


City of Alexandria, Virginia

MEMORANDUM

DATE: SEPTEMBER 21, 2018

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: MARK B. JINKS, CITY MANAGER 

SUBJECT: NOTIFICATION BY DOMINION ENERGY OF CHANGES IN DOMINION'S 230KV PLANS

This morning, the City received the attached information from Dominion Energy that included significant changes in the utility's planned 230kV underground transmission line in Alexandria.

A letter and presentation, which are attached, indicate that Dominion intends to drop the proposed new connection and will not, at this time, build a new line under Potomac Avenue or reconstruct the existing 230kV lines under Route One.

The City has been working closely with Dominion since 2014 on the utility's proposal for a new line from the existing Glebe Substation in Arlington County to Pepco's existing Potomac River Substation in north Old Town. Dominion has regularly cited multiple electric reliability studies that determined the existing transmission facilities in the City and Arlington County would no longer adequately meet demand and mandatory North American Electric Reliability Corporation (NERC) reliability criteria. Dominion initially proposed nine potential alignments for a transmission line and requested that the City identify an alternative that it could support as part of Dominion's planned submission to the State Corporation Commission (SCC), which is the public entity charged with approving transmission line proposals in Virginia.

In May, City Council adopted a proposal that would have allowed Dominion to run the line under Potomac Avenue if the SCC approved the project and if Dominion was able to substantiate a need for the work. The agreement would have provided the City with financial compensation for impacts to City-owned right-of-way.

Today's information is a result of recent analysis performed by Dominion in consultation with PJM, the regional transmission organization that coordinates the movement of wholesale electricity in the Mid Atlantic. Because the analyses includes information on critical energy infrastructure, it is not public for the City Government and its residents to review; and Dominion did not provide the attached findings to the City until today.

Since Dominion will no longer pursue the perpetual easement needed for the Potomac Avenue underground line, compensation will not be part of a planned future SCC filing. City Council eliminated the Tier II Tax District in Potomac Yard contingent on receiving at least \$14.6 million from Dominion. Given that compensation will no longer occur, staff intends to review options and to provide a recommendation to City Council by the end of this calendar year.

Finally, in its letter, Dominion indicated that it intends to proceed with relocation of the Potomac Yard north substation and a rebuild of the Glebe Substation. The utility targets a SCC filing in either the first or second quarters of 2019. Staff will continue to coordinate with Dominion as more specifics come available and will report back to both Council and community.

ATTACHMENTS



September 21, 2018

Mr. Mark Jinks, City Manager
City of Alexandria
301 King St.
Alexandria, VA 22314

**Transmission Project Preferred Proposal Changes to *Rebuild Solution*,
No Construction Required Along Route 1 in Alexandria**

Dear Mr. Jinks,

As you are aware, over the last four years, our team at Dominion Energy has worked to address a forecasted reliability concern in the Alexandria-Arlington area. During this time, we have analyzed a number of options that would resolve forecasted load concerns, minimize disruption to neighbors and mitigate impacts within the city. I wanted to inform you of some significant changes to the scope of this project.

In our last letter in December, we shared that our two most viable alternatives to address the identified North American Electric Reliability Corporation (NERC) reliability violations were the *New Line Solution* and the *Rebuild Solution*. The *New Line Solution* involved constructing a new underground line between our Glebe Substation in south Arlington County and Pepco's Potomac River Substation in Alexandria. At that time, the *Rebuild Solution* was comprised of multiple components, including rebuilding and replacing existing underground cable in the city of Alexandria along Route 1 and existing overhead lines in Fairfax County, combined with substation upgrades in the county. Both solutions included the relocation of the Potomac Yards North Transition Station and a rebuild of the Glebe Substation in Arlington. While the *New Line Solution* at the time was projected to cost approximately \$50 million more than the *Rebuild Solution*, we felt, and Pepco and PJM agreed, that the new line offered the most resilient solution for the challenges known at the time.

In July, we received an updated base case study from PJM, our regional transmission organization, on load projections through 2023. The study gives a fresh look at energy needs in the region and across the grid. This updated study revealed several changes to our electrical planning horizon – removing the need for certain work and shifting other work out in some cases by potentially 15 years.

One key factor in the update from PJM is the effect of generation changes. In particular, Dominion Energy Generation's announcement in January that Possum Point Generating Units 3 and 4 would be placed into cold storage had multiple impacts on the system load forecast, including increasing the overload at Ox Substation in Fairfax County and entirely eliminating the

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Transmission Project Preferred Proposal Changes to *Rebuild Solution*
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need for the replacement of underground cables along Route 1 in Alexandria, both of which were components of the original *Rebuild Solution*.

In addition to changing the scope of the alternatives, these load changes significantly impacted the cost of each solution. Specifically, the estimated cost of the *Rebuild Solution* decreased from approximately \$290 million to approximately \$170 million. Alternately, the total estimated cost for the *New Line Solution* is approximately \$340 million.

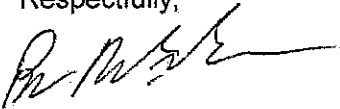
Following these changes, PJM, Pepco and our team concur that we can no longer advocate for the *New Line Solution* as the preferred alternative in our planned filing with the Virginia State Corporation Commission, because the cost difference between solutions are unjustifiable.

We feel confident at this time, based on the information before us today, that the revised scope of project will adequately address the NERC reliability violations identified, even if large new development comes to the Alexandria-Arlington area. However, we will continue to monitor and consider any new development plans and resiliency needs that may impact power delivery requirements in this area.

Our plan going forward is to complete detailed engineering on components of the current *Rebuild Solution* and present to PJM again. Once this work is completed, we will communicate the final scope and new SCC filing date(s).

We appreciate your collaboration on this project, and we will keep you and other stakeholders informed as we work to provide reliable energy in this region and throughout our service area.

Respectfully,



Bob McGuire
Director, Electric Transmission Project Development & Execution
Dominion Energy Electric Transmission

cc: Steve Chafin, Director, Electric Transmission Planning & Strategic Initiatives
Wes Keck, Project Manager
Deborah Tompkins Johnson, Regional Policy Director
Scott Reamy, External Affairs Manager
Dave Weaver, Exelon Utilities, VP Transmission Strategy
Steve Herling, PJM, VP Planning

Glebe Project Update

City of Alexandria
September 25, 2018

Background Review

- As we discussed in May 2018, there were a number forecasted violations of Federal (NERC) Reliability Standards.
 - Supported by PJM's 2018 Load Forecast
- Two electric solutions were presented to resolve the violations.
 - New Line Solution (Glebe-Potomac River UG 230 kV Line); and,
 - Rebuild Alternative, which entailed, among other things, rebuilding existing 230 kV lines under Route 1 and the relocation on the North Potomac Yard Terminal Station.

Status Update – What Has Changed?

- PJM published its 2018 Power Flow Model on July 2, 2018
 - Complex model used to evaluate the reliability of the entire PJM (13 states and DC) electric transmission system – on a component-by-component basis.
 - PJM Load Forecast is just one component of this complex model.
- Dominion Energy re-evaluated the NERC Reliability violations at issue here using the final 2018 Power Flow Model. This evaluation showed:
 - Violations related to transformers at Ox Substation continued.
 - No violations on the transmission lines that run under Route 1.
 - No overhead line violations in Fairfax County.
 - The primary reason for this was the recently announced cold reserve status of generating units at Possum Point Power Station.
- As a result, the scope of the “Rebuild Alternative” is now limited to addressing the transformer issue at Ox Substation.

Cost Comparison of New Line Alternative and Rebuild Alternative As Previously Presented

Rebuild Alternative is now the preferred option

Project	Total
Glebe – Potomac River 230 KV Line <ul style="list-style-type: none">• New Potomac Ave 230 kV Line• Glebe Rebuild• North Potomac Yard Relocation (OH to UG)	\$ 340 M
Rebuild Alternative <ul style="list-style-type: none">• Occoquan Expansion• Glebe Rebuild• North Potomac Yard Relocation (OH to UG)	\$ 170 M

Results and Drivers Going Forward

Alexandria-Arlington Load Area to benefit from both projects

- Two separate geographically and electrically unrelated projects.
 - Glebe Substation Rebuild/North Potomac Yard Terminal Station Relocation (OH to UG)
 - Aging Infrastructure
 - Expiring City SUP (Jan. 1, 2021)
 - Ox Substation transformer overload Project
 - NERC violation

Long Term

- Based on the current PJM Load Forecast and Power Flow Model results, updated line rating evaluations, and research into UG line cooling technologies we do not anticipate a need to rebuild the UG lines under Route 1 in the near future, or need a new line along the Potomac Avenue Route*
- This does not include work related to those lines for, among other things:
 - Regular inspections and maintenance;
 - Repairs; or
 - Installation of cooling technology

*We reiterate here that the evaluation for the need for new electric transmission infrastructure is an ongoing process, and thus, subject to change. As always, we will provide the City with any changes as soon as possible.

Timing

Glebe Substation Rebuild/North Potomac Yards Relocation (OH to UG) Project

- 2019 Q1/Q2 – File CPCN Application



Questions ?