City of Alexandria, Virginia

MEMORANDUM

DATE: JANUARY 22, 2015

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: MARK B. JINKS, ACTING CITY MANAGER

SUBJECT: 230 kV UNDERGROUND TRANSMISSION LINE & SUBSTATION WORKING GROUP ALTERNATIVES RECOMMENDATIONS MEMO

As Council is aware, Dominion Virginia Power notified the City in December that it anticipates a delay in its filing to the State Corporation Commission (SCC) due to an updated regional electric load forecast being released by PJM Interconnection LLC (PJM). Once Dominion receives the PJM report, which is expected this month, the power company staff will determine impacts of the report (if any) on their filing for the 230 kV Glebe-Potomac River Station project. Dominion has indicated to City staff that it plans to communicate the load forecast results along with a new anticipated filing date to the City by the end of January 2015.

In December the Underground Transmission Line and Substation Working Group, which was formed by City Council in June 2014, also completed its initial charge which was to assess quality of life, economic impacts, electrical reliability, and environmental and transportation impacts associated with the proposed project and to make recommendations to staff, the City Manager, and City Council. Attached, please find the Working Group's current recommendations memo, which is based on all currently available information and proposes several least objectionable alternatives to Dominion's nine proposed alignments.

The information is being provided to Council in advance of a to-be-determined future Council meeting and public hearing. City staff plans to docket this issue soon after additional information is available from Dominion about its intended SCC filing date. It is important to coordinate Council's potential consideration of least objectionable alternatives closely with Dominion's filing. In the event new load forecasts alter the project schedule, staff will inform Council as soon as possible. Dominion's load forecast and subsequent filing will also need to be reviewed by the City's Underground Transmission Line and Substation Working Group, as they may wish to amend their recommendations based on this new Dominion information.

If you have any questions, please contact Yon Lambert, Acting Director, Department of Transportation & Environmental Services at 703.746.4025.

Attachment 1: Dominion's Proposed 230 kV Underground Transmission Line Project – Working Group Recommendations, dated December 30, 2014

cc: Emily A. Baker, P.E., Acting Deputy City Manager
Yon Lambert, AICP, Acting Director, T&ES
Chris Spera, Deputy City Attorney
William Skrabak, Deputy Director, T&ES
Jeff Farner, Deputy Director, Planning and Zoning
Maurice Daly, P.E., Division Chief, T&ES
Bill Eger, Energy Manager, General Services
Dana Wedeles, RPCA

City of Alexandria, Virginia

MEMORANDUM

DATE: 12/30/14

TO: Honorable Mayor and Members of City Council;
Rashad Young, City Manager;
Mark Jinks, Deputy City Manger

FROM: Jay Nestlerode, Chair, Ad Hoc Underground Transmission Line and Substation Working Group

SUBJECT: Dominion's Proposed 230 kV Underground Transmission Line Project – Working Group's Recommendations

EXECUTIVE SUMMARY

City Council passed a resolution on June 24, 2014 to establish an Ad Hoc Underground Transmission Line and Substation Working Group (Working Group) in response to a Dominion Virginia Power (Dominion) proposal to construct a 230 kilovolt (kV) electrical transmission line between Arlington and Alexandria. The mandate of the Working Group as set forth in this resolution is to (i) examine quality of life, economic, electric reliability, environmental and transportation impacts associated with the proposed Dominion project and (ii) make recommendations to staff, the City Manager and Council on matters pertaining to the project. This memo outlines the efforts of this group to date. The Working Group membership can be found on page 4 of this memorandum.

The Working Group held five meetings at which it learned of the ostensible need for the project and discussed potential regional electrical alternatives to eliminate what Dominion characterizes as violation of federal reliability standards due to increased electrical demand in Northern Virginia. The Working Group heard from Dominion on proposed route alignments that will accomplish Dominion's preferred electrical alternative. Dominion advised the Working Group that it will include an overhead option in its project filing with the Virginia State Corporation Commission (SCC) for a Certificate of Public Convenience because, according to Dominion, the SCC requires inclusion of that option. Additionally, Pepco gave the Working Group a brief overview of its Substation C design proposal to be located at the former NRG's power plant site in Alexandria. Pepco promised to come back to the Working Group in December 2014 with more detailed design information.

To date, the City and the Working Group have yet to receive from PJM, Dominion and Pepco, detailed technical information necessary to evaluate the need for the project and/or whether the project will actually and effectively address reliability issues related to Dominion's assertion that it will serve Alexandria's increased electrical demand.

Based on concerns expressed by Working Group members, questions posed during the public comment portion of the first meeting, and in order to facilitate the evaluation of each potential alignment, City staff developed a matrix and one-page narrative summaries for the Working Group to evaluate a total of 13 alignments, 10 of which were proposed by Dominion and 3 by the members of the Working Group. Staff initially grouped these 13 alignments into three tiers to reflect the extent of their impacts to the City and its residents: Tier 1 includes the least objectionable alignments and Tier 3 represents the most objectionable alignments. The Working Group ultimately organized all of the proposed alignments into two tiers, either Tier 1 or Tier 3, following its discussion on the pros and cons of each alignment. The Working Group also reached consensus on initial suggestions for mitigating the negative impact of the project. Based on its deliberations, the Working Group's recommendations to City Council and to the City Manager include the following:

- The City should oppose strongly all alignments assigned by the Working Group to Tier 3 (most objectionable). These include:
    - All overhead transmission line options
    - The Mt Jefferson Park Trail and Mt Jefferson Park Trail Alternate Alignment
    - The Mainline Boulevard Alignment
    - The Route 1/Slaters Lane Alignment
    - The Commonwealth Avenue/East Glebe Road Alignment

- Dominion should consolidate the existing Potomac Yard North Substation with the Glebe Substation and install appropriate underground lines that connect the Potomac Yard North Terminal Station and Glebe Road Substation.

- The equipment needed to accommodate the new 230 kV line at the Potomac River Substation C should not simply be an addition to the existing site. Rather, Substation C should be re-designed to consolidate the existing substation with the new equipment, while minimizing the combined footprint of both new and existing and emphasizing a design that is compatible with the requirements of the Historic District, adjoining uses and buildings and with the intent of the Alexandria's Waterfront Plan.

- Dominion should limit its submission to the SCC and prioritize the proposed alignments that the Working Group has categorized as "least objectionable," subject to the limiting conditions stated below. They are, in descending order of preference:

    a) CSX; CSX/DRCA Alternate
        Limiting Condition:
        - Neither alignment will preclude or adversely impact siting or construction currently under study for the VRE expansion or the future

Potomac Yard Metro, or the operation and efficacy of the future Potomac Yard Metro.

b) Four Mile Run/ Potomac River and Four Mile Run/Potomac River/GW Parkway Alternate

Limiting Conditions

- Every effort should be made to minimize loss of mature trees, wetlands and other vegetation.
- Every effort should be made to minimize the interruption or closure of bike trail along the Parkway.
- Every effort should be made to minimize any loss of public's use of the National Park lands along the Parkway.
- Every effort should be made to minimize traffic impacts along the Parkway during and after construction.

c) GW Parkway Alignments (Metro/GW Parkway; GW Parkway)

Limiting Conditions: same as noted in "alignment b" above

d) Potomac Avenue

Limiting Conditions:

- Locate the entirety of the right-of-way within the existing roadway (western portion) of Potomac Avenue.
- Locate the entirety of the right-of-way in a manner that does not impact the existing Potomac Yard Park, central median or street trees.
- Locate the entirety of the right-of-way within the Potomac Yard retail center (Landbay F) in a manner that does not preclude the implementation of the North Potomac Yard Plan, including without limitation, planned development, transit way and open space – parks (Landbay E) and Landbay K extension in North Potomac Yard.
- Minimize traffic and public safety interruptions.

- Dominion should make every effort to consider the most preferred alignment (i.e., CSX and the CSX/DRCA Alternative) before considering the next in the Working Group's order of preference, as listed above.

- The City should obtain from Dominion and Pepco, a pledge to take action to mitigate any negative impacts to the City of Alexandria and its residential and business community arising from or related to the project.

- The City should identify, and obtain from Dominion and Pepco, tangible benefits for the City of Alexandria and its residential and business community.

- Dominion should perform a traffic analysis to demonstrate the extent to which the construction project will impair traffic flow during and after construction.

- Dominion should consider approved routes to Substation C from the west utilizing the existing railroad Right of Way.

- The City and the Working Group should continue evaluating environmental impacts including electromagnetic field (EMF) effects regarding the proposed transmission project.

- The City should verify and continue to review the need for the project as proposed by Dominion, whether it is required by federal mandate or by health and safety concerns and that it is pursued with the interests of the City of Alexandria's residential and business communities in the forefront. The City should perform independent due diligence by working with specialized consultants and outside counsel retained by the City to develop strategies for the City's participation in the SCC submission process. The City should participate to the full extent permitted during the SCC's review of Dominion's submission of the project.

In conclusion, the Work Group remains committed to examining all relevant information presented during the state review process to help minimize the negative impacts of the project on the adjacent community and encourages City Council and the City Manager to remain vigilant as Dominion's Application for a Certificate of Public Convenience is considered by the SCC and, if applicable, by others.

BACKGROUND, DISCUSSION AND RECOMMENDATIONS

I. Introduction

In June 2014, Dominion formally approached the City with its proposed project to build a 230 kV underground transmission line that connects the Dominion Glebe Road Substation to Pepco's Potomac River Substation C, on the site of the former NRG's power plant in Alexandria. In response, the Alexandria City Council passed a resolution to establish the Ad Hoc Underground Transmission Line and Substation Working Group.The scope of the Working Group's work, as set forth in the City Council's Resolution, is to examine quality of life, economic, electric reliability, environmental and transportation impacts associated with the project, and to make recommendations to staff, the City Manager and Council on matters pertaining to the project.

The Working Group membership is:

Jason Nestlerode, Chair
Nancy J. Appleby
Elizabeth Chimento
Rick Cooper
Patrick Harenburg
Judy Noritake
Catherine Poulin
Nathalie Simon
Ben Sylla

Given what the City understood about the Project and Dominion's announced intention to file its application for approval with the SCC in late November 2014, the mission of the Working Group, beyond evaluating the need for the Project, was to:

- Identify the impacts of the proposed routes, defined as alignments that connect the Dominion Substation in Arlington to the Pepco Substation C;
- Consider additional alignments, to the extent feasible;
- Review Pepco Substation C siting and design options; and
- Prepare a recommendations memorandum to the City Manager and City Council responding to the items outlined above.

To date, the Working Group has held five meetings to examine several aspects of the project. A number of members of the Working Group also attended the Dominion public information meeting held on October 1, 2014. The Working Group meetings focused on the following themes: understanding the need for the project; process/scope of work; review of Dominion's proposed alignments; and information exchange and questions.

The Working Group heard presentations by PJM Interconnection (PJM), Dominion and Pepco. PJM explained that the project is needed to ensure reliability, and to address a projected demand for increased electricity in Northern Virginia including Alexandria and Arlington.

Dominion gave a Project overview, including six potential regional solution alternatives that it considered before selecting the project. Dominion also presented a map (Attachment 1) showing the nine potential underground alignments that connect the Glebe Road and Potomac Substation C Substations. The nine alignments are:

1. Commonwealth Avenue/ E. Glebe Road
2. Route 1/ Slaters Lane
3. Potomac Avenue
4. CSX
5. Metro/ GW Parkway
6. GW Parkway
7. Mount Jefferson Park Trail
8. Main Line Boulevard
9. Four Mile Run/ Potomac River

After further consideration, Working Group members proposed another three potential underground alignments (Attachments 2 & 2A), for a total of twelve potential underground Alignments:

1. Potomac River/ GW Parkway;
2. Mount Jefferson Park Trail/ DRCA Alternate
3. CSX/ DRCA Alternate.

On September 25, 2014, following its initial presentation to the Working Group on September 11, 2014, Dominion presented to the Working Group, Dominion's proposed overhead line alignment along Potomac Avenue. Dominion stated that at least one overhead alignment must be submitted with its application for a Certificate of Public Convenience to the Virginia State Corporation Commission (SCC).

Pepco provided a brief overview of its Substation C design and promised to come back to the Working Group in December 2014 with more detailed design information.

Based on concerns from the Working Group and questions from the community expressed at the Working Group's September 11, 2014 meeting, and to facilitate the evaluation of each potential alignment, staff developed a matrix (Attachment 3) listing the following impact areas for each alignment:

- Traffic
- Open space
- Future development
- Environment
- School/population
- Right-of-way
- Aesthetics
- Cost
- Catalyst (for co-benefits/development)
- Beneficial result(s)

Staff also developed a one-page summary for each potential alignment, including a re-cap of positive and negative impacts (Attachment 4) and grouped the twelve potential underground alignments including the overhead transmission line alignment into three tiers:

- Tier 1 includes the alignments that City staff identified as having the least impact on the City's existing rights-of-way and least impact to the community at large.

- Tier 2 includes the alignments that City staff identified as having some impact on City's existing rights-of-way and least impact to the community at large.

- Tier 3 includes the underground alignments that City staff identified as having the most negative impact on the City's existing rights-of-way and the community at large because of their overarching negative impact on Alexandria's quality of life, environmental conditions, and future development. Tier 3 also includes all overhead alignment(s).

This matrix and the one-page summary for each alignment were used by the Working Group in its evaluation of the potential alignments and led to the recommendations described in Section III of this memorandum.

II. Correspondence, Information and Issues

To date, the City and the Working Group have yet to receive from PJM, Dominion and Pepco, detailed technical information necessary to evaluate the need for the project and/or whether the project will actually and effectively address reliability issues related to Dominion's assertion that it will serve Alexandria's increased electrical demand. On several occasions, the City and the Working Group have formally requested PJM and Dominion to provide specific information related to this evaluation. These requests have been unanswered to date.

Likewise, after several requests by both City staff and the Working Group, the Working Group has obtained from Dominion only superficial information on the six regional alternatives that Dominion reports to have considered before deciding on its preferred alternative, the 230 kV transmission line between Dominion Glebe Road Substation in Arlington and the Pepco Substation C located at the NRG site in Alexandria.

Although Dominion has participated in every meeting of the Working Group, it has not yet provided any substantive information that the Working Group or the community requested.

The lack of information available to the Working Group is exacerbated by the abbreviated time allowed by Dominion for consideration by the City and the Working Group of the Project.

It is clear that the proposed project is complex, both technically and logistically. The Working Group has struggled within the short time mandated by Dominion to gain technical knowledge to assess the complex issues related to the project. While Dominion has represented that additional information will be available after it has filed its Application with the SCC, its failure to provide information before filing leaves the Working Group and the City few innovative solutions to consider in such a short timeframe.

A summary of all correspondence between the City and/or the Working Group and other stakeholders is listed in Attachment 5.

III. Recommendations

While acknowledging the constraints under which the Working Group has worked described in Section II, the Working Group unanimously makes the following recommendations for City Council's consideration.

A. Oppose All Tier 3 Alignments

Overhead Line Alignment: At the second meeting of the Working Group (September 25, 2014), Dominion mentioned that as part of its due diligence for its Application to the SCC, Dominion is required to propose an overhead line alignment for the SCC's consideration. Dominion did not offer the Working Group any additional information about the overhead alignment, including that its proposed route for the overhead alignment is along Potomac Avenue. That information was made available only on October 1, 2014, at Dominion's one and only public information meeting on the proposed project. Of note, the overhead images and ground photos Dominion used to illustrate an overhead line along Potomac Avenue were

outdated and did not accurately represent recent housing and open space development in the area.

Dominion's overhead alignment would negatively impact the existing businesses and residents along Potomac Avenue: 83 residential buildings and 519 residences in buffer area, and potential impacts to open space along Potomac Avenue.

Most important, Alexandria is a densely populated area. An overhead high-voltage transmission line would have significantly negative aesthetic and property value impacts on the City, residents, businesses, and the community at large for many years to come. Additionally, an overhead transmission line has the potential to adversely affect current and future development and raise health concerns.

The Working Group recommends that City Council definitively and firmly oppose any proposal by Dominion for an overhead alignment.

Underground Alignments: The City should strongly oppose all Tier 3 underground alignments identified by the Working Group, which includes:

- Mt Jefferson Park Trail and Mt Jefferson Park Trail Alternate
- Mainline Boulevard
- Route 1/ Slaters Lane
- Commonwealth Avenue/ East Glebe Road

B. Relocate the Existing North Potomac Yard North Substation to the Glebe Substation and Place Lines Connecting to Glebe Substation Underground.

To ensure implementation of the North Potomac Yard Small Area Plan and the Four Mile Run Restoration Plan, the group recommends the relocation of the North Potomac Yard Substation and replacement of three existing above-ground poles with underground equipment and lines. This recommendation is consistent with special use permit (SUP # 2011-0014) by City Council. The Working Group recommends requiring that Dominion consolidate the existing North Potomac Yard North Substation with the existing Glebe Road Substation, as part of the project. This recommendation would require Dominion to incorporate into its Application to the SCC for the project the relocation and undergrounding of utilities.

C. Potomac River Substation C Design Should Be Located with Consideration of Future Redevelopment of the NRG Site; Minimize the Footprint of Potomac River Substation C; Design and Screen Potomac River Substation C in a Manner Appropriate for its Visually Prominent Location.

As part of the project, Pepco proposes to construct an addition to its existing Potomac River Substation in the parking lot of NRG's retired power plant. The addition will have significant impacts on an important and visually prominent redevelopment site in the City.

As currently proposed, the expanded Potomac River Substation will occupy the entire +- 3 acre surface parking lot, adjacent to the George Washington Memorial Parkway, causing a significant

reduction in land available for redevelopment. Additionally, expanding the size of the Substation will put it in closer proximity to adjoining residential uses (e.g., Harbor Terrace and Marina Towers) and adjoining commercial uses. The expansion of the existing Substation also will create an even larger structure on its visually prominent site immediately adjacent to the George Washington Memorial Parkway and at the gateway to Old Town Alexandria.

The NRG site is an important redevelopment site for the City and its residential and business community. It will be a key part of the upcoming Old Town North Small Area Plan. The City should investigate all possibilities to ensure that the location and design of the Substation is done in a comprehensive manner that considers the long-term redevelopment of the NRG site, including visual, physical, and environmental impacts to the residential and commercial uses adjacent to the site.

The Working Group recommends that Pepco and/or NRG revise the substation proposal to include the following:

- Consolidate proposed Substation C with the existing Substation.
- Enclose the existing and proposed Substations entirely within a roofed structure.
- Minimize the size, footprint and impact of operations of the proposed and existing Substations by, among other things, applying advanced technology to the design and operation of the Substation C.
- Consult with the City Planning and Zoning Department and all applicable Boards and Commissions regarding building design and landscaping to ensure the facility is screened, which includes using high quality design and building materials.
- Provide landscaping, decorative fencing or other buffering and aesthetic features as part of the overall design.

D. Working Group's Four Tier 1 Least-Objectionable Alignments

After consideration of all impact areas for each potential alignment, and in consultation with City staff, the Working Group concluded that the following four alignments pose the least overall impact to the City and its residential and business community. These options are ranked in descending order, the first being the least objectionable:

1. CSX; CSX/DRCA Alternate
   Limiting Condition:
   - Neither alignment will preclude or adversely impact siting or construction currently under study for the future Potomac Yard Metro, or the operation and efficacy of the future Potomac Yard Metro.

2. Four Mile Run/ Potomac River and Four Mile Run/Potomac River/GW Parkway Alternate

Limiting Conditions: Similar to those stated in 3 below.

3. GW Parkway Alignments (Metro/GW Parkway; GW Parkway)
   Limiting Conditions:
   - Neither alignment will result in significant loss of trees and other vegetation.
   - Neither alignment will result in the interruption or closure of bike trail along the Parkway.
   - Neither alignment will cause any loss of public's use of the National Park lands along the Parkway.

4. Potomac Avenue
   Limiting Conditions:
   - Locate the entirety of the right-of-way within the existing roadway (western portion) of Potomac Avenue.
   - Locate the entirety of the right-of-way in a manner that does not impact the existing Potomac Yard Park, central median or street trees.
   - Locate the entirety of the right-of-way within the Potomac Yard retail center (Landbay F) in a manner that does not preclude the implementation of the North Potomac Yard Plan, including without limitation, planned development, transit way and open space – parks (Landbay E) and Landbay K extension in North Potomac Yard.
   - Minimize traffic and public safety interruptions.

The Working Group recommends that Dominion submit to the SCC only the foregoing "Least-Objectionable Alignments" in the project filing with the SCC.

E. Identify and Pursue Potential Mitigation or Benefits

The Working Group acknowledges the significant cost of the project; it also believes that the lasting economic benefits of the project will flow to Dominion and Pepco. The Working Group also recognizes that the impacts of each alignment are different. In each case, however, the negative impacts of the project consistently burden the City and its residents, businesses, and community at large, not Dominion or Pepco. Therefore, the City should pursue with Dominion potential mitigation specific to each alignment.

The Working Group recommends:

- Dominion should make every effort to consider the most preferred alignments (i.e., CSX and the CSX/DRCA Alternative) before considering the next in the Working Group's order of preference.

- The City should identify and obtain from Dominion and Pepco, their pledge to mitigate negative impacts to the City of Alexandria's residential and business communities arising from, or related to the project.

- The City should identify, and obtain from Dominion and Pepco, tangible benefits for the City of Alexandria and its residential and business community.

- Dominion should perform a traffic analysis to demonstrate that impaired traffic flow during and after construction of the project will not result in significant economic loss to the City.

- Dominion should consider approved routes to Substation C from the west utilizing the existing CSX railroad Right of Way.

- The City and the Working Group should continue evaluating environmental impacts including electromagnetic field (EMF) effects regarding the proposed transmission project.

- The City should verify and continue to review the need for the project, as proposed by Dominion, that it is required by federal mandate or by health and safety concerns and is pursued with the interests of the City of Alexandria's residential and business communities in the forefront. The City should perform independent due diligence, work with specialized consultants and outside counsel retained by the City to develop strategies for the City's participation in the SCC process; and the City should participate fully throughout the SCC's consideration and approval of the project.

CONCLUSION

In conclusion, the Working Group remains committed to examining the impacts of the project and encourages City Council and the City Manager to remain vigilant as Dominion's application advances through the SCC review process.

Sincerely,

Jason Nestlerode – Chair, Alexandria Underground Transmission Line & Substation Working Group

ATTACHMENTS:
Attachment 1: Dominion Alignments Map
Attachments 2 & 2A: Working Group Alignments Map
Attachment 3: Alignments Matrix
Attachment 4: Alignments Summaries
Attachment 5: Correspondence Summary

Cc: Chris Spera - Deputy City Attorney
Yon Lambert - Acting Director, Department of T&ES
Karl Moritz - Acting Director, Department of Planning and Zoning
James Spengler - Director, Department of Recreation, Parks, and Cultural Activities

City Staff
Dominion Work Group Members