



Dominion Supplemental Projects

Transmission Expansion Advisory
Committee

December 13, 2018

Needs



Need Number: DOM-2018-0020

Meeting Date: 12/13/2018

Process Stage: NEED

Supplemental Project Driver: Customer Service

Problem Statement:

DEV Distribution has submitted a DP Request for a new substation (Genito). DEV has received load requests in Chesterfield County with a total load of 36MVA. One development request is in the area of Genito Place, west of Hwy 288 and north of Genito Road, another request is also in the close proximity. All existing substations are remote from the new developments and do not have adequate capacity. Requested in-service date is 05/15/2020.

Projected 2023 Load

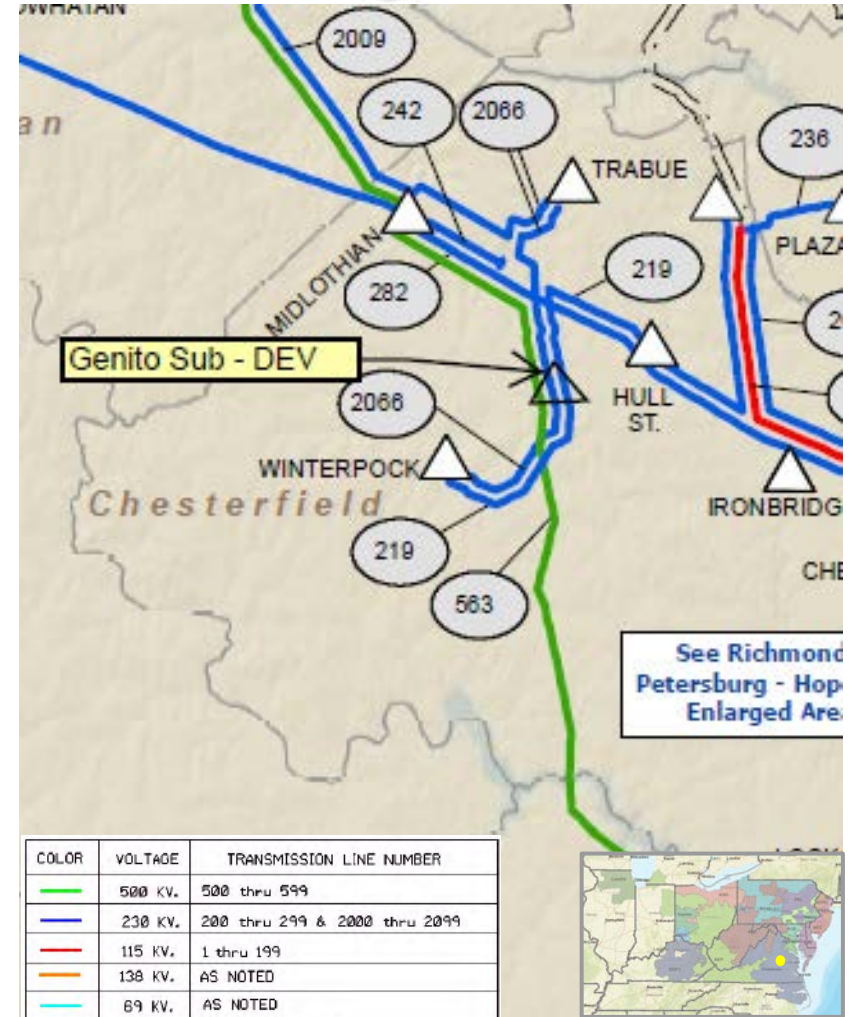
Summer: 58.3 MVA

Winter: 45.6 MVA

Specific Assumption References:

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

Dominion Transmission Zone: Supplemental Customer Load Request



Need Number: DOM-2018-0022

Meeting Date: 12/13/2018

Process Stage: NEED

Supplemental Project Driver: Customer Service

Problem Statement:

DEV Distribution has submitted a DP Request to add a 4th distribution transformer at BECO Substation in Loudoun County. The new transformer is being driven by data center growth and projections of normal summer load at BECO near 226 MW in 2020. Requested in-service date is 05/16/2020.

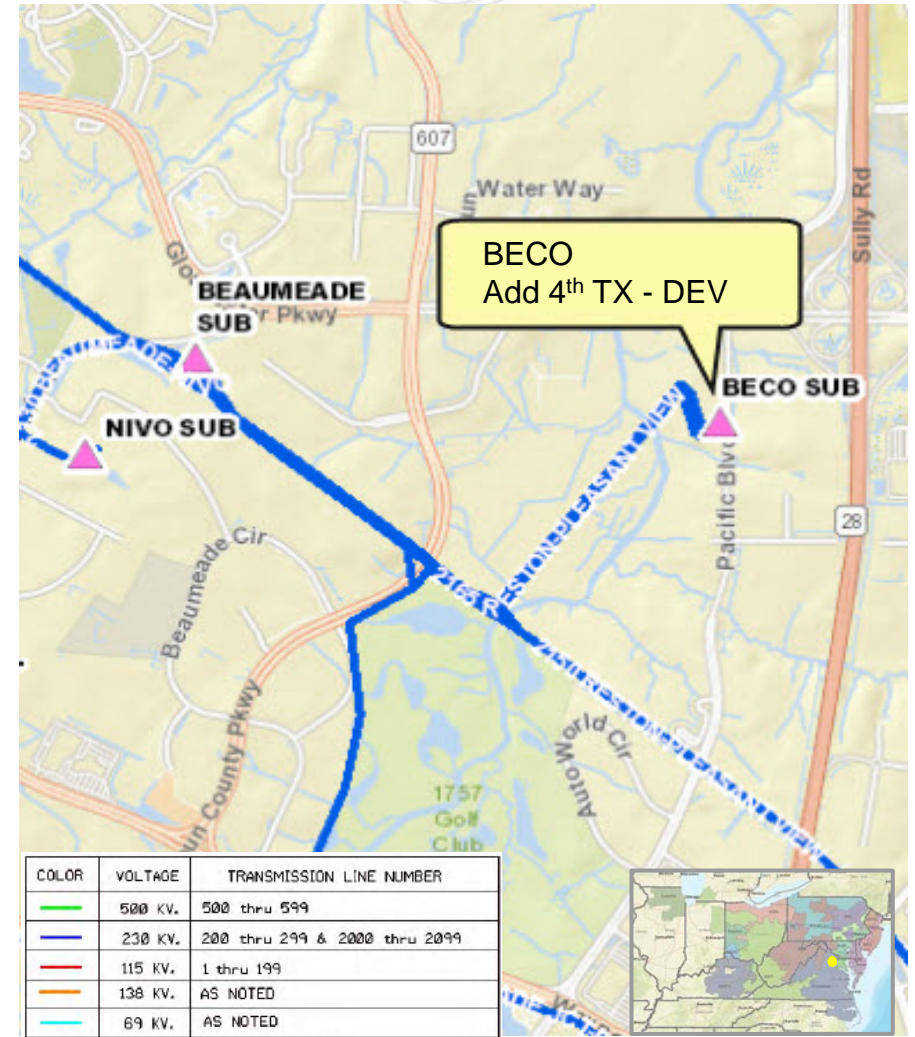
Projected 2023 Load

Summer: 259.0 MW

Winter: 217.9 MW

Specific Assumption References:

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





Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2018-0023

Meeting Date: 12/13/2018

Process Stage: NEED

Supplemental Project Driver: Customer Service

Problem Statement:

DEV Distribution has identified the need to install a second distribution transformer at Greenwich substation. The station load growth has caused a transformer contingency to exceed the capacity of field switching plus a mobile transformer. Requested in-service date is 10/15/2019.

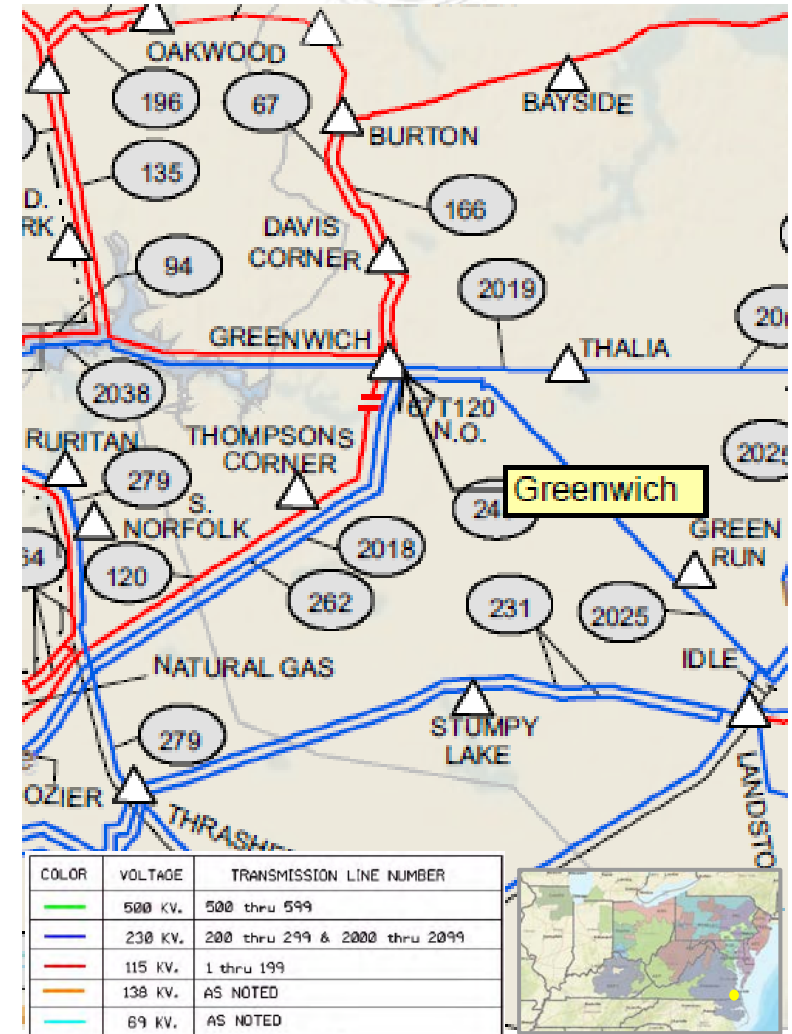
Projected 2023 Load

Summer: 77 MVA

Winter: 77 MVA

Specific Assumption References:

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





Solutions



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2018-0006

Meeting Date: 12/13/2018

Process Stage: SOLUTIONS

Need Presented: 09/13/2018

Supplemental Project Driver: Customer Service

Problem Statement:

NOVEC has submitted a DP Request for a new substation (Gant) to accommodate a new datacenter campus in Loudoun County with a total load in excess of 100 MW. Requested in-service date is 11/01/2019.

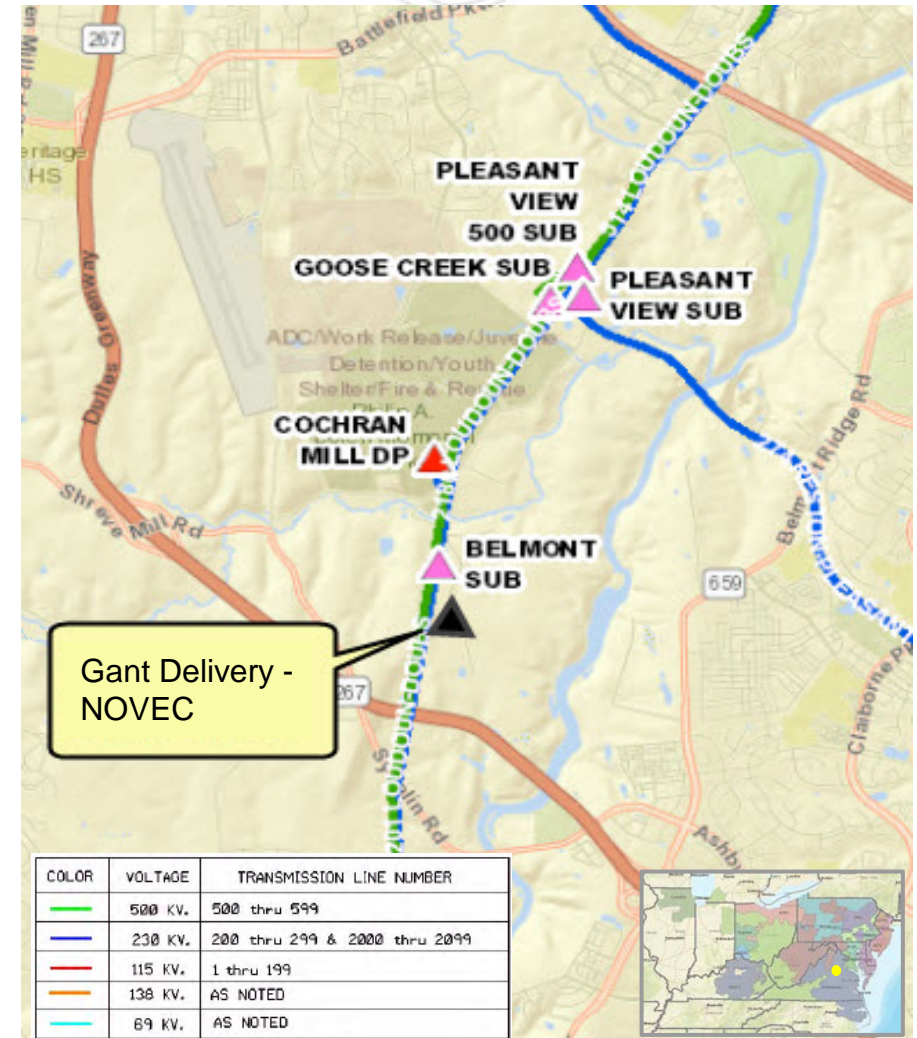
Projected 2023 Load

Summer: 112.0 MW

Winter: 120.0 MW

Specific Assumption References:

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





Dominion Transmission Zone: Supplemental Gant 230 kV Delivery - NOVEC

Need Number: DOM-2018-0006

Proposed Solution :

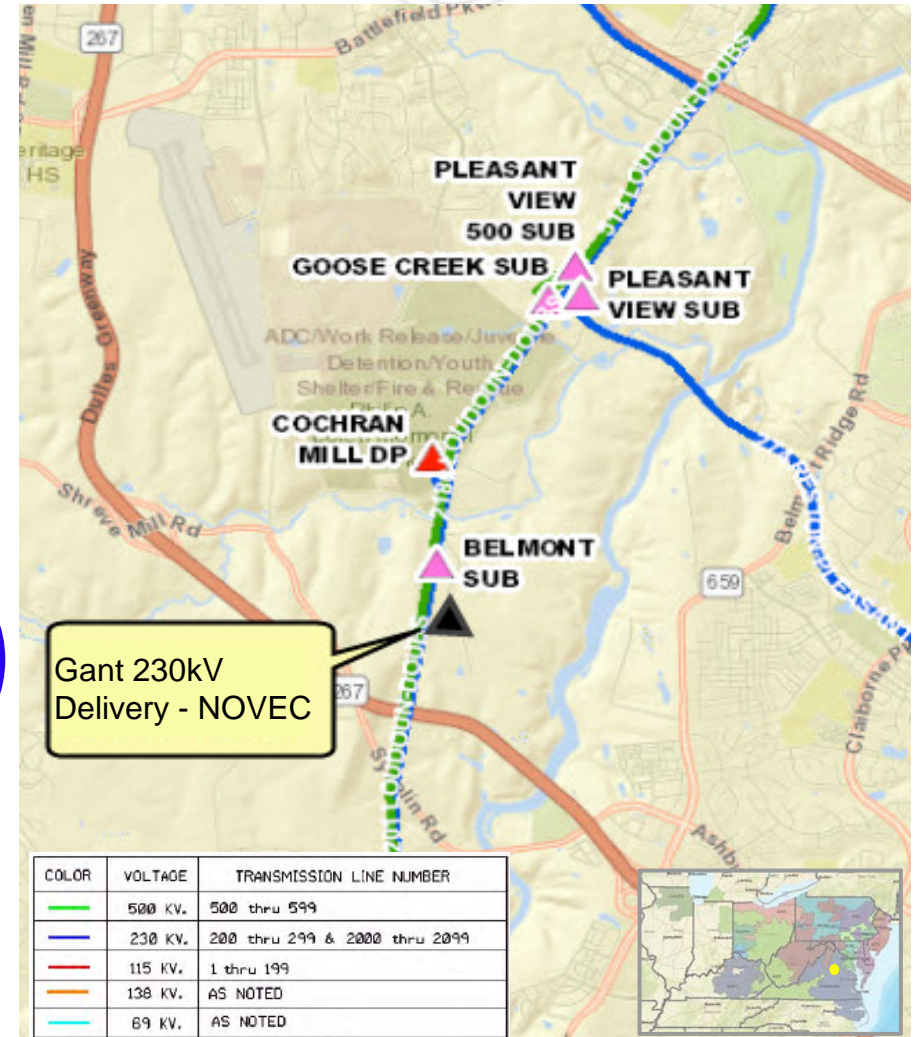
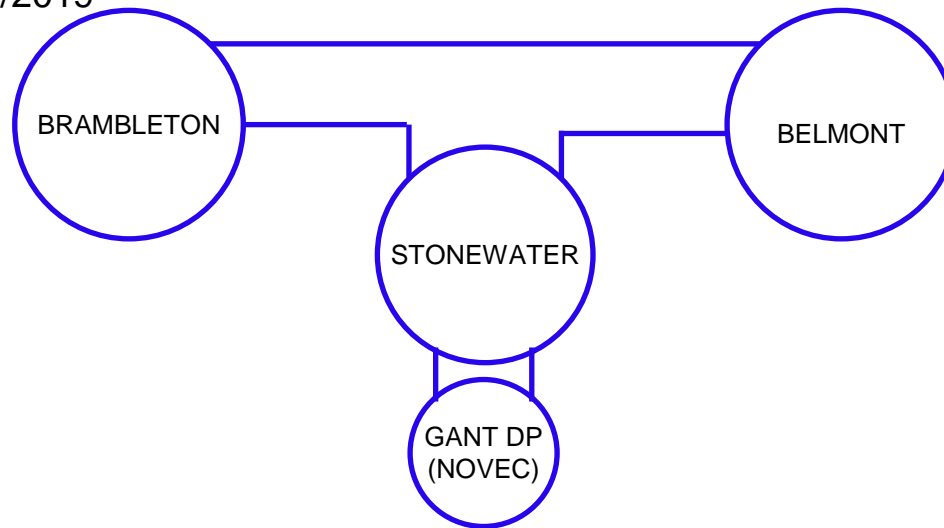
Interconnect the new DP substation by cutting and extending Line #206 (Brambleton-Belmont) to new Stonewater Switching Station. Terminate both ends into a four-breaker ring arrangement to create a Brambleton-Stonewater line and a Stonewater-Belmont line. Provide two 230 kV feeds from the ring bus at Stonewater to Gant DP.

TO Alternatives Considered:

No feasible alternatives

Estimated cost: \$ 9.0 M

Projected In-service Date: 11/01/2019





Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2018-0007

Meeting Date: 12/13/2018

Process Stage: SOLUTIONS

Need Presented: 09/13/2018

Supplemental Project Driver: Customer Service

Problem Statement:

NOVEC has submitted a DP Request for a new substation (Innovation) to accommodate a new datacenter campus in Prince William County with a total load in excess of 100 MW. Requested in-service date is 08/15/2019.

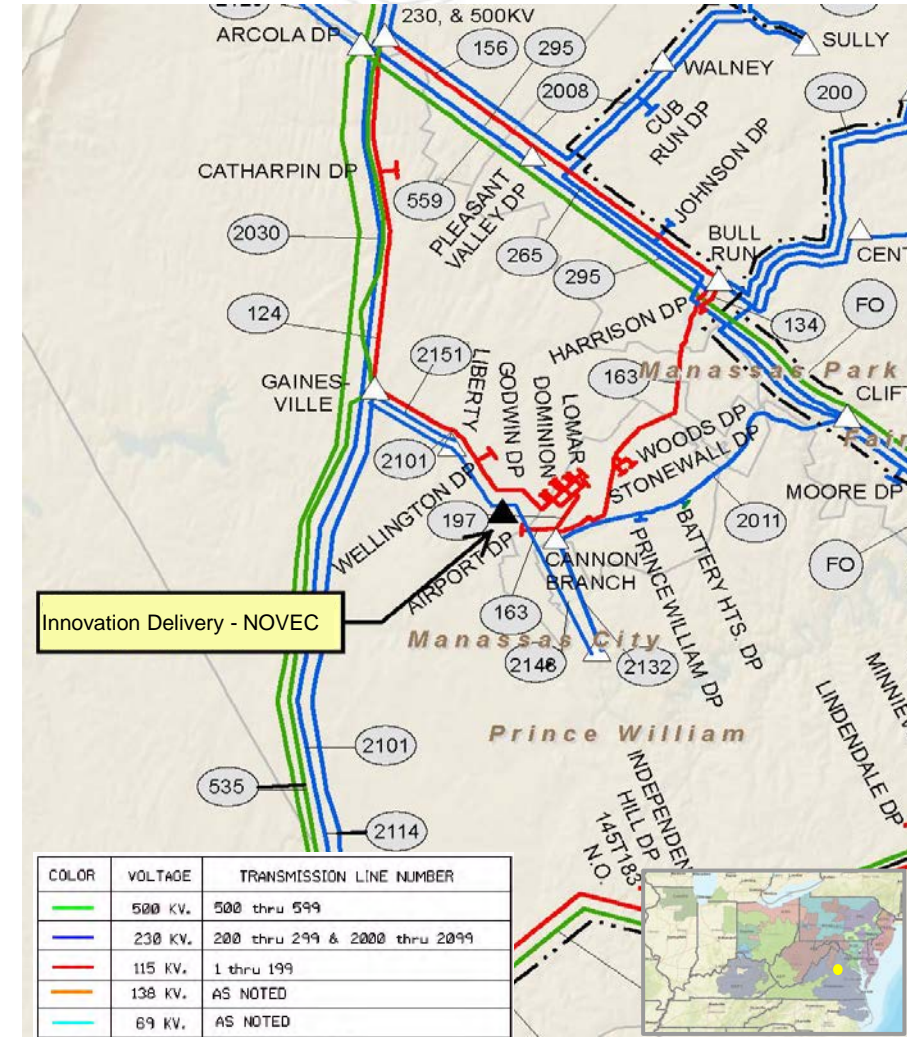
Projected 2023 Load

Summer: 98.6 MW

Winter: 111.4 MW

Specific Assumption References:

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





Dominion Transmission Zone: Supplemental Innovation 230 kV Delivery - NOVEC

Need Number: DOM-2018-0007

Proposed Solution :

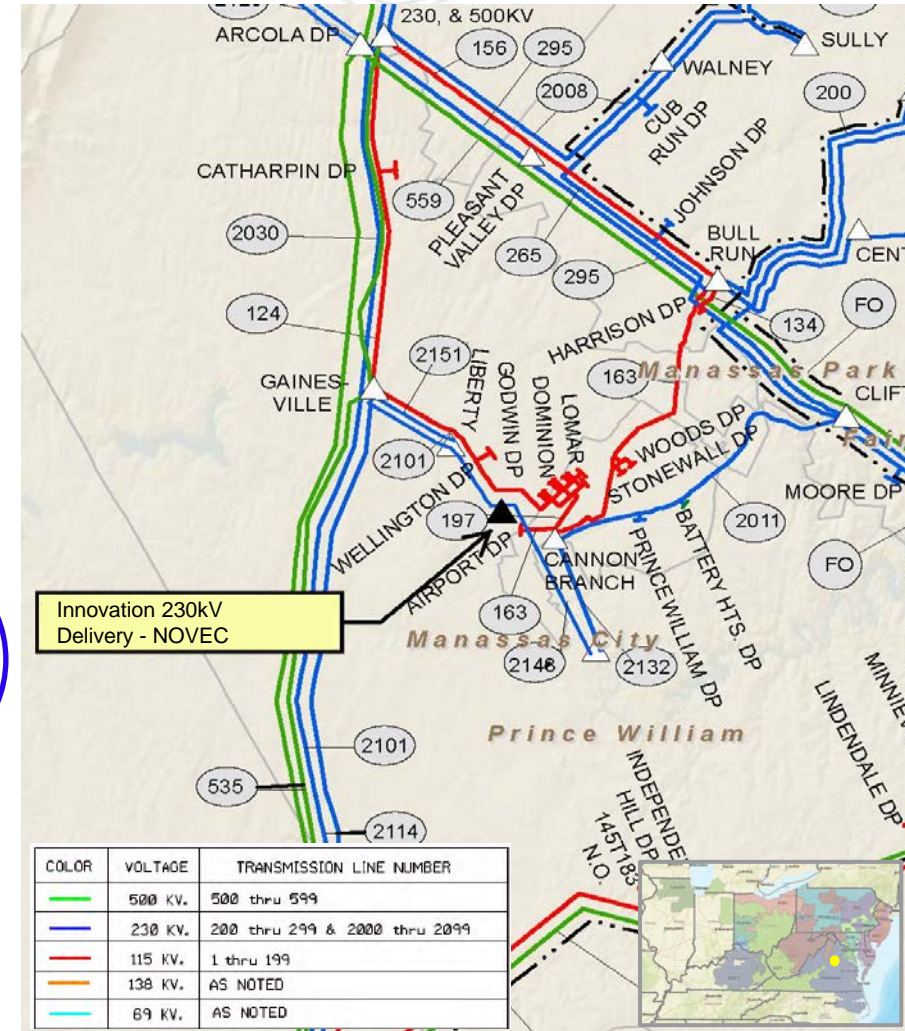
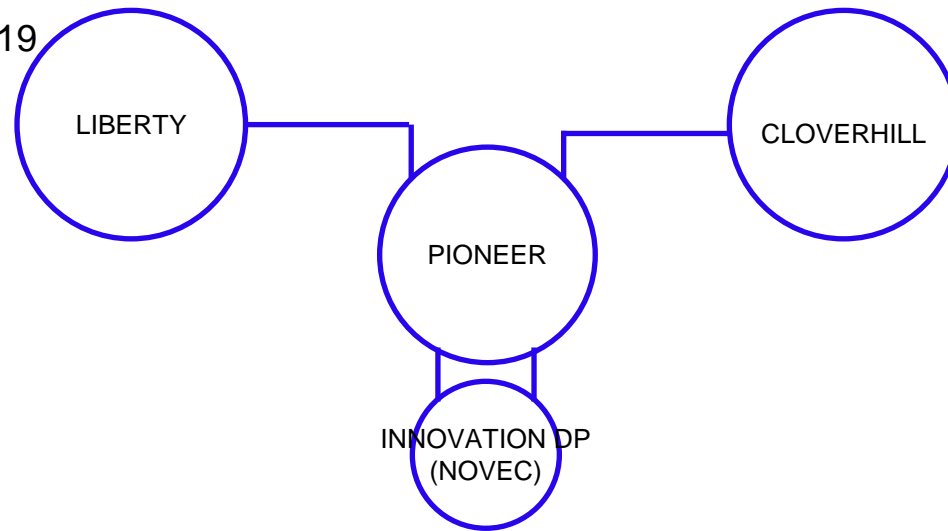
Interconnect the new DP substation by cutting and extending Line #2148 (Cloverhill-Liberty) to new Pioneer Switching Station. Terminate both ends into a six-breaker ring arrangement (four breakers installed initially, two future) to create Line #2148 (Cloverhill-Pioneer) and Line #2187 (Pioneer-Liberty). Provide two 230 kV feeds from the ring bus at Pioneer to Innovation DP.

TO Alternatives Considered :

No feasible alternatives

Estimated cost: \$ 9.7 M

Projected In-service Date: 08/15/2019





Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2018-0019

Meeting Date: 12/13/2018

Process Stage: SOLUTIONS

Need Presented: 10/11/2018

Supplemental Project Driver: Customer Service

Problem Statement:

DEV Distribution has submitted a DP Request for a new substation (Sandlot) to accommodate the expansion of a manufacturing plant in the City of Manassas with a total load in excess of 100 MW. Requested in-service date is 10/15/2019.

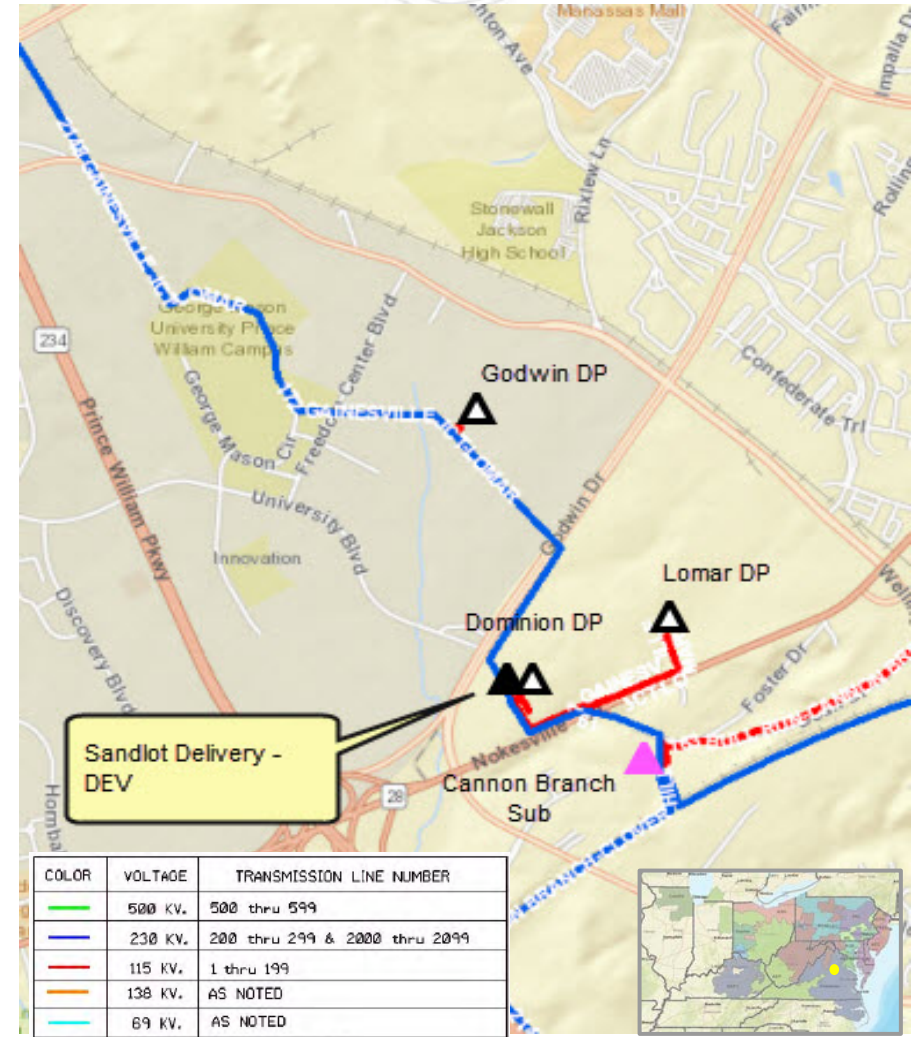
Projected 2023 Load

Summer: 41.9 MW

Winter: 41.9 MW

Specific Assumption References:

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





Dominion Transmission Zone: Supplemental Sandlot 230 kV Delivery - DEV

Need Number: DOM-2018-0019

Proposed Solution :

Interconnect the new substation by cutting and extending Line #2148 (Cloverhill-Liberty) to a backbone in the new station. Terminate both ends into a four-breaker ring to create a Cloverhill-Sandlot line and a Sandlot-Liberty line.

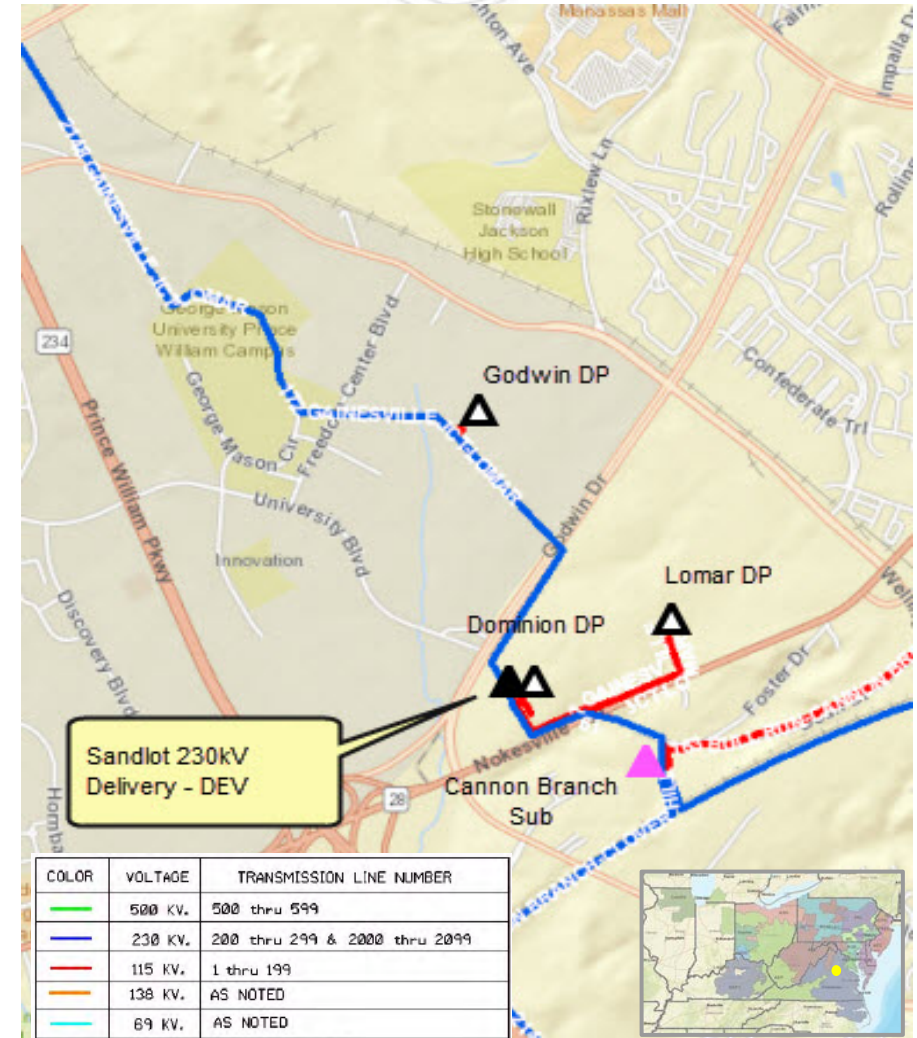
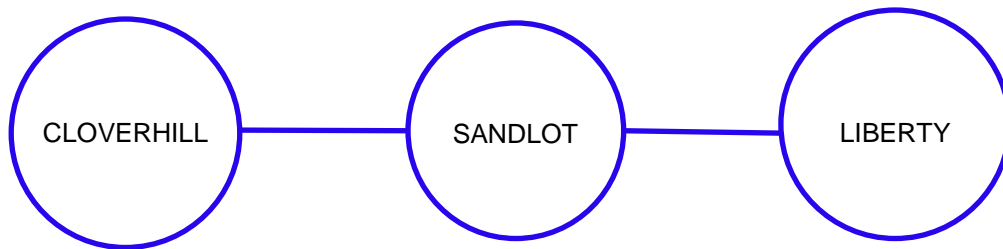
The existing manufacturing load of approx. 60 MW will be moved to the Sandlot 230kV Delivery when its 115kV source is converted to 230kV (projected to be needed within the next 3-5 years to accommodate continued growth in the area). The total manufacturing load (existing + expansion) is projected to exceed 100 MW by 2023.

TO Alternatives Considered :

No feasible alternatives

Estimated cost: \$ 5.5 M

Projected In-service Date: 10/15/2019



- V1 – 12/3/2018 – Original Slides Posted