



Sub Regional RTEP Committee PJM South

January 30, 2018

First Review

Baseline Reliability and Supplemental Projects



Dominion: Baseline Project Skippers – New 115kV Switching Station

Problem Statement:

- 115kV Line #130 (Carolina - Clubhouse) has a 4.0 mile long tap to Brink DP (MEC). The need to remove this long tap exposure was identified for reliability. Dominion Energy's Facility Interconnection Requirements (FIR) section 6.1.b states that transmission tap lines greater than a mile and less than 100MW should be protected by a 3 or 4 breaker ring.
- Line #130 is a 20 mile long 115kV network line with 5 tap connections. The number of tap connections on Line #130 exceeds the limit outlined in Dominion Energy's Planning Criteria (C.2.7) which limits tap connections to 4 per line.

Potential Solution:

- Acquire land and build a new switching station (Skippers) at the tap serving Brink DP with a 115kV four breaker ring to split line #130 and terminate the end points. Terminate the Brink tap into the ring. This will reduce line exposure by splitting line #130 into 2 lines: Clubhouse to Brink Tap ~9 miles and Brink Tap – Carolina ~11 miles. This results in 1 tap connection between Carolina and the new station and 3 tap connections between the new station and Clubhouse. The fourth breaker in the ring prevents a breaker failure from taking out all customers (~7300) between Carolina and Clubhouse.

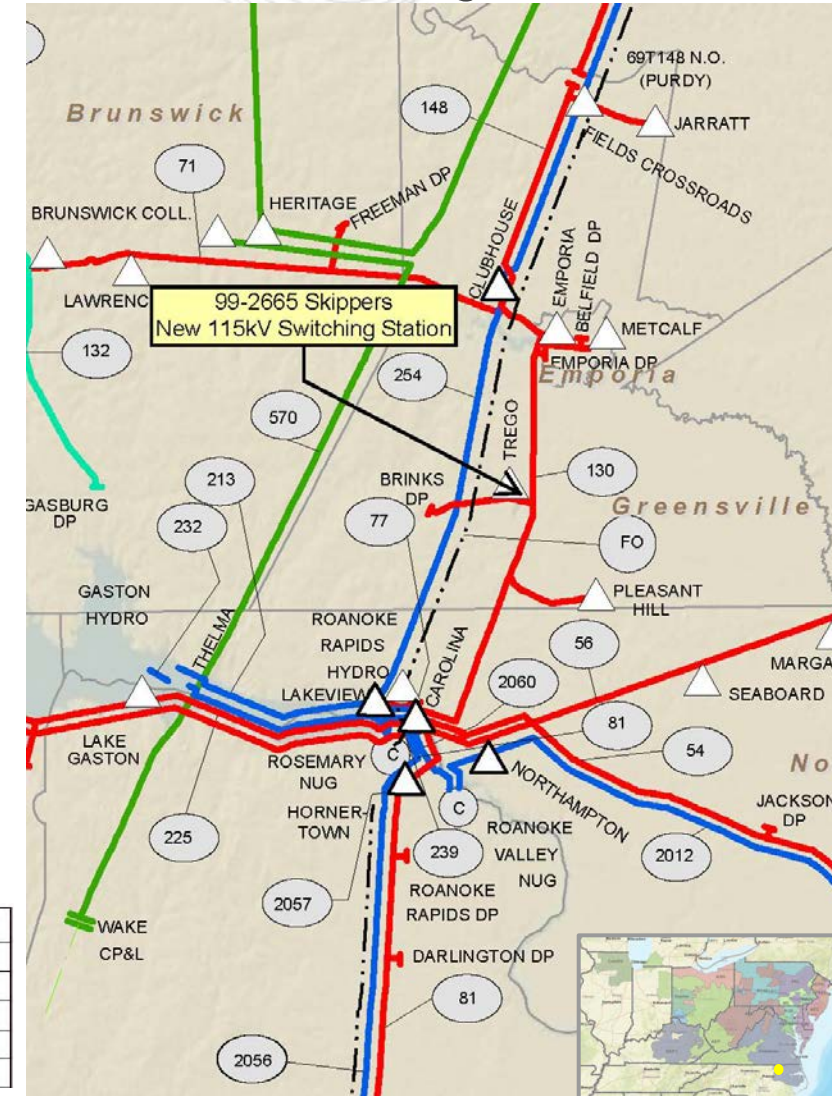
Alternatives: No feasible alternatives

Estimated Project Cost: \$8.0 M

Possible In-service Date: 5/1/2020

Project Status: Conceptual

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





Dominion: Supplemental Project Line #121 Wave Trap Replacement

Problem Statement:

- 115kV Line #121 wave trap at Poe substation needs to be replaced due to age.

Potential Solution:

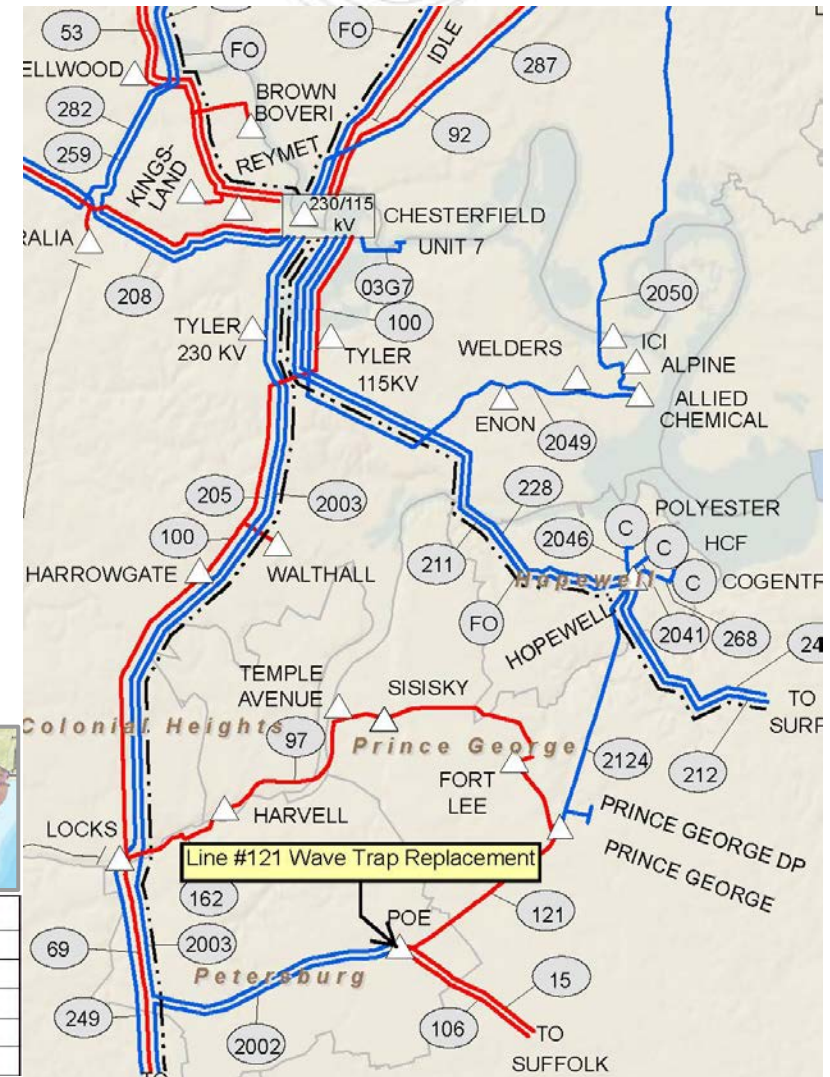
- Replace existing line #121 1200A wave trap at Poe with a 2000A wave trap. Line #121 Poe – Prince George summer emergency rating will be increased from 239MVA to 262MVA.

Alternatives: No feasible alternatives

Estimated Project Cost: \$130 K

Possible In-service Date: 5/30/2018

Project Status: Engineering





Dominion: Supplemental Project

Pumping Hill – New 115kV Delivery Point for Mecklenburg EC

Problem Statement:

- ODEC has requested a new 115kV delivery point on behalf of Mecklenburg EC to replace Hickory Grove DP #2 (3MW). The main drivers for the new 115kV delivery point are MEC's:
 1. Aging equipment needs to be replaced and clearance issues need to be corrected; however, MEC cannot expand the station because MEC does not own Hickory Grove DP property.
 2. It is not practical for the load to be served by DE distribution.

Potential Solution:

- Dominion Energy to support the installation of MEC's new 115kV delivery point by installing 3 switches. Hickory Grove DP #2 will be retired. Hickory Grove DP #1 will remain as an industrial service to feed a pipeline.

Alternatives: No feasible alternatives

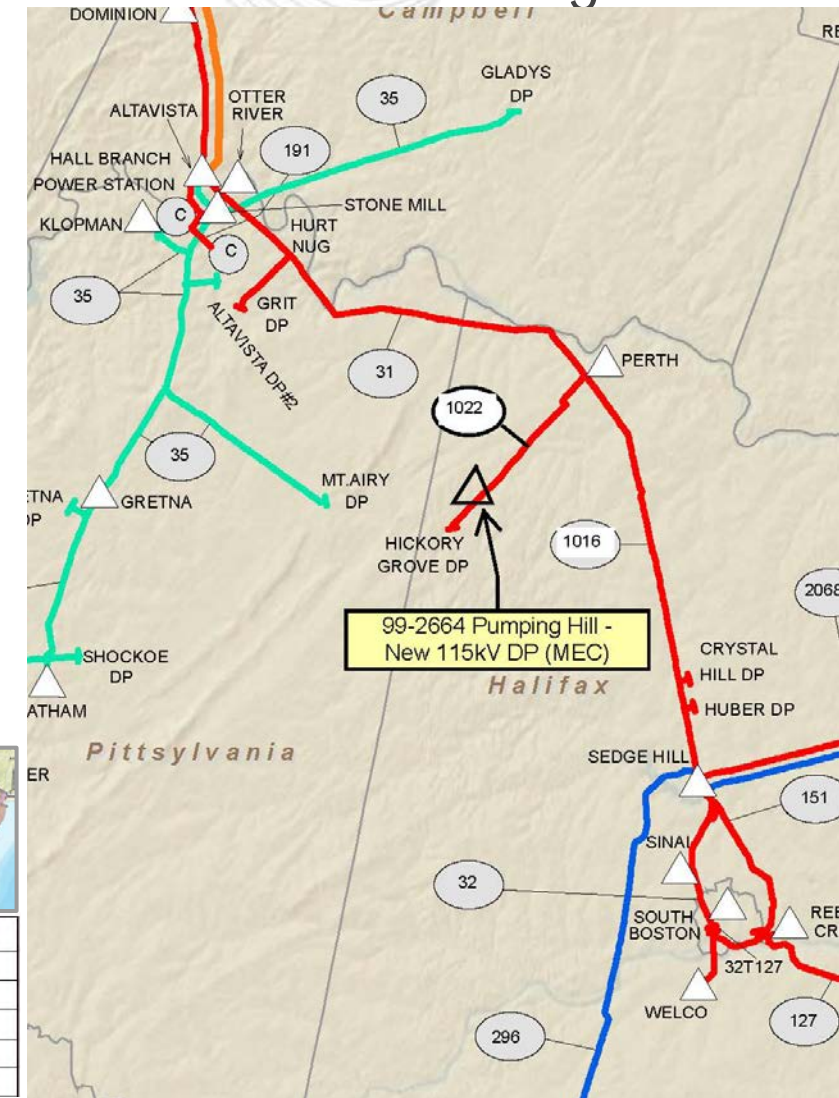
Estimated Project Cost: \$1.5 M

Possible In-service Date: 11/1/2018

Project Status: Conceptual



COLOR	VOLTAGE	TRANSMISSION LINE NUMBER
Green	500 KV.	500 thru 599
Blue	230 KV.	200 thru 299 & 2000 thru 2099
Red	115 KV.	1 thru 199
Orange	138 KV.	AS NOTED
Cyan	89 KV.	AS NOTED





Dominion: Supplemental Project Line #4 Cobbs Creek 115kV Delivery Point

Problem Statement:

- CVEC has submitted a DP Request for a new Cobbs Creek station to accommodate the construction of water reservoir adjacent to existing 115kV Line #4. Anticipated load is expected to be 7 MVA.

Potential Solution:

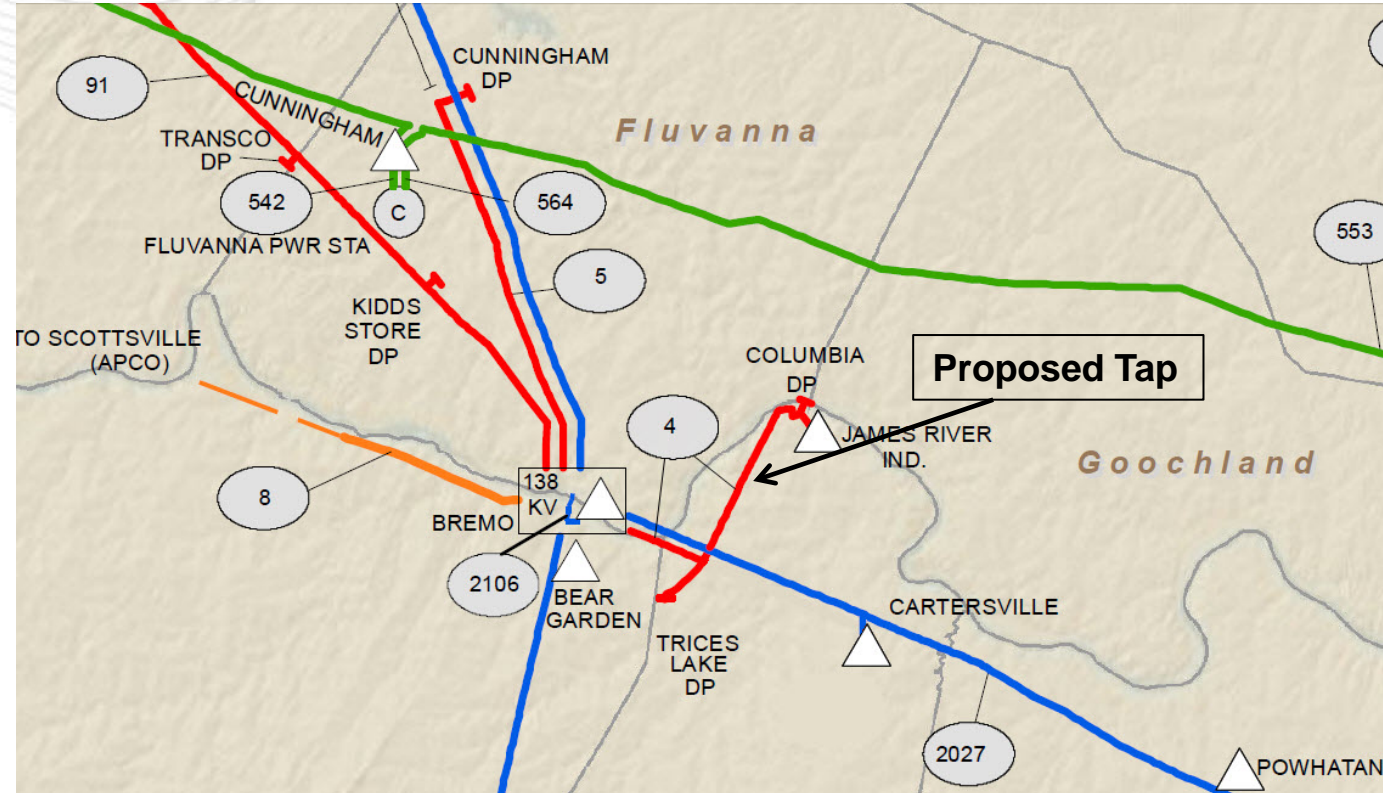
- Install a tap off 115kV Line #4

Alternatives: No feasible alternatives

Estimated Project Cost: \$450 K

Possible In-service Date: 1/1/2019

Project Status: Conceptual



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



Next Steps

South	Start	End
3/27/2018	8:30	11:30
5/30/2018	8:30	11:30
7/27/2018	8:30	11:30
9/28/2018	8:30	11:30
11/29/2018	8:30	11:30

Questions?



or

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Revision History

01/23/2018 – V1 – Original version posted to PJM.com