upgrades



Competitive Process Background

PJM Risk Assessment Criteria						
Risk Assessment	Cost Estimate Risks	Cost Containment Risk	Schedule Risks	Constructability Risks	Use of Existing ROW/Brownfield	Outage Coordination Risks
Low	Greater than or within 0-10% of Independent Estimate	Hard cost cap	Ratings assessed based on independent assessment of proposed in-service dates, and assessment of significant schedule risks such as such as permitting and constraint mitigation, long-lead material procurement, land/ROW acquisition, construction complexity.	Ratings assessed based on independent assessment of the number and severity of constructability risks assessed for the proposed project scope, such as permitting and constraint mitigation, land/ROW acquisition, construction complexity.	Rebuild/Reconductor Upgrades or Pure Brownfield	Minimal existing facility outages required, beyond short outages to cut-in to existing facilities
Medium	Within 10-20% of Independent Estimate	Soft cost containment (e.g ROE caps)			Mostly Brownfield (i.e. Uses/Overlaps existing ROW but requires expansion)	Significant existing facility outages required, with reasonable outage coordination plan proposed
Medium-High	Within 20-30% of Independent Estimate	Minimal cost containment/Excessive Exclusions			Greenfield paralleling existing ROW	Significant existing facility outages required, with no coordination plan proposed
High	Less than 30% of Independent Estimate	No cost containment			Pure Greenfield	Significant existing facility outages required, with known operational concerns and no coordination plan proposed.

NOTE:

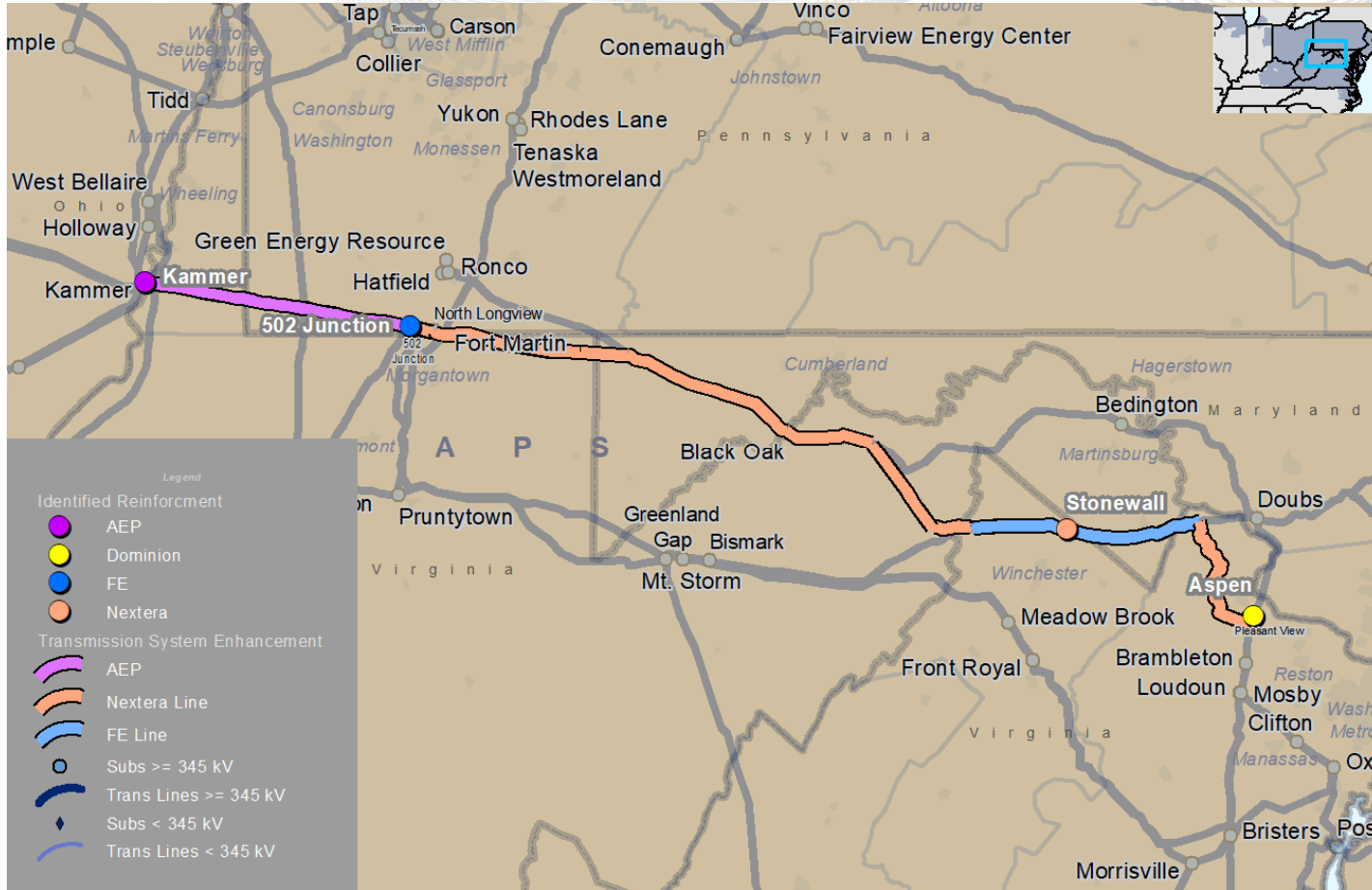
- PJM conducted its constructability evaluation of the project data submitted by proposers, and engaged expert consultants to evaluate the constructability, cost estimation, and cost containment risks of the projects.
- PJM also reached out to key regulatory agencies for their insight on certain projects to help clarify permitting risks.
- This risk assessment is not intended as a pass/fail or quantitative test, but rather as qualitative information on potential risks PJM has considered along with the reliability performance in selection of the finalist scenarios, and ultimately the recommended solution.



Changes to Selected Projects

- Designated Entities do not change the solution, but can update the scope and cost to reflect changes to how the solution is accomplished.
- Reference: PJM Operating Agreement, Schedule 6, *pro forma* Designated Entity Agreement and PJM Manuals 14C and 14F

Selected Solution – Western Cluster



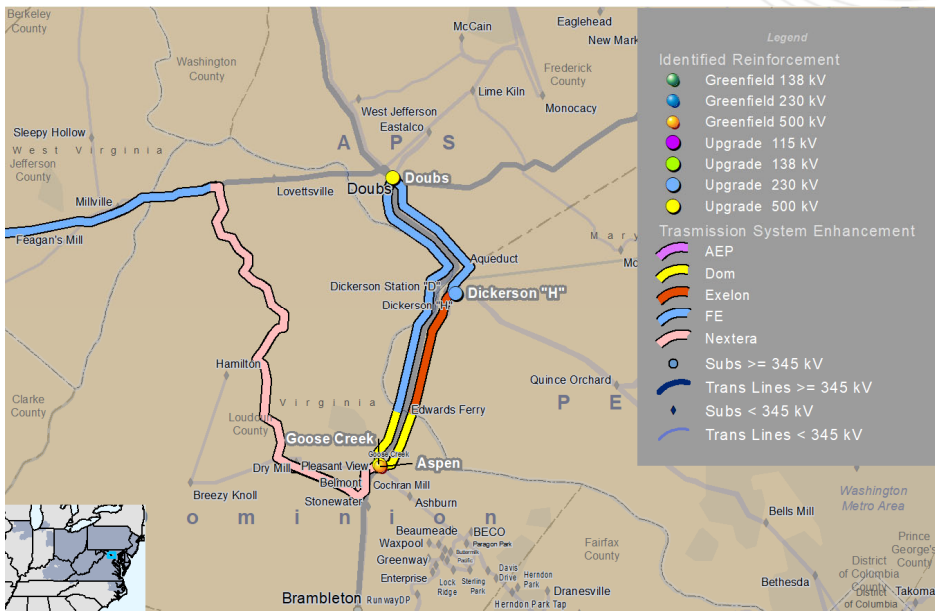
NOTE: This map is only intended to illustrate the general electrical connectivity of the projects, and should *not* be relied upon for exact geographical substation locations or line routes.

The line section from Woodside to Aspen will be rerouted from the originally proposed greenfield line route to an alternate route within existing transmission line rights of way along the Doubs Corridor containing the rebuilt Doubs – Goose Creek and the new Doubs – Aspen 500 kV lines. This reroute is the outcome of successful collaboration between NextEra and the incumbent Transmission Owners to determine the most feasible route and minimize area impact for the new Woodside to Aspen 500 kV line segment.

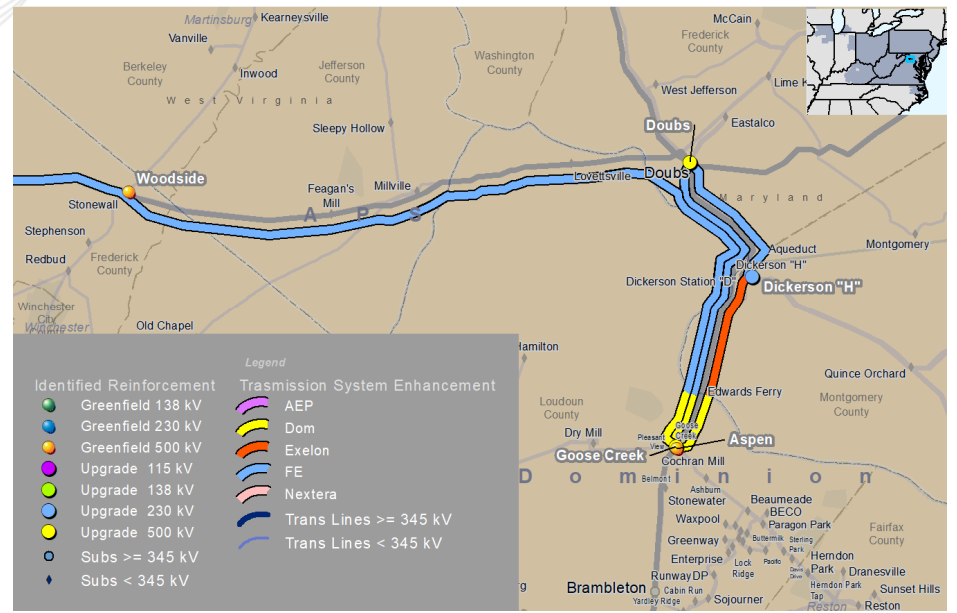
As part of this change, the new 500 kV line from Woodside will now terminate into Goose Creek substation due to space constraints within the Corridor and also to minimize unnecessary line crossings.

Justification provided at the July TEAC, [Item 10 - Reliability Update](#), Slide 43

Original Proposal



Revised Scope



Revised scope increases the total line length by 5 miles.



Summary of the Changes

ID	Scope	Original Cost (\$M)	Revised Cost (\$M)	Cost Change (\$M)
Next Era				
B3800.119	New 500 kV transmission line from Woodside substation to Aspen substation (in DOM zone) (NEET Portion)	\$71.72	\$0.00	- \$71.72
First Energy				
B3800.105	Rebuild ~6 miles of the Millville-Doubs 138 kV line for ~16 miles from structure MVF1-39 to structure MVF1-101 (outside of Doubs Substation) with 500 kV overbuild	\$52.35	\$147.45	+ \$95.10
B3800.128	Construct 500 kV Line from existing structure MVF1-101 on the Doubs – Millville 138 kV Line, around Doubs Substation, and into the entrance of the Doubs – Goose Creek Corridor. (~2 miles)	\$0.00	\$13.20	+ \$13.20
B3800.129	Construct new Woodside – Goose Creek 500 kV line for ~15 miles on single circuit monopole structures within the Doubs – Goose Creek Corridor. (FE Portion)	\$0.00	\$115.30	+ \$115.30
Dominion				
B3800.120	Terminate new NextEra 500 kV line from Woodside into Aspen Goose Creek substation. Include a portion of the Aspen 500 kV substation build. The Goose Creek 500kV cap bank will be moved to Aspen substation.	\$30.49	\$30.49	\$0.00
B38000.75	Construct new Woodside – Goose Creek 500 kV line for ~3 miles on single circuit monopole structures within the Doubs – Goose Creek Corridor. (DOM Portion)	\$0.00	\$15.60	+ \$15.60
Total Change				+ \$167.48

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