Reliability Analysis Update

Transmission Expansion Advisory Committee
January 10, 2019
Proposal Window Exclusion Definitions

- The following definitions explain the basis for excluding flowgates and/or projects from the competitive planning process and designating projects to the incumbent Transmission Owner.

- Flowgates/projects excluded from competition will include the underlined language on the corresponding slide.
  - Immediate Need Exclusion: Due to the immediate need of the violation (3 years or less), the timing required for an RTEP proposal window is infeasible. As a result, the local Transmission Owner will be the Designated Entity. - Operating Agreement, Schedule 6 § 1.5.8(m)
  - Below 200kV: Due to the lower voltage level of the identified violation(s), the driver(s) for this project are excluded from the competitive proposal window process. As a result, the local Transmission Owner will be the Designated Entity - Operating Agreement, Schedule 6 § 1.5.8(n)
  - FERC 715 (TO Criteria): Due to the violation need of this project resulting solely from FERC 715 TO Reliability Criteria, the driver(s) for this project are excluded from the competitive proposal window process. As a result, the local Transmission Owner will be the Designated Entity - Operating Agreement, Schedule 6 § 1.5.8(o)
  - Substation Equipment: Due to identification of the limiting element(s) as substation equipment, the driver(s) for this project are excluded from the competitive proposal window process. As a result, the local Transmission Owner will be the Designated Entity - Operating Agreement, Schedule 6 § 1.5.8(p)
2018 RTEP Analysis Update
Dominion/PEPCO
B2443 – Glebe to Station C Project Update
Problem Statement: Updated NERC Reliability Drivers

- Original criteria violations included overloads of Ox 500/230 kV Tx #1 & #2, 230 kV Line #248 (UG section between Carlyle South – North Potomac Yard) and the Franconia – Van Dorn Section of 230 kV Line #243.

- Updated criteria violation – Based on recent generation retirements (Possum Point Units #3 & #4) and the PJM 2018 Load Forecast updates indicates that for a NERC Category P1 – single contingency that Possum Point 500/230 kV Tx #1 overloads for a loss of the Possum Point – Ox 500 kV Line #571 under Dominion’s critical stress case criteria.

- Other previously identified deficiencies in Dominion and PEPCO are no longer present.

- The Glebe – Station C Project (b2443) will be cancelled and replaced with a new baseline to resolve the NERC reliability deficiencies.
  - The previously approved cost for the Glebe – Station C Project: **$299 M**
  - The new baseline will be discussed on the next slide.

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Recommended Solution:

- Install a second 500/230 kV transformer at Possum Point substation and replace bus work and associated equipment as needed. (b2443.6)
- Replace 19 - 63 kA 230 kV breakers with 19 – 80 kA 230 kV breakers (b2443.7)

Estimated Project Cost:
- 500/230 kV transformer bank, bus work & associated equipment: $21 M (b2443.6)
- 19 – 230 kV 80 kA breakers: $19 M (b2443.7)
- Total: $40 M

Required IS Date: 06/01/2023
Projected IS Date: 06/01/2023

Project Status: Conceptual

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## Glebe – Station C Project

<table>
<thead>
<tr>
<th>Components</th>
<th>Baseline ID</th>
<th>Estimate</th>
<th>Status</th>
</tr>
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<tbody>
<tr>
<td><strong>DVP</strong></td>
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<tr>
<td>Construct new underground 230 kV line from Glebe to Station C</td>
<td>b2443</td>
<td>$136.5 M</td>
<td>Cancel</td>
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<tr>
<td>Replace the Idylwood 230 kV breaker '203512' with 50kA breaker</td>
<td>b2443.1</td>
<td>$0.255 M</td>
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<td>Replace the Ox 230 kV breaker '206342' with 63kA breaker</td>
<td>b2443.2</td>
<td>$0.27 M</td>
<td>In-Service</td>
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<tr>
<td>Rebuild Glebe Substation</td>
<td>b2443.4</td>
<td>$65.0 M</td>
<td>Cancel</td>
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<tr>
<td><strong>PEPCO</strong></td>
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<tr>
<td>New 230kV Potomac River Substation Project (includes PAR)</td>
<td>b2443.3</td>
<td>$94.8 M</td>
<td>Cancel</td>
</tr>
<tr>
<td>Blue Plains Substation Breaker Replacements Project</td>
<td>b2443.5</td>
<td>$2 M</td>
<td>Cancel</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td></td>
<td><strong>$299 M</strong></td>
<td></td>
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</tbody>
</table>
• Completed NPIR, N-1-1, and baseline assessments
  – No issues identified
  – Results have been communicated to applicable entities
• Finalize remaining TO identified upgrades (SRRTEP)
• Begin resilience analysis on 2023 case
• Continue case build
• Exercise case - target beginning of February to begin work
Questions?
Upcoming TEAC Meetings

2019

• TEAC meetings are the following Thursdays in 2019
  • 1/10, 2/7, 3/7, 4/11, 5/16, 6/13, 7/11, 8/8, 9/12, 10/17, 11/14, 12/12.
Revision History

- V1 – 01/4/2019 – Original SlidesPosted