Glebe – Potomac River
230 kV Transmission Line Project

Update: January 11, 2018
Agenda

• Introductions
• Recap/Purpose of Tonight’s Meeting/Ground Rules
• Project Update/Recent Developments
• Public Comment
Project Timeline To-Date

• PJM Approved Project – February 2014
• Initial meeting with City of Alexandria officials – Spring 2014
• City of Alexandria formed Underground Working Group – Summer 2014
  • Working group recommended Railway Route as most preferred to City Council – December 30, 2014
• Reaffirmed project need based on 2016 Load Forecast – Summer 2016
• PJM/Dominion Energy Virginia/Pepco verified projected in-service date – Spring 2017
• Detailed evaluation of Railway Route – 2016-2018
Project Resolves Reliability Concerns

- Project originally approved by PJM in February 2014 with June 2018 In-Service Date
- Three new load forecasts have been issued since February 2014
- Despite economic headwinds combining with continued integration of Energy Efficiency and Demand Side Management to slow the pace of forecasted growth, our updated analysis still indicates the need for a transmission solution in this area
- Re-evaluated electrical alternatives that will address the projected overloads
- Current projected in-service date: June 2023
Reliability Drivers/Concerns

NERC Reliability Issues Across Existing System:
Category C (P6) overloads:
- Ox 500/230kV Tx #1
- Ox 500/230kV Tx #2
- 230kV Line Hayfield to Va Hills
- 230kV Line South Carlyle to N. Potomac Yards
- 230 kV Line Ox to Occoquan
- 230 kV Line Franconia to Belvoir

Additional Benefits for Proposed New Line:
Tie-line strengthens the grid in Arlington & Alexandria and improves operational performance for Dominion Energy Virginia/Pepco customers
Glebe – Potomac River Transmission Project: Preferred Solution

- Dominion Energy Virginia’s responsibility:
  - Build 230kV line interconnecting Dominion Energy & Pepco - approximately 2.0 miles long
  - Relocate North Potomac Yards Terminal Station
  - Rebuild Glebe 230kV Switching Station with GIS
    - Needed to interconnect new 230 kV lines from Pepco & North Potomac Yards Terminal Station
    - Replaces aging infrastructure issues

- Pepco responsibility:
  - Build 230 kV breaker station at Potomac River Substation
  - Install a 230 kV Phase Angle Regulator
Glebe – Potomac River Transmission Project: Preferred Solution

Benefits:

- Resolves NERC criteria violations
- Adds additional 230kV source in a generation deficient area
- Project results in an interconnect between Dominion Energy Virginia and Pepco which enhances system reliability and operational performance for both systems
- Project provides substantial resiliency improvements to system

Estimated Cost: $400+ Million
Rebuild Alternative:

Alternative includes the following Dominion Energy Virginia components:

- Install 500-230 kV Transformer at Occoquan Substation
- Relocate North Potomac Yards Terminal Station
- Rebuild Glebe Substation GIS Aging Infrastructure
- Reconductor UG 230 kV Line South Carlyle to North Potomac Yards
- Reconductor OH 230 kV Line Ox to Occoquan
- Reconductor OH 230 kV Line Hayfield to Virginia Hills
- Reconductor/Rebuild OH 230 kV Line Franconia to Belvoir

No Pepco components to Rebuild Alternative

Estimated Cost: $290 Million
Rebuild Alternative

Arlington, Fairfax, and City of Alexandria

- Existing Substation
- Milepost
- Overhead Reconductor
- Rebuild
- Ampacity Uprate
- Underground Reconductor
- Existing Overhead Line Relocation to Underground
- Railroad Line
Challenges

•Preferred Solution
  •Increased costs (+40%) along Railway Route
    •Right of way acquisition
    •Engineering, Operation considerations
  •Reconsider Previous Potomac Ave. Route
    •To address escalating cost on Railway Route
    •Re-introduce this route to Working Group

•Rebuild Alternative
  •Impacts to Route 1
  •Lower cost, reduced benefits
Route Considerations

Benefits of Railway Route over Rebuild

- New interconnection or injection with neighboring utility
- New source into Glebe Substation
- Improvements to Potomac River Substation
- Approximately $15M in compensation to the City

Additional Benefits with Potomac Ave. Route

- Increased compensation to the City – additional $25M for total of $40M, depending on appraisal and negotiations
- Less impact to the development of Northern section of Potomac Yards
- Decreased cost, less cost to customer
  - Better chance of being selected by SCC
Potomac Ave. Route Construction

- Open Trench Method
  - Construction can be segmented by block
  - More flexibility
- Construction Duration: Approximately 3 years, but section along Potomac Ave <1 year
- Clearances from other utilities (2 ft.)
- Depth (Minimum of 42” deep)
- Plantings: within the right of way, only small shrubs could be replanted – No large trees
- Temporary impacts to volleyball and basketball/tennis area
Next Steps

• **Q1 2018**  Working Group meeting (decision on viability of Potomac Ave. Route)

  Public Informational Open House

  Working Group recommendation to City Council

  Update to City/Working Group on SCC Filing

• **Q2 2018**  File SCC CPCN Application

• **~Q3 2018**  Procedural Order Issued, Public Hearing Scheduled

• **June 2023**  Projected In-Service Date
Questions

Dedicated Project Page:
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