Dominion Transmission Zone M-3 Process
King and Queen 230kV Delivery – DEV

Need Number: DOM-2020-0019
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 09/01/2020

Solution – 11/04/2020

Project Driver:

Customer Load Request

Specific Assumption Reference:

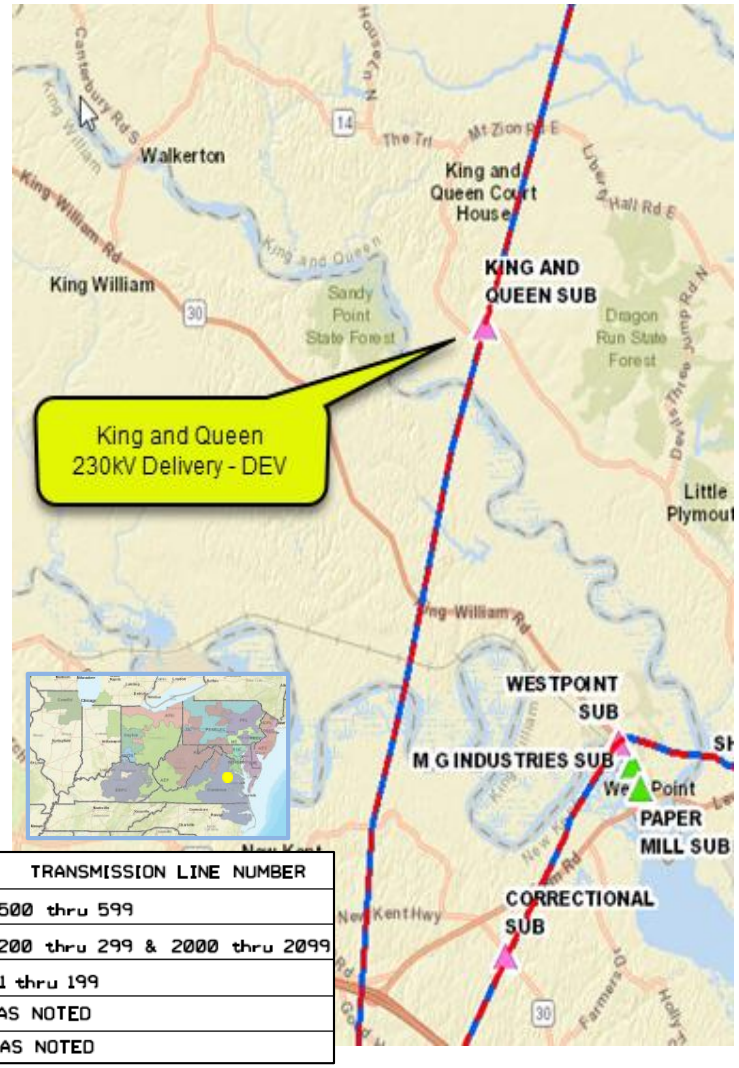
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:

DEV Distribution has submitted a DP Request for a new substation (King and Queen) to replace the source to an island of load that will be lost when a river crossing is eliminated as part of the 230kV Line #224 (Lanexa-Northern Neck) rebuild project. Requested in-service date is 06/01/2023.

Projected 2025 load

Summer: 3.5 MW
Winter: 5.4 MW



COLOR	VOLTAGE	TRANSMISSION LINE NUMBER
	500 KV.	500 thru 599
	230 KV.	200 thru 299 & 2000 thru 2099
	115 KV.	1 thru 199
	138 KV.	AS NOTED
	69 KV.	AS NOTED

Dominion Transmission Zone M-3 Process
King and Queen 230kV Delivery – DEV

Need Number: DOM-2020-0019
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:
Tap Line #224 in accordance with the Company's Facility Interconnection Requirements (FIR) document to create a tee-tap arrangement with line switches on either side of the tap. Install a 1200 Amp, 20kAIC circuit switcher and any additional transmission related equipment (e.g. 230kv bus, etc.) deemed necessary by the project team to support the interconnection of the permanent substation.

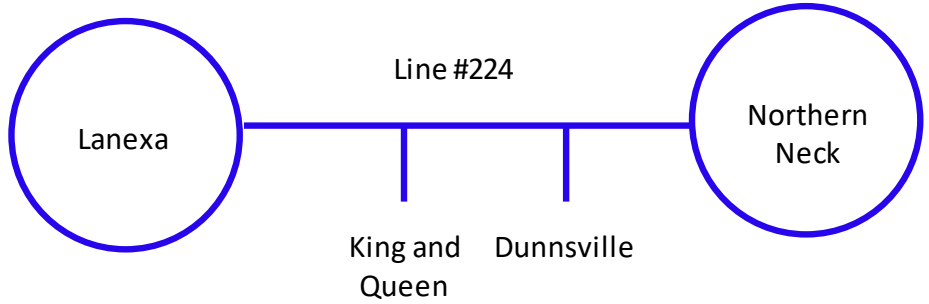
Estimated Project Cost: $1.86 M

Projected In-service Date: 06/01/2023

Supplemental Project ID: s2496

Project Status: Engineering

Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
Rollins Ford 230kV Delivery – DEV

Need Number: DOM-2020-0026

Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:
Need – 08/04/2020
Solution – 09/01/2020

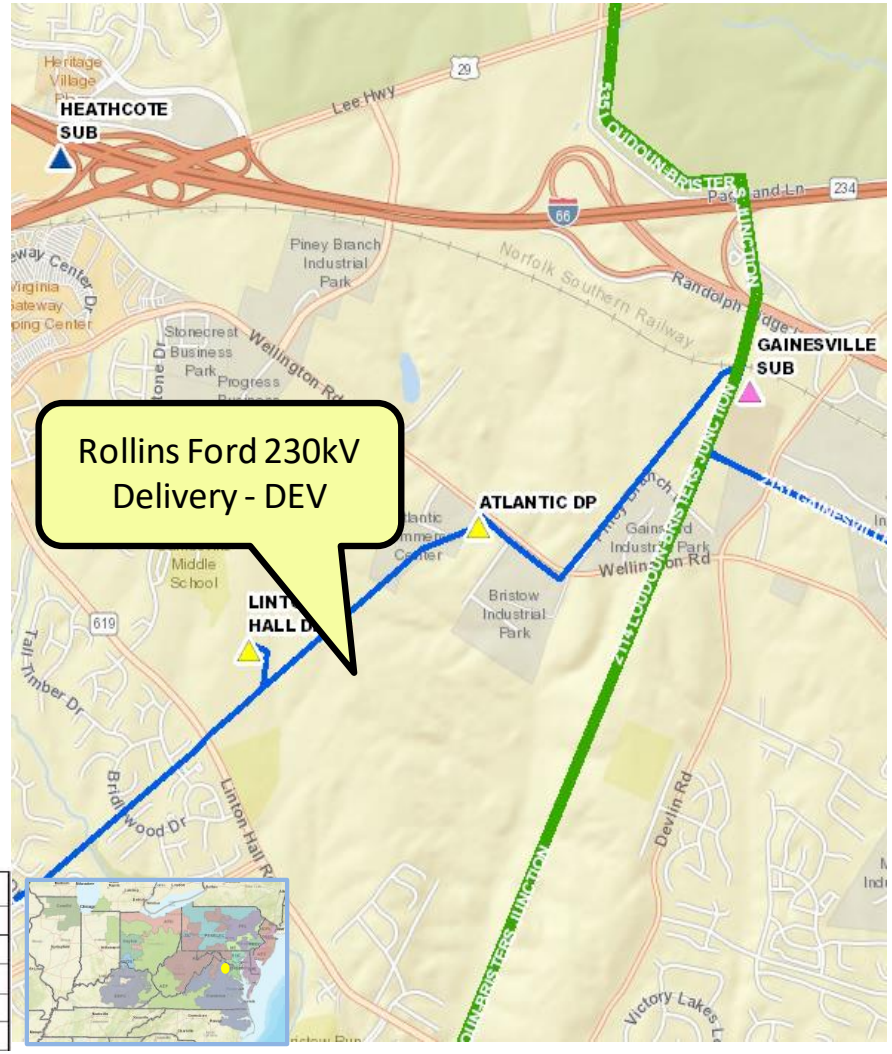
Project Driver:
Customer Load Request

Specific Assumption Reference:
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:

NOVEC has submitted a DP Request for a new substation (Rollins Ford) to accommodate a new datacenter campus in Prince William County. NOVEC has requested a 230kV ring bus connection. Due to the total load requested less than 100 MW, NOVEC will be required to pay excess facilities for all equipment required for the ring bus configuration above a T-tap. Requested in-service date is 12/31/2021.

Projected 2025 load
Summer: 53.7 MW
Winter: 64.2 MW



COLOR	VOLTAGE	TRANSMISSION LINE NUMBER
	500 KV.	500 thru 599
	230 KV.	200 thru 299 & 2000 thru 2099
	115 KV.	1 thru 199
	138 KV.	AS NOTED
	69 KV.	AS NOTED

Dominion Transmission Zone M-3 Process
Rollins Ford 230kV Delivery – DEV

Need Number: DOM-2020-0026
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Interconnect the new substation by cutting and extending Line #2114 (Gainesville -Remington CT) to the proposed Rollins Ford Substation. Terminate both ends into a four-breaker ring arrangement to create a Rollins Ford - Gainesville line and a Rollins Ford - Remington CT line.

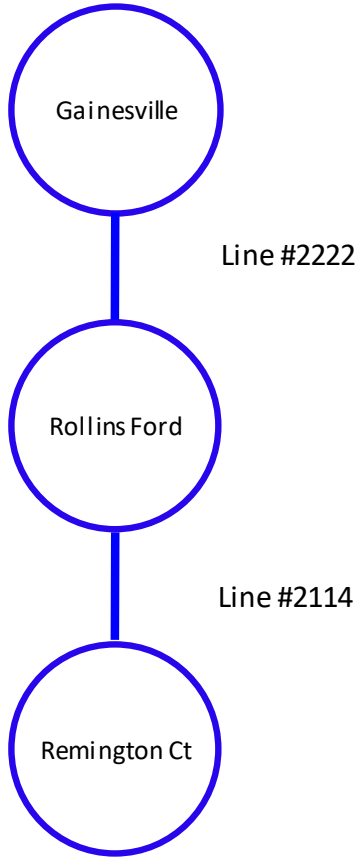
Estimated Cost: $10.0 M

Projected In-Service: 12/31/2021

Supplemental Project ID: s2340

Project Status: Engineering

Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
Line #233 - Replace switches 23339 and 23336

Need Number: DOM-2020-0027
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 08/04/2020

Solution – 09/01/2020

Project Driver:

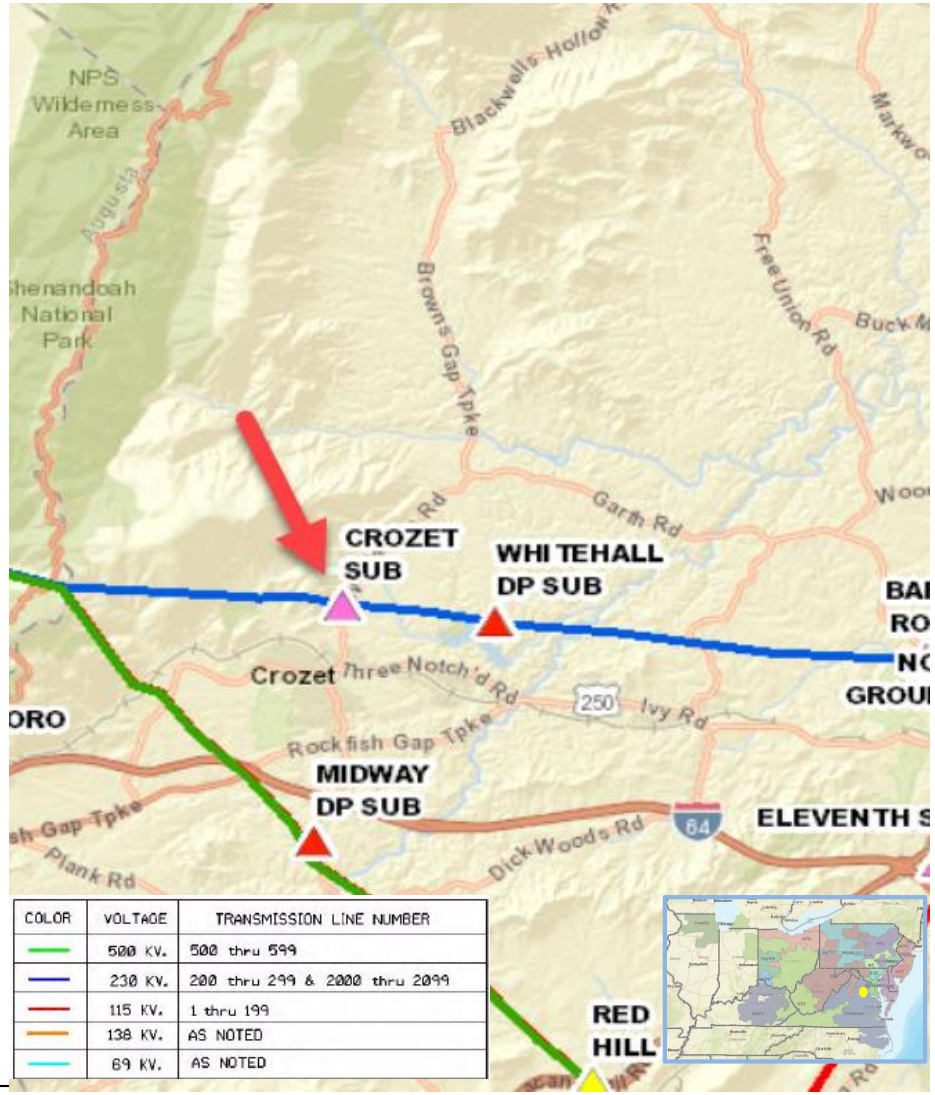
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
See details on Dominion Energy's End of Life Criteria in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020.

Problem Statement:

Line #233 switches 23339 and 23336 are less than 15 years and have operating issues. These issues include the following:

- Multiple bottle failures
- The vertical drive pipe U-joints have broken multiple times
- System Control Center's records show they are inoperable (blue tagged)



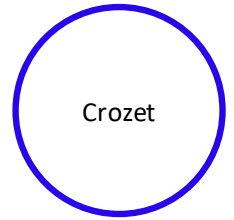
Dominion Transmission Zone M-3 Process
Line #233 - Replace switches 23339 and 23336

Need Number: DOM-2020-0027
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Replace two backbone structures, modify existing tower structures along with some conductor work. The replacement switches will be 3000 Amp to align with Dominion's 230 kV system standard. The section of Line #233 from Dooms to Crozet will have a summer rating of 925 MVA after the switches have been replaced.

Estimated Cost: $1.5 M
Projected In-Service: 10/27/2020
Supplemental Project ID: s2341
Project Status: Complete
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
230kV Line #293 & 115 kV Partial Line #83 – EOL Rebuild

Need Number: DOM-2020-0028

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 09/01/2020

Solution – 04/06/2021

Project Driver:

Equipment Material Condition, Performance, and Risk

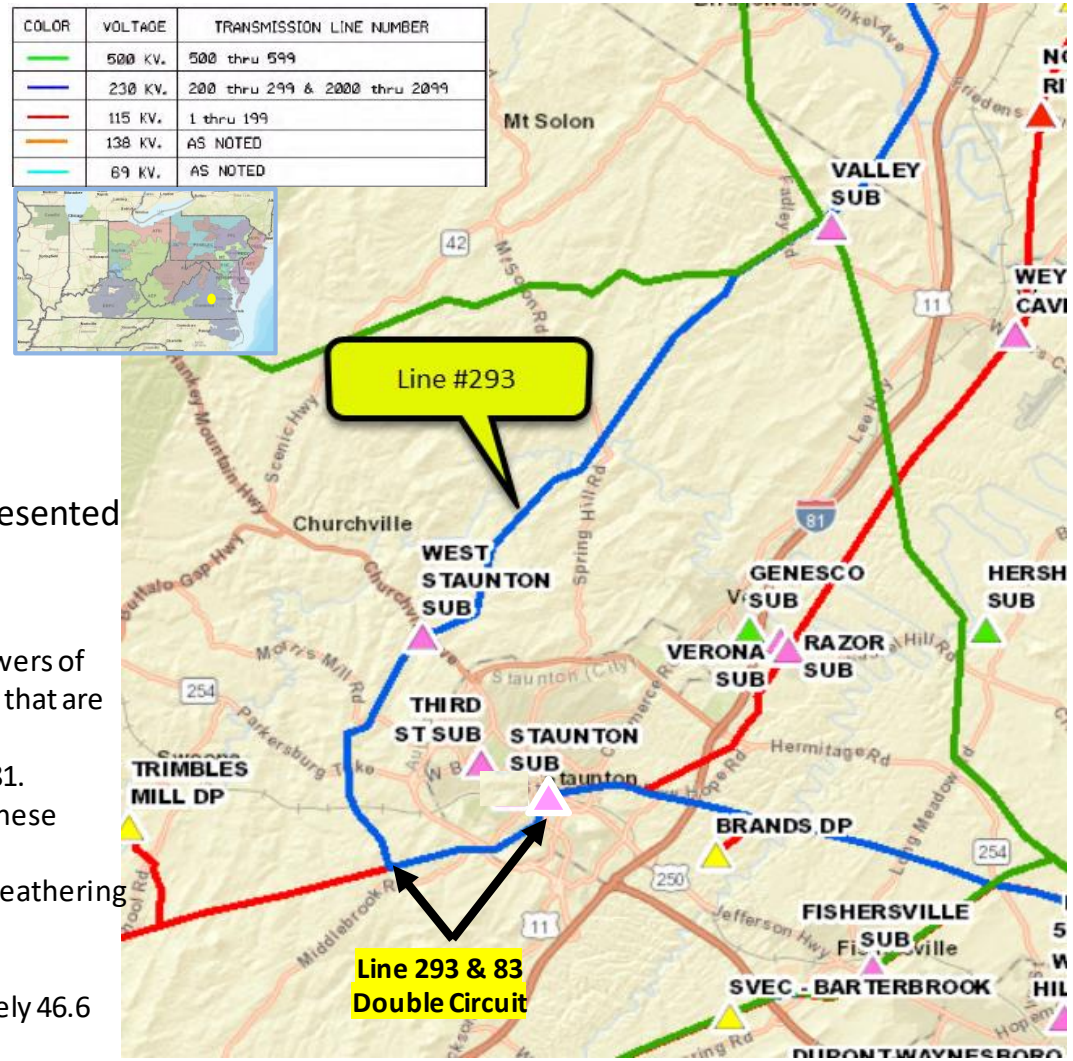
Specific Assumption Reference:

See details on Dominion Energy's End of Life Criteria in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020.

Problem Statement:

Dominion Energy has identified a need to replace 17.8 miles of existing single-circuit wood transmission towers of 230 kV Line #293 (Staunton and Valley), and 3.5 miles of double-circuit painted/weathering steel structures that are shared between Line #293 and 115 kV Line #83 (Craigsville-Staunton).

- The 293 line was constructed largely on wood H-frame structures in timeframe between 1971 and 1981. Approximately 17.8 miles of 21.3 miles of this line was constructed on wood H-frame structures and these structures are at the end of their useful life.
- The remaining 3.5 miles of double-circuit structures were constructed in 1981 and consist mainly of weathering steel lattice structures that are at the end of their useful life.
- Industry guidelines indicate equipment life for wood structures is 35-55 years.
- The Line #293 provides service to West Staunton Substation (Dominion Distribution) with approximately 46.6 MW tapped load.

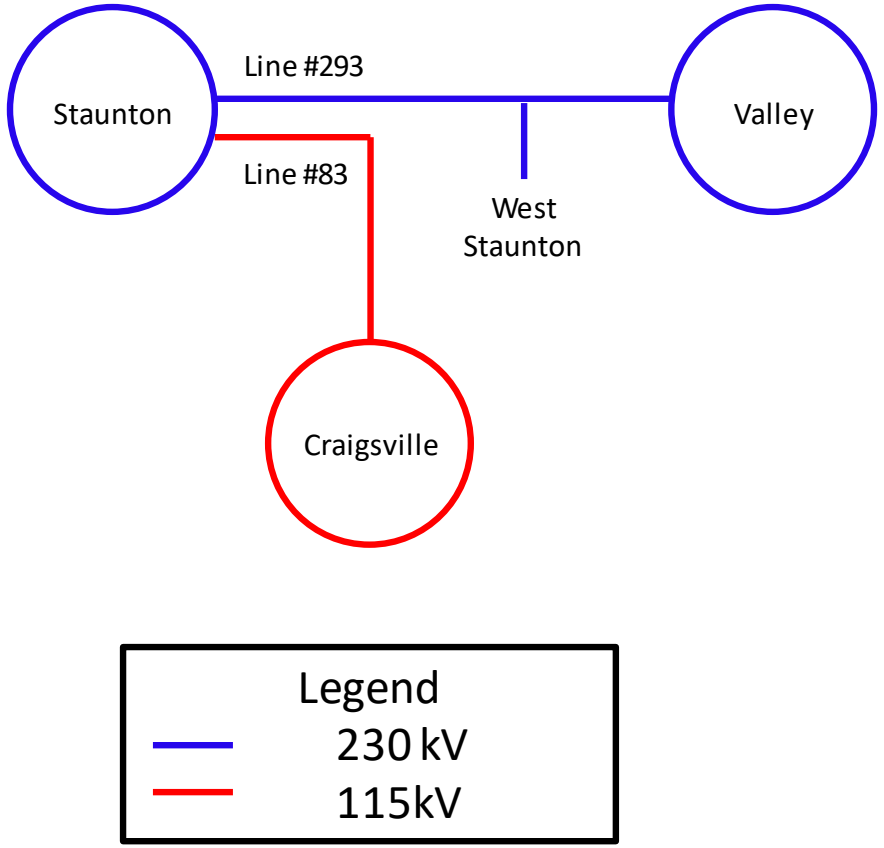


Dominion Transmission Zone M-3 Process
230kV Line #293 & 115 kV Partial Line #83 – EOL Rebuild

Need Number: DOM-2020-0028
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Replace approximately 17.8 miles of existing single-circuit wood H-frame structures on Line #293 and 3.5 miles of double-circuit painted/weathering steel structures shared between Line #293 and Line #83 with single and double-circuit steel monopoles, as appropriate. New conductor with a normal summer rating of 1047 MVA will be used for the entire Line #293. The 3.5-mile segment of Line#83 that is being replaced will use new conductor with a normal summer rating of 261 MVA.



Estimated Cost: $44.8 M
Projected In-Service: 12/15/2025
Supplemental Project ID: s2497
Project Status: Conceptual
Model: 2025 RTEP

Dominion Transmission Zone M-3 Process
115 kV Line #14 – EOL Rebuild

Need Number: DOM-2020-0029
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 11/18/2020

Solution – 12/16/2020

Project Driver:

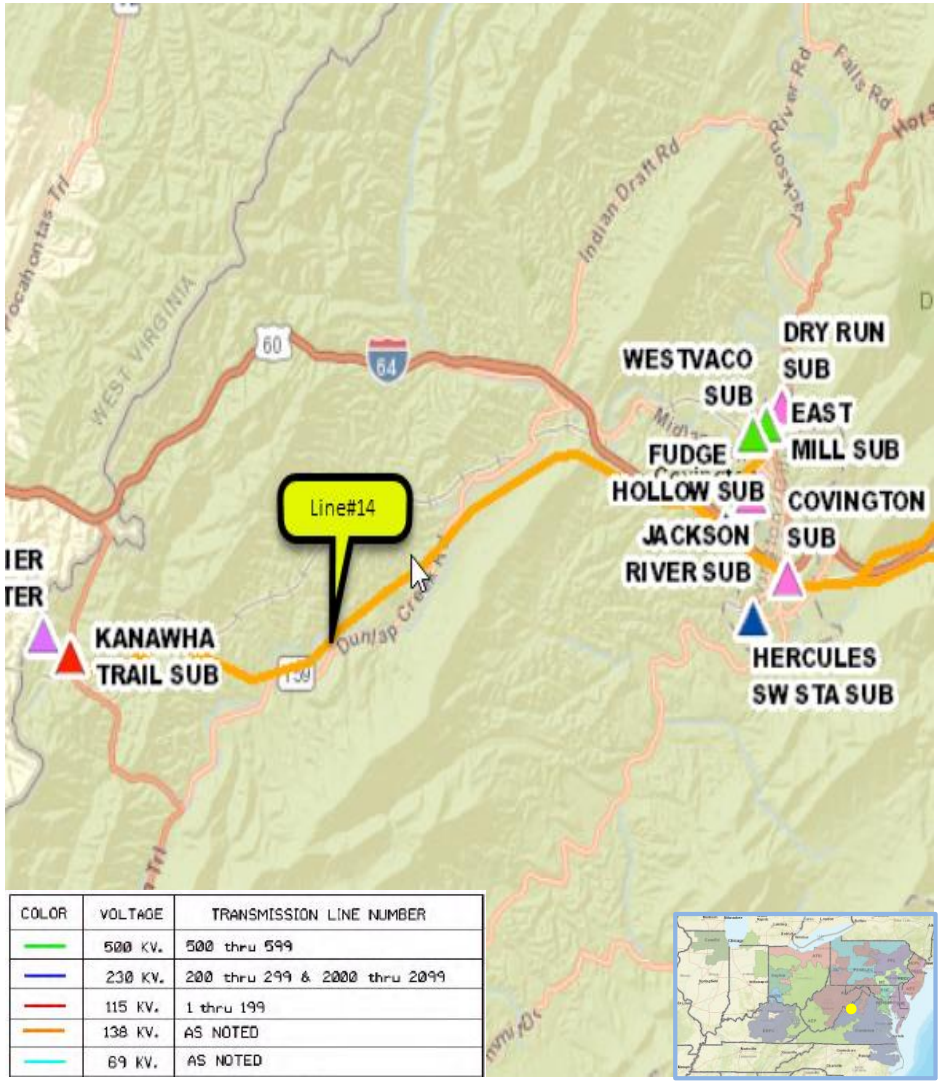
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
See details on Dominion Energy's End of Life Criteria in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020.

Problem Statement:

Dominion Energy has identified the need to replace 92 transmission towers on Line #14 between Fudge Hollow and the interconnect with AEP.

- Line #14 extends 14.94 miles to AEP territory from Fudge Hollow. AEP is fed radially from Fudge Hollow, most of the time.
- Existing structures are 1920's vintage Blaw Knox galvanized/painted towers.
- The line is at the end of its useful life (94 years old) and the ground line conditions of the structures range from fair to severe condition.



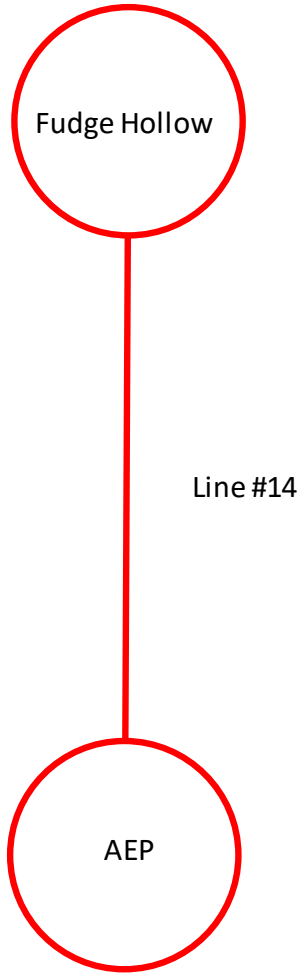
Dominion Transmission Zone M-3 Process
115 kV Line #14 – EOL Rebuild

Need Number: DOM-2020-0029
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Rebuild approximately 14.94 miles of Line #14, between Fudge Hollow to the demarcation point of AEP, to current 138kV standards and with a minimum rating of 211 MVA.

Estimated Cost: $30.0 M
Projected In-Service: 12/31/2024
Supplemental Project ID: s2504
Project Status: Conceptual
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
115 kV Line #1001 – EOL Rebuild

Need Number: DOM-2020-0032
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 09/10/2020

Solution – 11/18/2020

Project Driver:

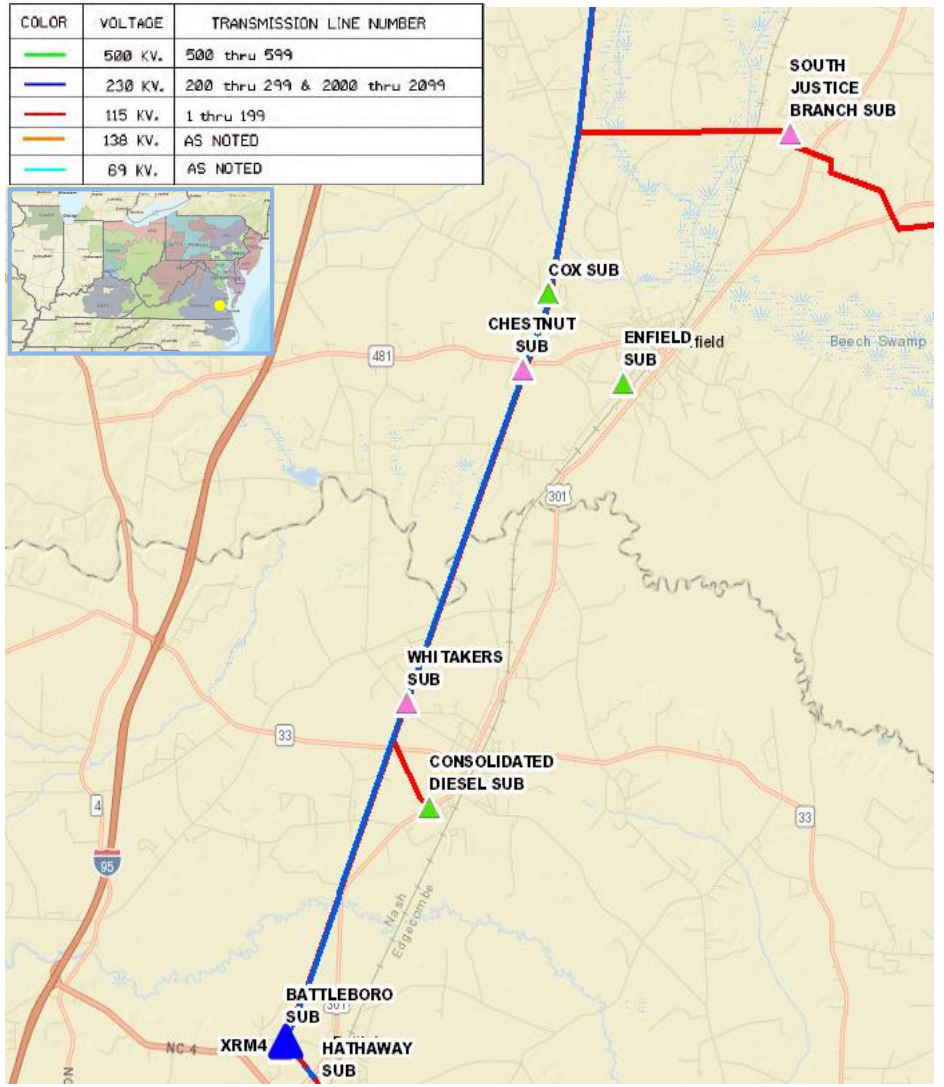
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
See details on Dominion Energy's End of Life Criteria in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020.

Problem Statement:

Dominion Energy has identified a need to rebuild Line#1001 (Battleboro – Chestnut) due to end of life.

- Line 1001 was constructed on predominately wood H-frame structures in 1959 from Battleboro to Chestnut (9.28 miles) .
- Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years.
- The Line #1001 provides service to Consolidated Diesel and Whitakers substations with approximately 6.0 MW and 8.3 MW tapped load.



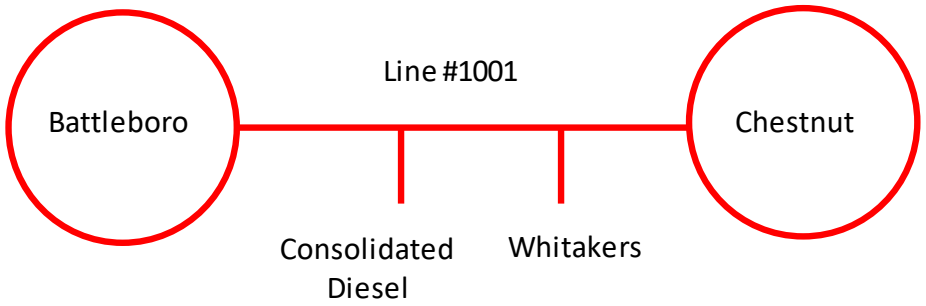
Dominion Transmission Zone M-3 Process
115 kV Line #1001 – EOL Rebuild

Need Number: DOM-2020-0032
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Rebuild Line#1001 (Battleboro – Chestnut) to current 115kV standards with a minimum summer rating of 261 MVA.

Estimated Cost: $14.0 M
Projected In-Service: 12/15/2024
Supplemental Project ID: s2501
Project Status: Conceptual
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
115 kV Line #1024 – EOL Rebuild

Need Number: DOM-2020-0033
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 09/10/2020

Solution – 11/18/2020

Project Driver:

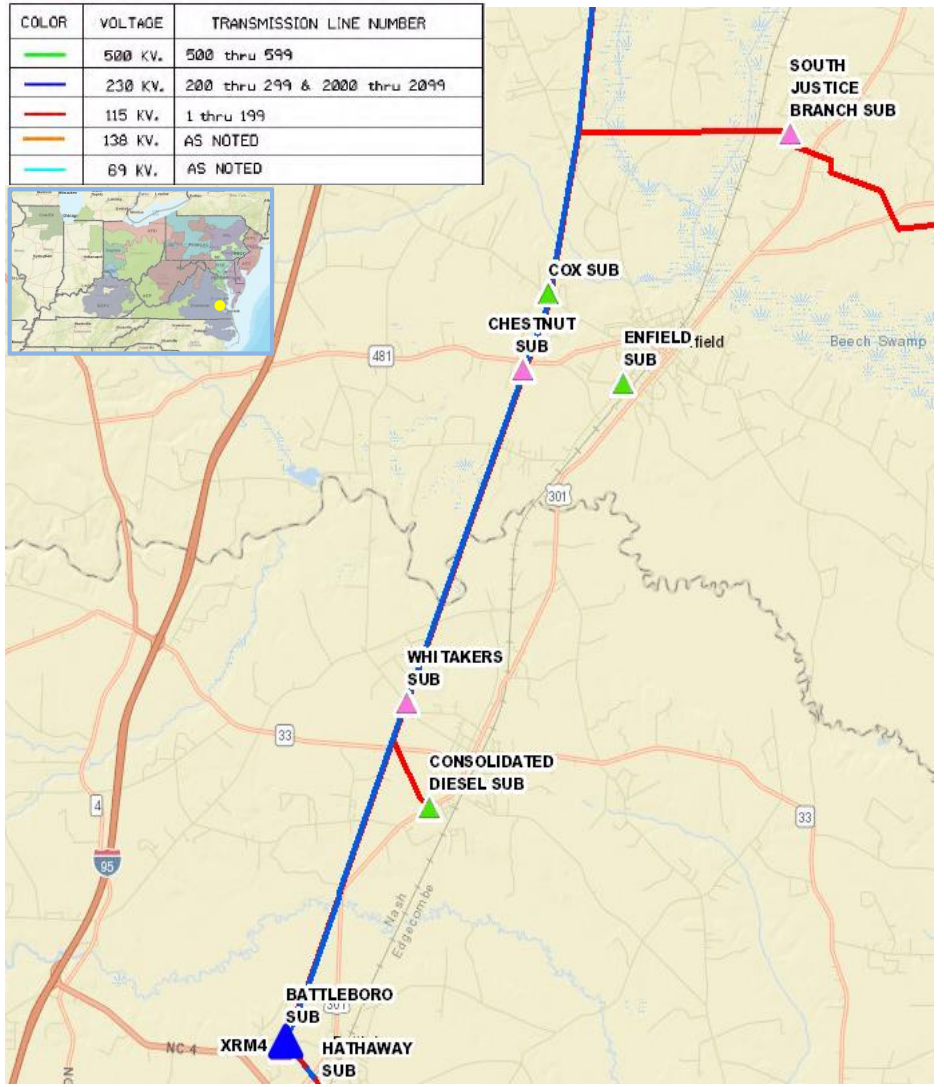
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
See details on Dominion Energy's End of Life Criteria in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020.

Problem Statement:

Dominion Energy has identified a need to rebuild Line#1024 (Chestnut – South Justice Branch) due to end of life.

- Line 1024 was constructed on predominately wood H-frame structures in 1959 from Chestnut to South Justice Branch (3.39 miles of 6.41 miles) .
- Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years.
- The Line #1024 provides service to Cox DP substations with approximately 14.0 MW of tapped load.



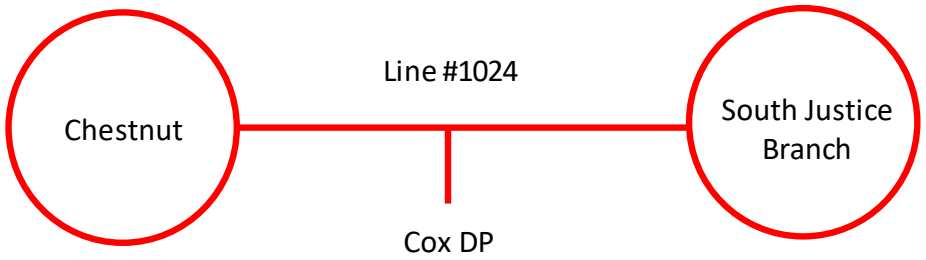
Dominion Transmission Zone M-3 Process
115 kV Line #1024 – EOL Rebuild

Need Number: DOM-2020-0033
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Rebuild Line#1024 (Chestnut – South Justice Branch) to current 115kV standards with a minimum summer rating of 261 MVA.

Estimated Cost: $5.1 M
Projected In-Service: 12/31/2023
Supplemental Project ID: s2502
Project Status: Conceptual
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
115 kV Partial Line #87 – EOL Rebuild

Need Number: DOM-2020-0034

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 09/10/2020

Solution – 10/15/2020

Project Driver:

Equipment Material Condition, Performance, and Risk

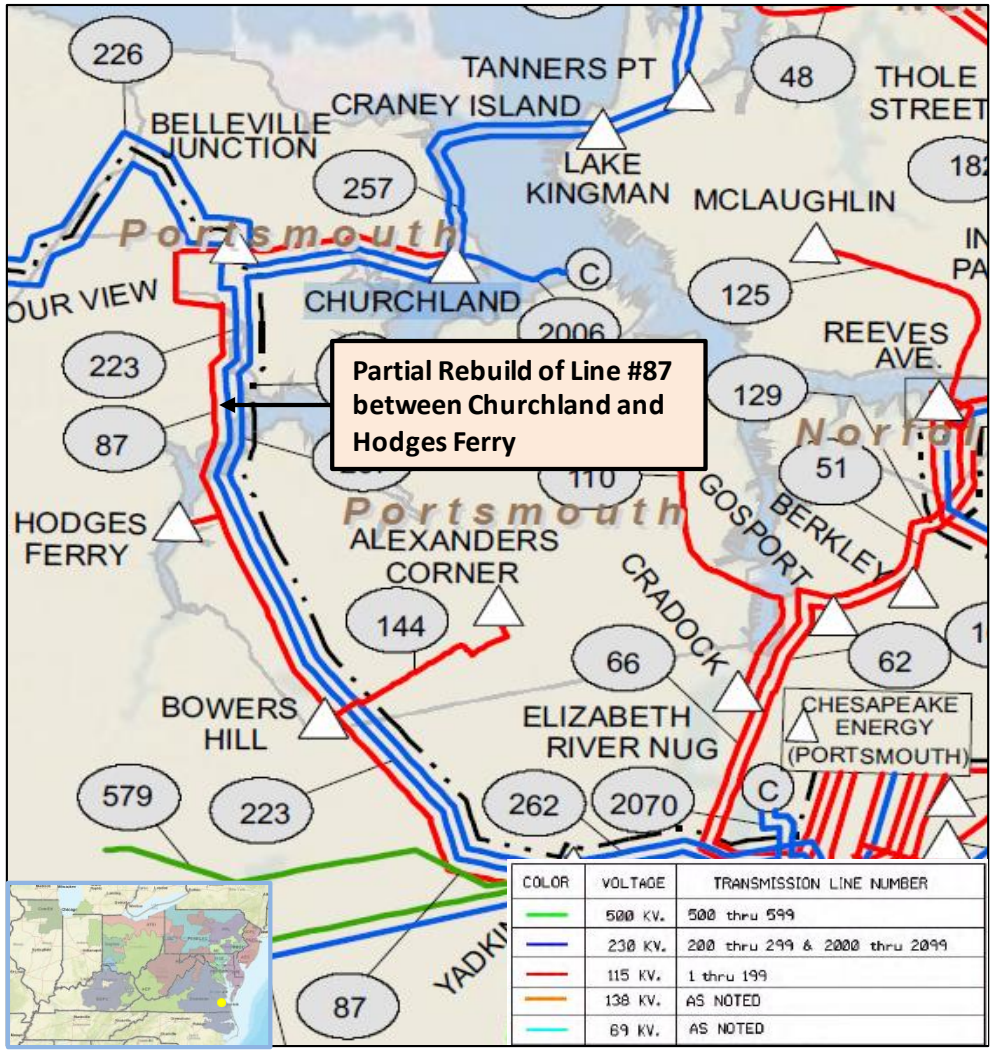
Specific Assumption Reference:

See details on Dominion Energy's End of Life Criteria in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020.

Problem Statement:

Dominion Energy has identified a need to replace 42 wood pole structures (Churchland – Hodges Ferry segment) of Line #87 (Churchland – Chesapeake Energy Center) based on the Company's End of Life criteria.

- The 5.21 miles segment of Line #87 was constructed on wood H-frame structures in 1957, and includes ACSR conductor and 3#8 static. These structures are at the end of their useful life.
- Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years.
- Line #87 provides service to Bower's Hill and Hodges Ferry substations with approximately 18 MW and 61 MW tapped load. Removal of the Churchland – Hodges Ferry segment will create a radial line exceeding Dominion's 700 MW-miles criteria.

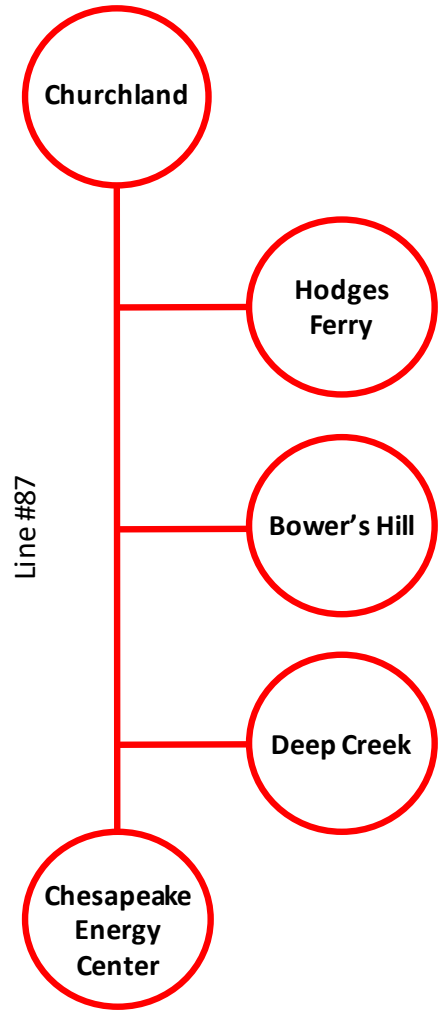


Dominion Transmission Zone M-3 Process
115 kV Partial Line #87 – EOL Rebuild

Need Number: DOM-2020-0034
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:
Rebuild approximately 5.21 miles of Line #87 between Churchland and Hodges Ferry to current 115kV standards. The summer rating of the line segment will be 262 MVA.

Estimated Cost: $8.0 M
Projected In-Service: 12/31/2023
Supplemental Project ID: s2495
Project Status: Conceptual
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
Farmwell 230kV Delivery – Add 3rd TX – DEV

Need Number: DOM-2020-0035

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 10/06/2020

Solution – 11/04/2020

Project Driver:

Customer Load Request

Specific Assumption Reference:

Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

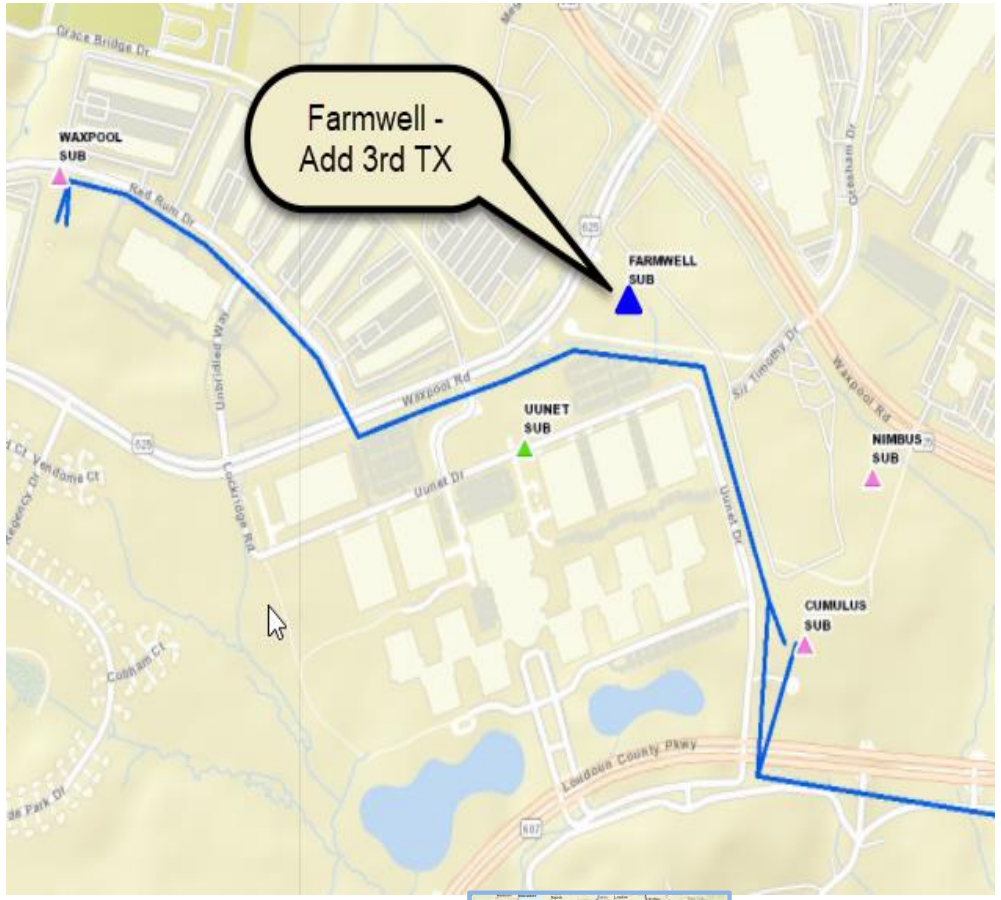
Problem Statement:

DEV Distribution has submitted a DP Request to add a 3rd distribution transformer at Farmwell Substation in Loudoun County. The new transformer is being driven by continued load growth in the area and contingency loading for loss of one of the existing transformers. Requested in-service date is 01/01/2023.

Projected 2025 load

Summer: 228.2 MW

Winter: 216.2 MW



COLOR	VOLTAGE	TRANSMISSION LINE NUMBER
	500 KV.	500 thru 599
	230 KV.	200 thru 299 & 2000 thru 2099
	115 KV.	1 thru 199
	138 KV.	AS NOTED
	69 KV.	AS NOTED

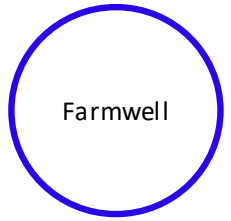
Dominion Transmission Zone M-3 Process
Farmwell 230kV Delivery – Add 3rd TX – DEV

Need Number: DOM-2020-0035
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Install a 1200 Amp, 50kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Farmwell.

Estimated Cost: $0.5 M
Projected In-Service: 01/01/2023
Supplemental Project ID: s2498
Project Status: Engineering
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
230 kV Line #2007 – EOL Rebuild

Need Number: DOM-2020-0036

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 10/06/2020

Solution – 11/04/2020

Project Driver:

Equipment Material Condition, Performance, and Risk

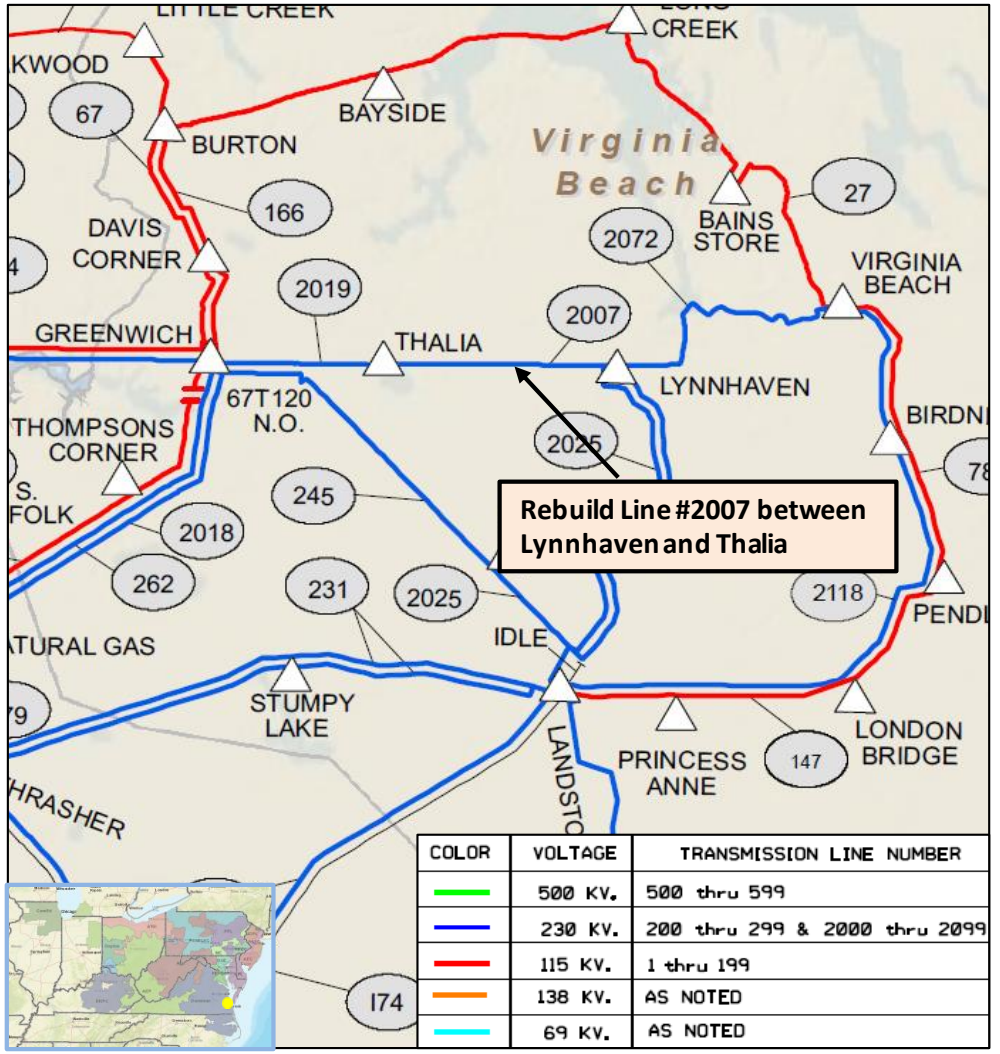
Specific Assumption Reference:

See details on Dominion Energy's End of Life Criteria in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020.

Problem Statement:

Dominion Energy has identified a need to replace 60 concrete structures of Line #2007 (Lynnhaven – Thalia) based on the Company's End of Life criteria.

- The 3.37 miles long line was constructed on concrete structures in 1970. These structures have developed significant structural concerns as they age.
- Every pole is experiencing hairline cracking at a minimum, and many of the poles have more advanced cracking that has exposed some of the interior reinforcing bars and cables.
- The cracks allow for significant water infiltration which can accelerate the deterioration of the concrete and cause rusting of the steel reinforcing components.
- The Line #2007 provides service to Thalia substation with approximately 134 MW of tapped load.

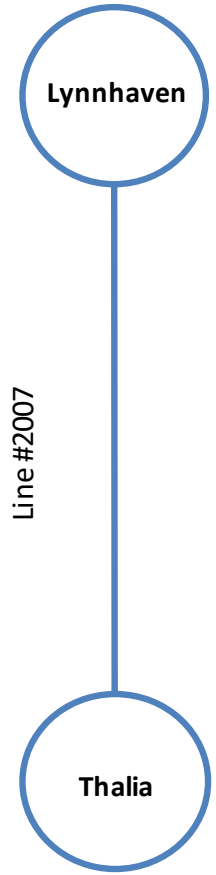


Dominion Transmission Zone M-3 Process
230 kV Line #2007 – EOL Rebuild

Need Number: DOM-2020-0036
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:
Rebuild the 3.37 miles long Line #2007 between Lynnhaven and Thalia to current 230kV standards. The normal summer rating of the line will be 1047 MVA.

Estimated Cost: $7.0 M
Projected In-Service: 12/31/2025
Supplemental Project ID: s2499
Project Status: Conceptual
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
230 kV Partial Line #2019 – EOL Rebuild

Need Number: DOM-2020-0037
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

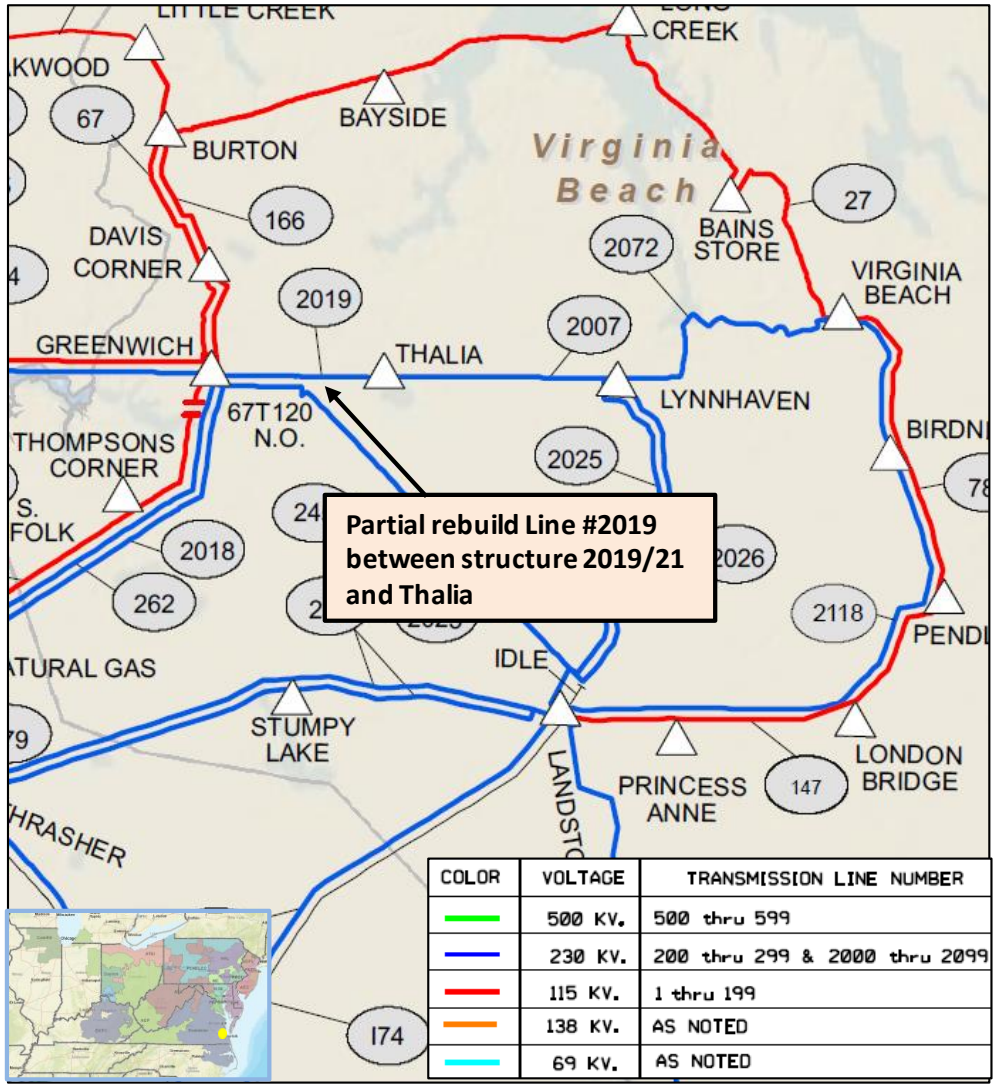
Previously Presented:
Need – 10/06/2020
Solution – 11/04/2020

Project Driver:
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
See details on Dominion Energy's End of Life Criteria in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020.

Problem Statement:
Dominion Energy has identified a need to replace 20 concrete structures (Structure 2019/21 – Thalia segment) of Line #2019 (Greenwich – Thalia) based on the Company's End of Life criteria.

- The 1.17 miles segment of Line #2019 was constructed on concrete structures in 1970. These structures have developed significant structural concerns as they age.
- Every pole is experiencing hairline cracking at a minimum, and many of the poles have more advanced cracking that has exposed some of the interior reinforcing bars and cables.
- The cracks allow for significant water infiltration which can accelerate the deterioration of the concrete and cause rusting of the steel reinforcing components.
- The Line #2019 provides service to Thalia substation with approximately 134 MW of tapped load.

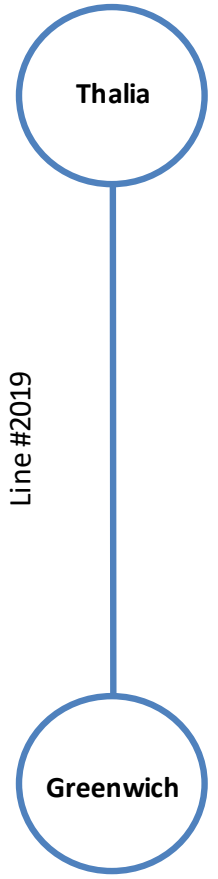


Dominion Transmission Zone M-3 Process
230 kV Partial Line #2019 – EOL Rebuild

Need Number: DOM-2020-0037
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:
Rebuild approximately 1.17 miles of Line #2019 between Thalia and Structure 2019/21 to current 230kV standards. The normal summer rating of the line segment will be 1047 MVA.

Estimated Cost: $3.0 M
Projected In-Service: 12/15/2025
Supplemental Project ID: s2500
Project Status: Conceptual
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
Cumulus 230kV Delivery – Add 4th TX – DEV

Need Number: DOM-2020-0041

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 11/04/2020

Solution – 12/01/2020

Project Driver:

Customer Load Request

Specific Assumption Reference:

Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

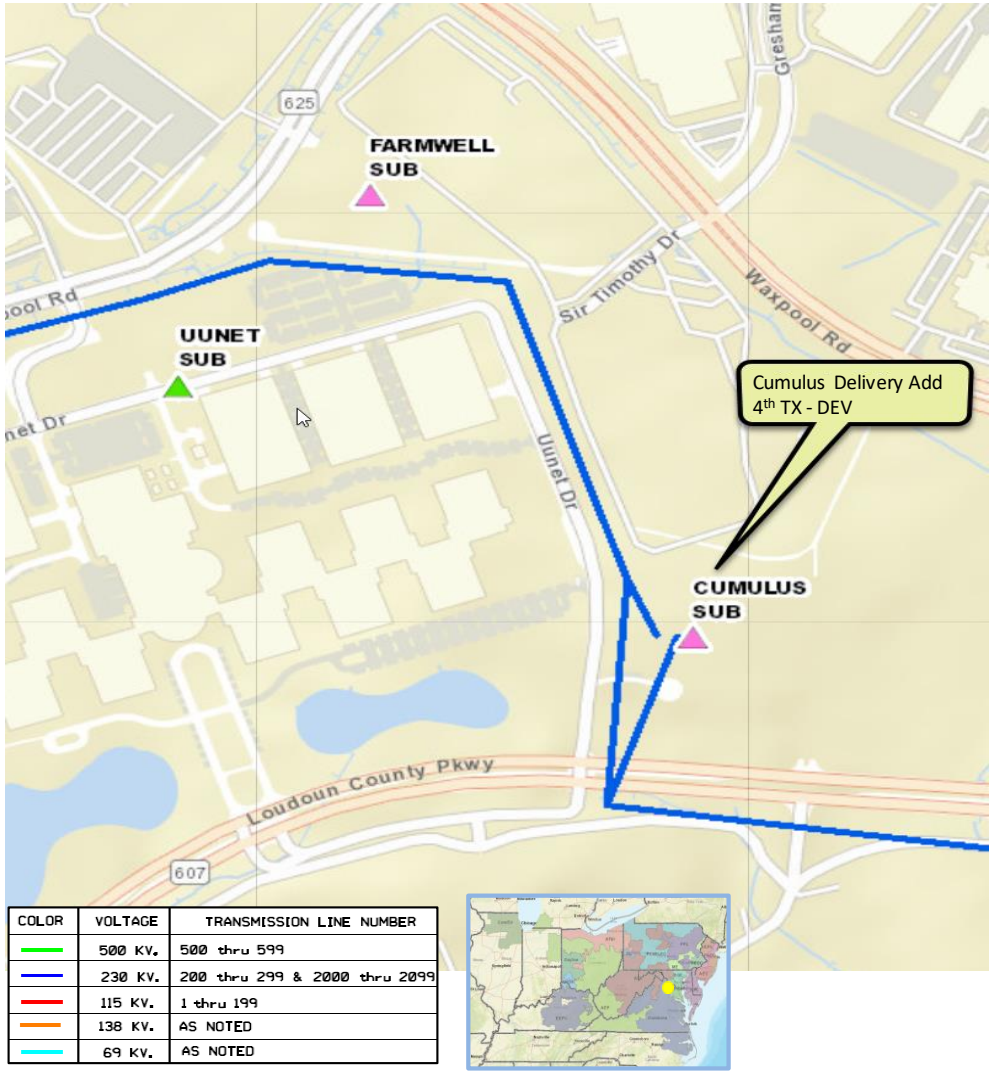
Problem Statement:

DEV Distribution has submitted a DP Request to add a 4th distribution transformer at Cumulus Substation in Loudoun County. The new 84 MVA transformer is being driven by continued load growth in the area and contingency loading for loss of one of the existing transformers. Requested in-service date is 12/01/2022.

Projected 2025 load

Summer: 256.1 MW

Winter: 241.3 MW



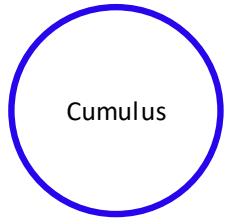
Dominion Transmission Zone M-3 Process
Cumulus 230kV Delivery – Add 4th TX – DEV

Need Number: DOM-2020-0041
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Install a 1200 Amp, 50kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Cumulus.

Estimated Cost: $0.5 M
Projected In-Service: 12/01/2022
Supplemental Project ID: s2503
Project Status: Engineering
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
Garysville 230kV Delivery – PGEC

Need Number: DOM-2020-0045

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 12/01/2020

Solution – 02/09/2021

Project Driver:

Customer Load Request

Specific Assumption Reference:

Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

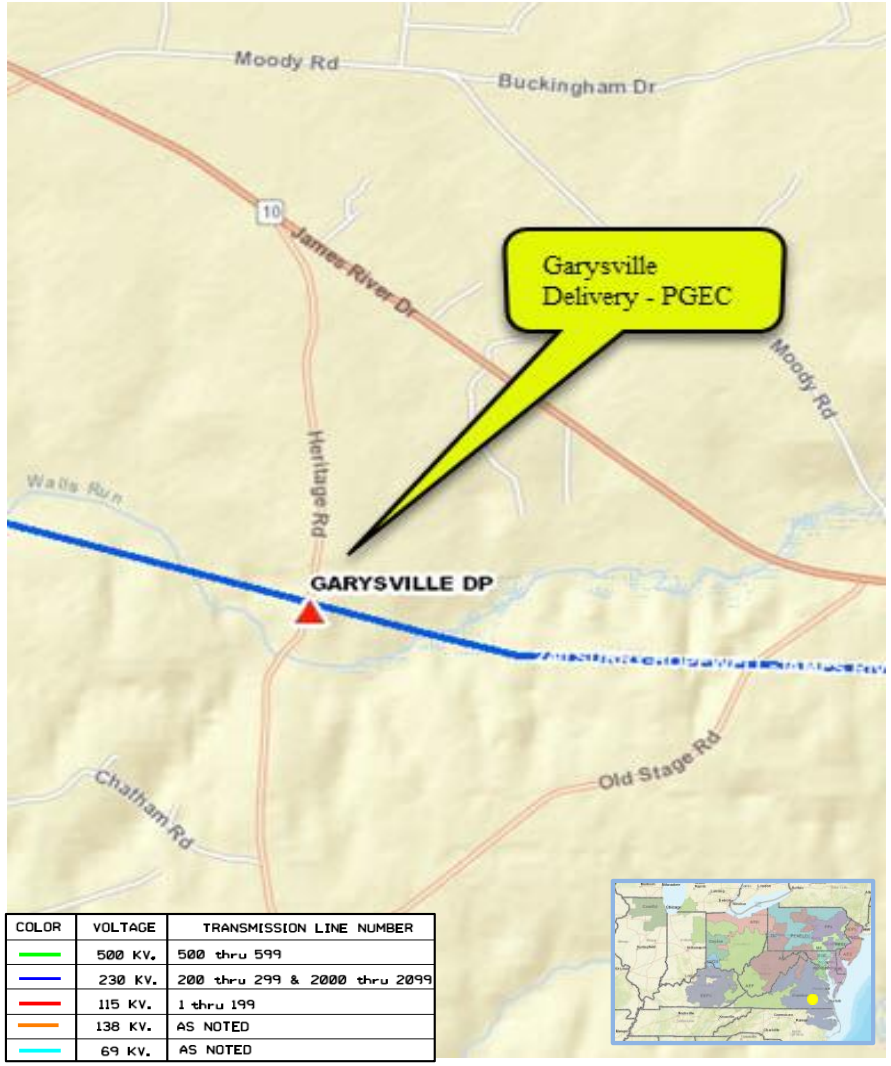
Problem Statement:

ODEC (on behalf of Prince George Electric Cooperative – PGEC) has submitted a DP Request to convert existing Garyville DP, in Prince George County, from a distribution sourced delivery to a transmission sourced delivery due to poor supplier reliability. Requested in-service date is 12/01/2022.

Projected 2025 load

Summer: 7.0 MW

Winter: 11.7 MW

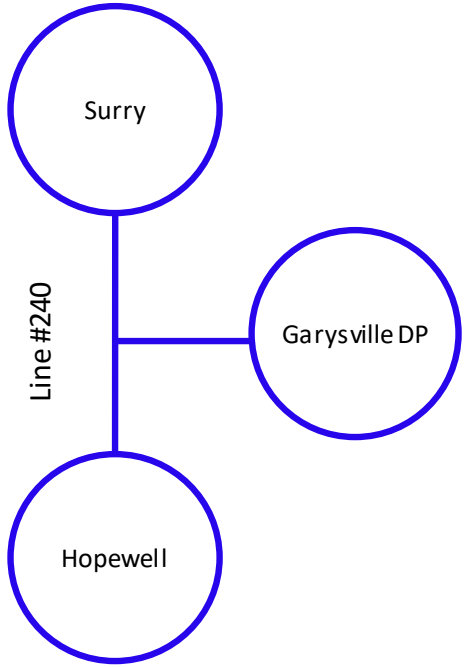


Dominion Transmission Zone M-3 Process
Garysville 230kV Delivery – PGEC

Need Number: DOM-2020-0045
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Create a tee-tap on 230kV Line #240 (Hopewell-Surry) at tower 196 by installing double-circuit H-frame switch structures on both sides at mid-span and remove tower 196. Replace towers 195 and 197 (suspension towers) with double-deadend steel pole structures to accommodate phase roll. Install terminal structure and H-frame switch structure for the tap span. Other ancillary work as needed.



Estimated Cost: $3.0 M
Projected In-Service: 12/01/2022
Supplemental Project ID: s2506
Project Status: Conceptual
Model: 2025 RTEP

Dominion Transmission Zone M-3 Process
Brandy 115kV Delivery – Add New TX - REC

Need Number: DOM-2020-0046
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 12/16/2020

Solution – 01/14/2021

Project Driver:

Customer Load Request

Specific Assumption Reference:

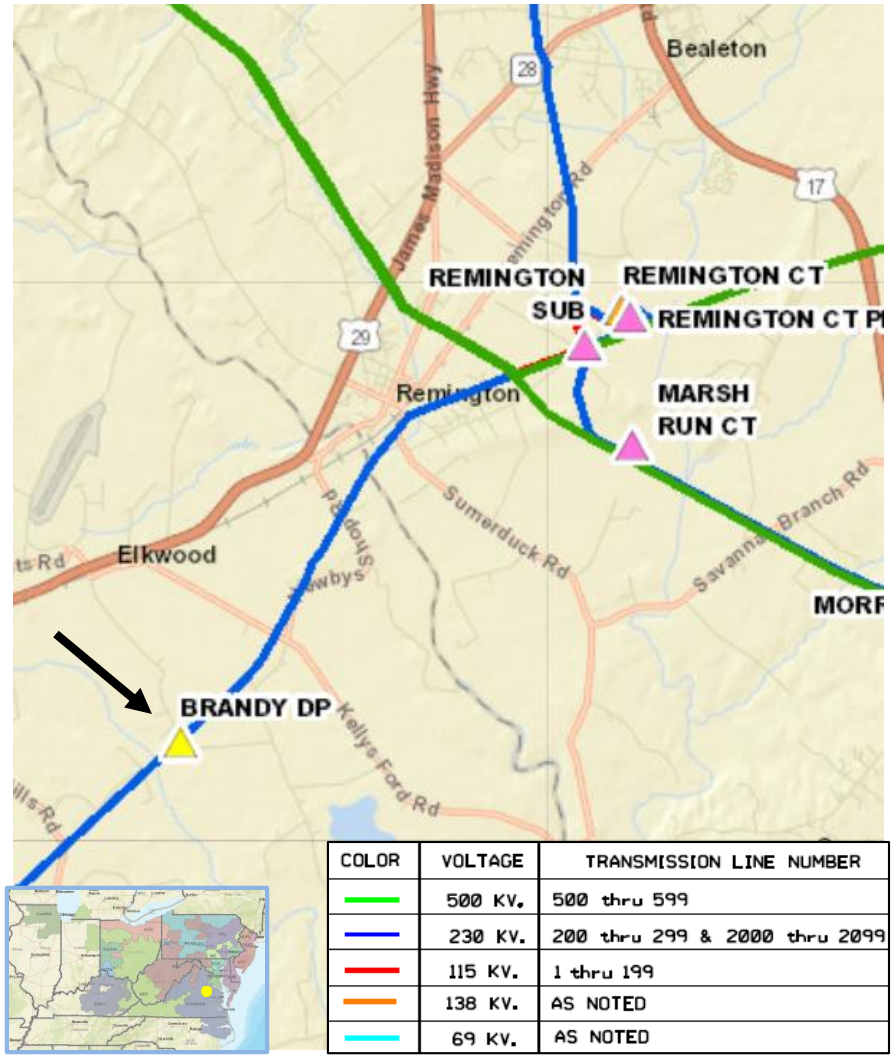
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:

ODEC has submitted a DP Request (on behalf of REC) to add a new, 56 MVA distribution transformer at Brandy DP in Culpeper County. The new transformer is needed to meet future growth and will initially serve load that is transferred from one of the existing substation transformers. The projected in-service date is 12/15/2020.

Projected 2025 load

Summer: 24.6 MW
Winter: 25.8 MW



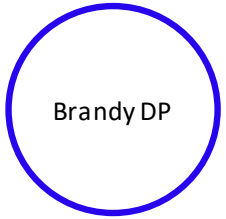
Dominion Transmission Zone M-3 Process
Brandy 115kV Delivery – Add New TX - REC

Need Number: DOM-2020-0046
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Install three 35kV CTs and three 35kV PTs at lower side of the transformers and associated equipment (the metering cabinet, the meter, the cellular modem, etc.).

Estimated Cost: $35 k
Projected In-Service: 12/15/2020
Supplemental Project ID: s2505
Project Status: Completed
Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
Shellhorn 230kV Delivery – Add 3rd TX - DEV

Need Number: DOM-2021-0002

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

Need – 01/06/2021

Solution – 02/09/2021

Project Driver:

Customer Load Request

Specific Assumption Reference:

Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

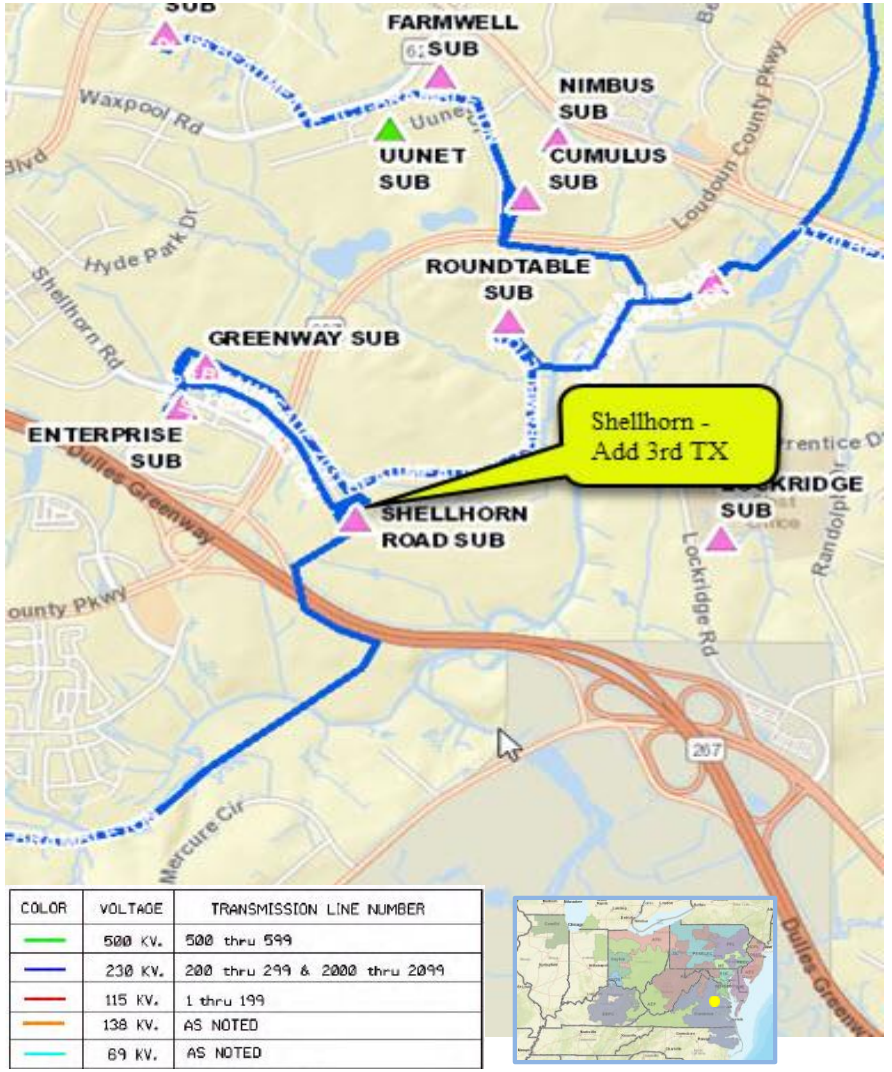
Problem Statement:

DEV Distribution has submitted a DP Request to add a 3rd transformer at Shellhorn Substation in Loudoun County. The new transformer is required to accommodate continued load growth in the area and support contingency loading for loss of one of the existing transformers. Requested in-service date is 04/15/2022.

Projected 2026 load

Summer: 201.5 MW

Winter: 201.5 MW



Dominion Transmission Zone M-3 Process
Shellhorn 230kV Delivery – Add 3rd TX - DEV

Need Number: DOM-2021-0002
Process Stage:
Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Install a 1200 Amp, 50kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Shellhorn.

Estimated Cost: $0.5 M
Projected In-Service: 04/15/2022
Supplemental Project ID: s2507
Project Status: Engineering
Model: 2025 RTEP

Dominion Transmission Zone M-3 Process
Do No Harm (DNH) Analysis

Need Number: DOM-2020-0026-DNH

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

DNH – 06/08/2021

Supplemental Project Driver:

Do No Harm Analysis

Specific Assumption Reference:

Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

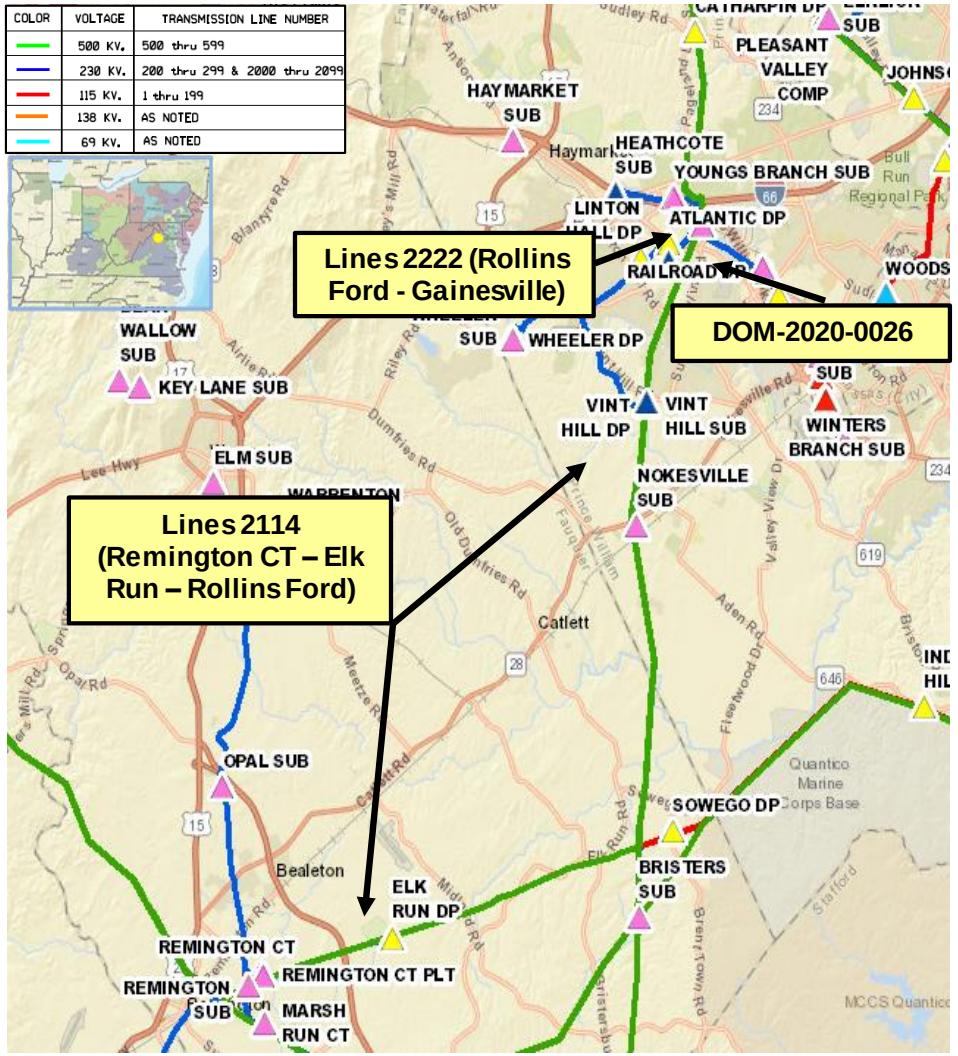
Problem Statement:

PJM has identified a N-1 Generator Deliverability contingency scenario that results in overloads of both segments of Line 2114 (Remington CT to Elk Run; Elk Run to Rollins Ford) in the 2021 Do-No-Harm analysis.

For example, the loss of Line 569 (Loudoun – Morrisville) under contingency DVP-P1-2: Line 569 creates overloads of:

- Line 2114 (Remington CT to Elk Run) – Current rating 1047 MVA
- Line 2114 (Elk Run to Rollins Ford) – Current rating 1047 MVA

The violations are caused by previously presented Supplemental Project DOM-2020-0026 in the Dominion Zone.



Dominion Transmission Zone M-3 Process
Do No Harm (DNH) Analysis

Need Number: DOM-2020-0026-DNH

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Re-conductor the following segments of 230kV Line 2114 using a higher capacity conductor and upgrade terminal equipment to achieve an expected rating of 1574 MVA.

- Line segment from Remington CT to Elk Run (approx. 3.46 miles)
- Line segment from Elk Run to Rollins Ford (approx. 19.71 miles)

Re-conductor approx. 1.11 miles of 230kV Line 2222 from Rollins Ford to Gainesville using a higher capacity conductor and upgrade terminal equipment to achieve an expected rating of 1574 MVA.

Estimated Cost:

Line 2114 (Remington CT – Elk Run – Rollins Ford) - $ 35.0 M

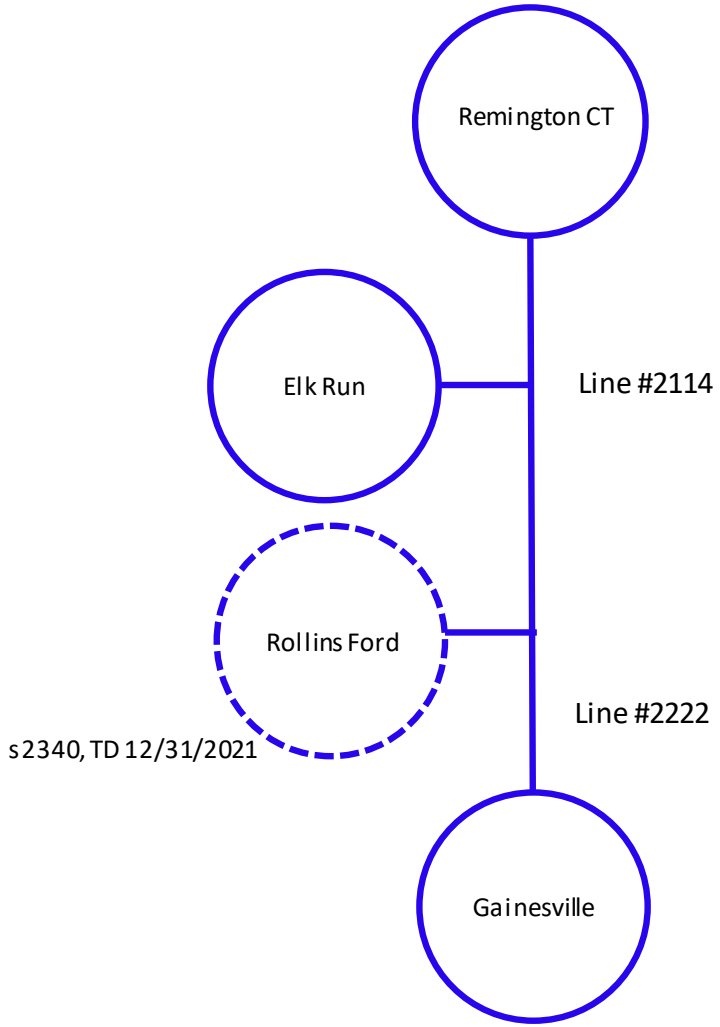
Line 2222 (Rollins Ford - Gainesville) - $ 2.0 M

Projected In-Service: 12/31/2025

Supplemental Project ID: s2340.1 (Line 2114); s2340.2 (Line 2222)

Project Status: Conceptual

Model: 2025 RTEP



Dominion Transmission Zone M-3 Process
Do No Harm (DNH) Analysis

Need Number: DOM-2021-0002-DNH

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Previously Presented:

DNH – 06/08/2021

Supplemental Project Driver:

Do No Harm Analysis

Specific Assumption Reference:

Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

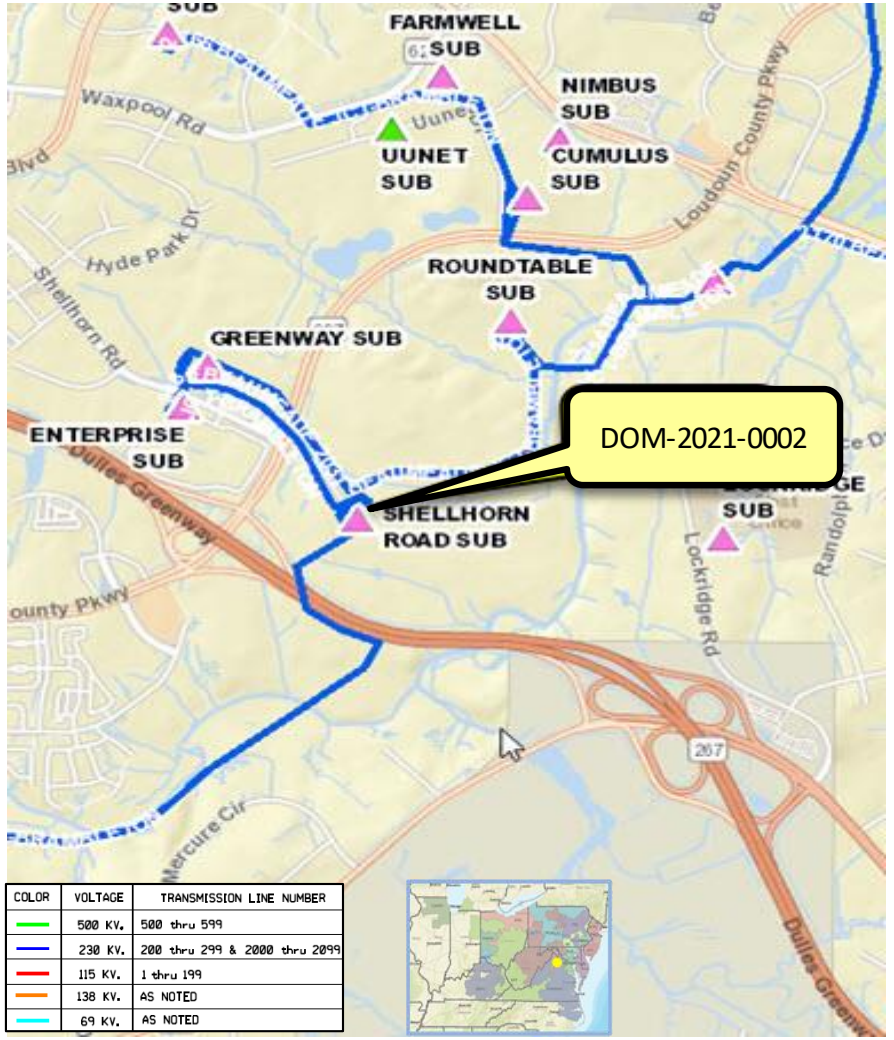
Problem Statement:

PJM has identified a N-1 contingency that results in overloads of two segments of Line 2008 (Loudoun to Takeoff) in the 2021 Do-No-Harm analysis.

For contingency DVP-P4-2: 2172T2210 overloads:

- Line 2008 (Cub Run to Walney) – Current rating 823 MVA
- Line 2008 (Walney to Takeoff) – Current rating 823 MVA

The violations are caused by previously presented Supplemental Project DOM-2021-0002 in the Dominion Zone.



Dominion Transmission Zone M-3 Process
Do No Harm (DNH) Analysis

Need Number: DOM-2021-0002-DNH

Process Stage:

Submission of Supplemental Project for Inclusion in the Local Plan – 06/18/2021

Selected Solution:

Re-conductor the segments of 230kV Line 2008 between Cub Run and Walney (1.07 miles) and Walney to Takeoff (1.94 miles) using a higher capacity conductor and upgrade terminal equipment to achieve an expected rating of 1574 MVA.

Estimated Cost:

Line 2008 (Cub Run – Walney) - $ 2.5 M

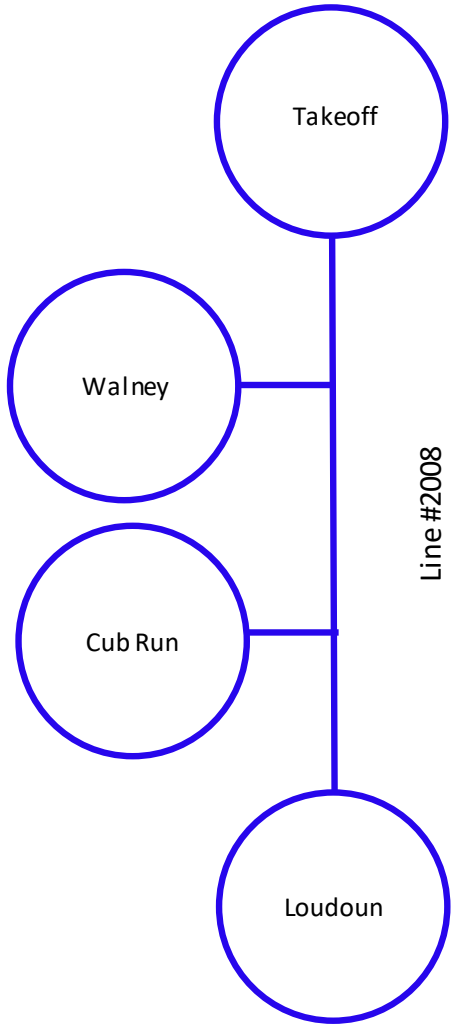
Line 2008 (Walney – Takeoff) - $ 3.5 M

Projected In-Service: 12/31/2025

Supplemental Project ID: s2507.1 (Cub Run-Walney); s2507.2 (Walney-Takeoff)

Project Status: Conceptual

Model: 2025 RTEP



Revision History

07/01/2021 – V1 – Local Plan posted to pjm.com for s2340, s2341, s2495-s2507.