SRRTEP Committee Southern
Dominion Supplemental Projects

October 21, 2019

Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2019-0026

Process Stage: Solutions Meeting 10/21/2019

Previously Presented: Need Meeting 08/27/2019

Project Driver: Customer Service

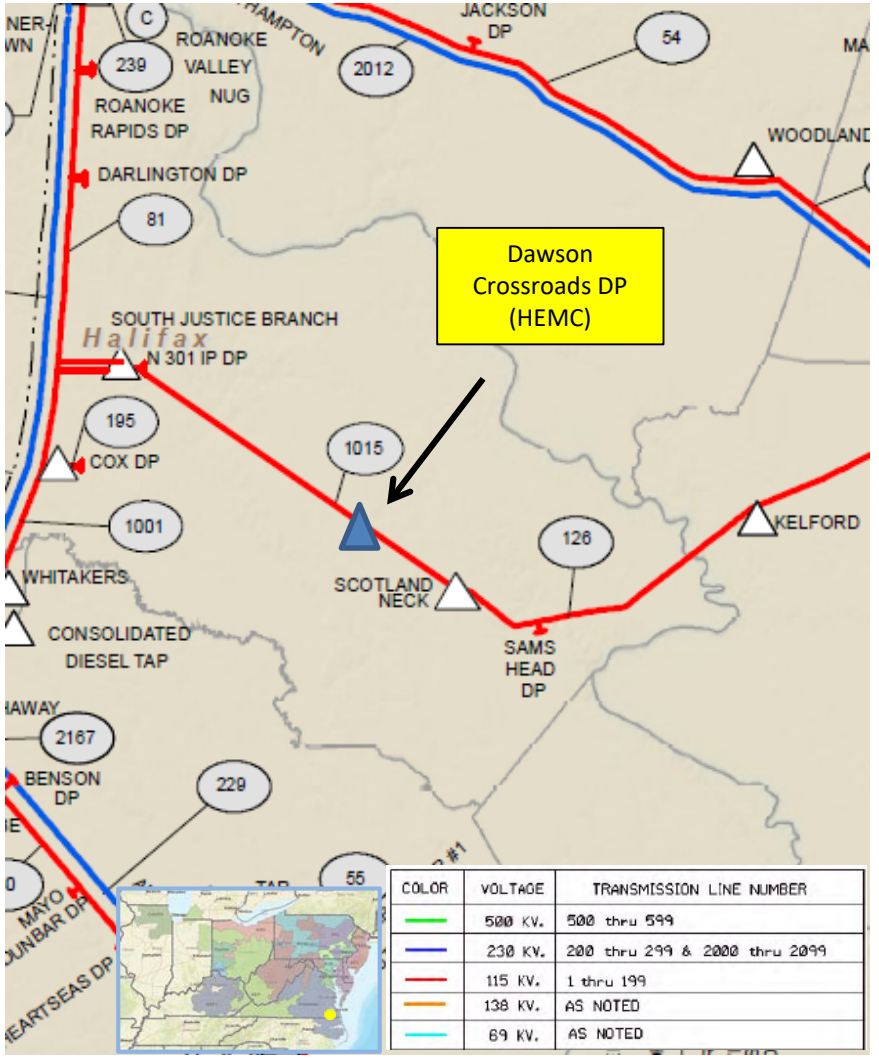
Specific Assumption References:

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

Problem Statement:

NCEMC has submitted a request on behalf of Halifax EMC (HEMC) for a new Delivery Point (Dawsons Crossroads) at Halifax, NC, to replace an existing distribution Delivery Point due to poor reliability. The customer requests service by November 1, 2020.

Initial In-Service Load	Projected 2024 Load
Winter: 2.5 MW	Winter: 2.6 MW

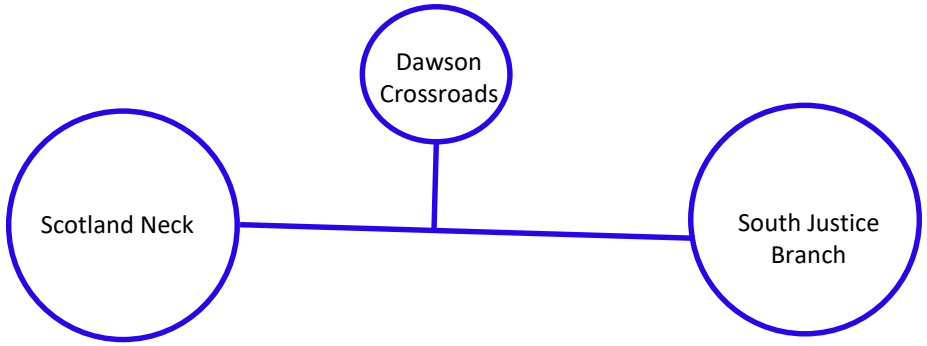


Dominion Transmission Zone: Supplemental Dawson Crossroads 115kV Delivery - DEV

Need Number: DOM-2019-0026

Process Stage: Solutions Meeting 10/21/2019

Proposed Solution:
Cut into line #1015 and install three line switches. Install a 115kV circuit switcher on the high side of the new transformer. Perform any necessary associated transmission level work to support this new substation.



Estimated Project Cost: $0.7 M

Alternatives Considered:
No feasible alternatives

Projected In-service Date: 11/01/2020

Project Status: Conceptual

Model: 2023 RTEP

Dominion Transmission Zone: Equipment Material Condition, Performance, and Risk

Need Number: DOM-2019-0030

Process Stage: Solution Meeting 10/21/2019

Project Driver: Equipment Material Condition, Performance, and Risk

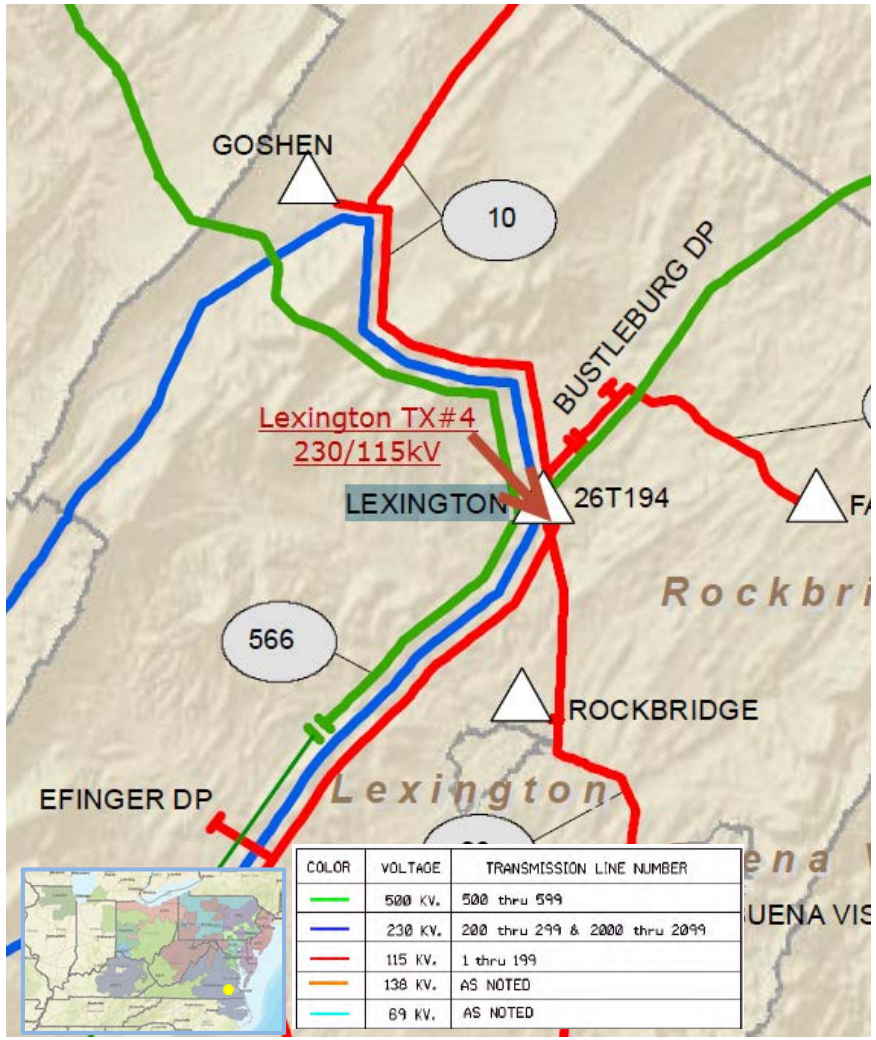
Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2018

Problem Statement:

Lexington Tx#4 is a 168MVA 230/115kV transformer originally manufactured in 1986. This transformer is being replaced as part of our strategic transmission transformer replacement program as based on the results of our ongoing transformer health assessment (THA) process. Detailed drivers are:

- DGA indicates trending upward levels of Hydrogen, Methane, along with high levels of carbon monoxide and carbon dioxide since 1997. Oil was degasified in 2009 but gas trending continues.
- Reduced BIL ratings



Dominion Transmission Zone: Equipment Material Condition, Performance, and Risk

Need Number: DOM-2019-0030

Process Stage: Solutions Meeting 10/21/2019

Proposed Solution:

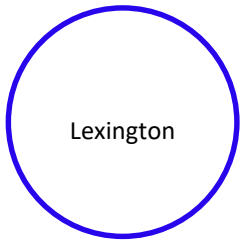
Replace the identified 168MVA 230/115kV transformer with a 168MVA 230/115kV transformer. Perform any associated transmission work.

Estimated Project Cost: $3.0 M

Project IS Date: 3/01/2020

Project Status: Engineering

Model: 2023 RTEP



Dominion Transmission Zone: Equipment Material Condition, Performance, and Risk

Need Number: DOM-2019-0031

Process Stage: Solution Meeting 10/21/2019

Project Driver: Equipment Material Condition, Performance, and Risk

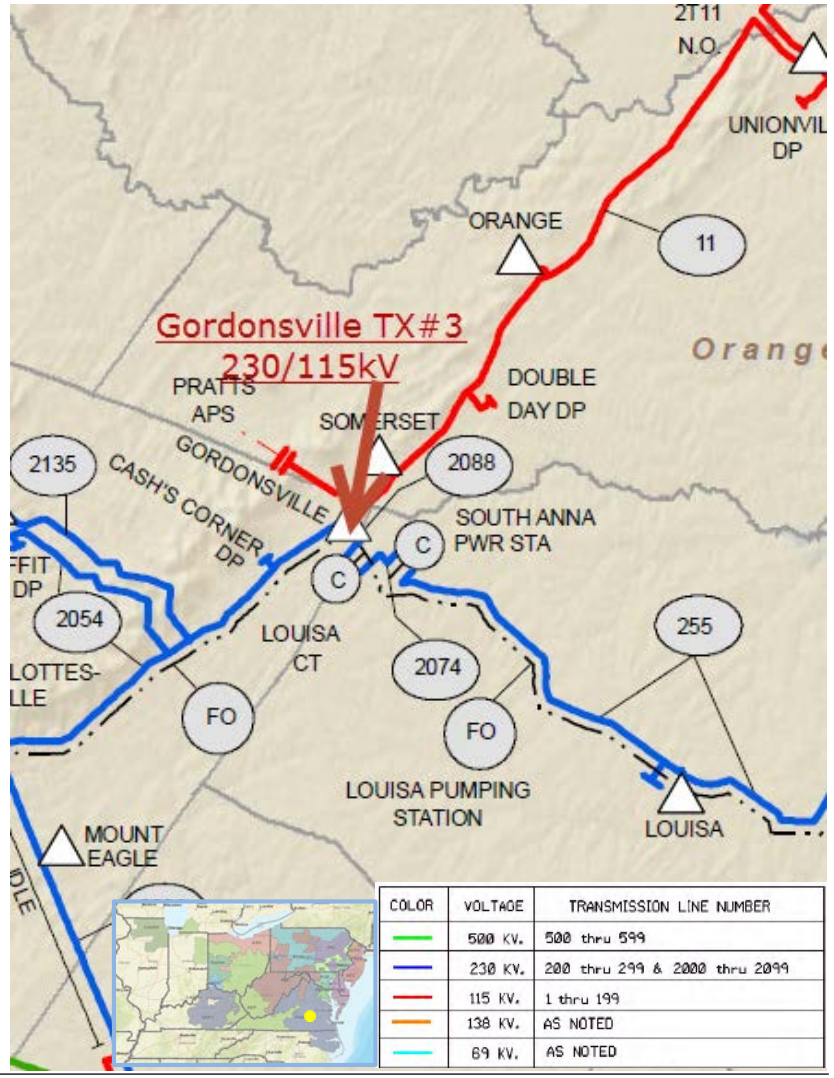
Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2018

Problem Statement:

Gordonsville Tx#3 is a 224MVA 230/115kV transformer originally manufactured in 1990. This transformer is being replaced as part of our strategic transmission transformer replacement program as based on the results of our ongoing transformer health assessment (THA) process. Detailed drivers are:

- Transformer failed in service at Dooms in 1999, repaired / remanufactured in 2000 and returned to service in Gordonsville in 2005.
- Oil DGA indicates trending upward levels of Methane and Ethylene, along with high levels of carbon monoxide and carbon dioxide since returning to service.
- Reduced BIL ratings



Dominion Transmission Zone: Equipment Material Condition, Performance, and Risk

Need Number: DOM-2019-0031

Process Stage: Solutions Meeting 10/21/2019

Proposed Solution:

Replace the identified 224MVA 230/115kV transformer with a 224MVA 230/115kV transformer. Perform any associated transmission work.

Estimated Project Cost: $3.5 M

Project IS Date: 12/13/2019

Project Status: Engineering

Model: 2023 RTEP

Appendix

High level M-3 Meeting Schedule

Assumptions

Activity	Timing
Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
Stakeholder comments	10 days after Assumptions Meeting

Needs

Activity	Timing
TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
Stakeholder comments	10 days after Needs Meeting

Solutions

Activity	Timing
TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
Stakeholder comments	10 days after Solutions Meeting

Submission of Supplemental Projects & Local Plan

Activity	Timing
Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
Post selected solution(s)	Following completion of DNH analysis
Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions

Revision History

10/11/2019 – V1 – Original version posted to pjm.com