Significant Extended Transmission Outages
Winter 2019/2020

Dean Manno
Engineer, Transmission Operations
System Operations Subcommittee
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Breinigsville-Alburtis Outage

Background

• Supplemental RTEP project s0864 to address aging infrastructure and operational flexibility needs at the Wescosville substation
  – Drivers:
    • Aging Infrastructure
    • Increase Operational Flexibility
• First phase of the project reconfigured the Wescosville substation
• Second phase of the project rebuilds the existing Breinigsville-Alburtis 500 kV line and adds a new, 2nd Breinigsville-Alburtis 500kV line.

Outages

• eDART Ticket 735758 – 03/15/2019 to 05/01/2019 – Completed
• eDART Ticket 702513 – 11/18/2019 to 6/12/2020 - Upcoming
Nature of work requires outage to go over at least 1 peak period (summer or winter) to minimize overall outage time.

- Winter was preferred due to lower expected seasonal peak (when compared to summer)

PJM and PPL worked together over the past months and determined this sequence is the best solution to minimize outage time, while continuing to meet M-03 outage criteria.

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Recall Availability</th>
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</thead>
<tbody>
<tr>
<td>11/18/2019 – 12/31/2019</td>
<td>None</td>
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<tr>
<td>1/1/2020 – 3/1/2020</td>
<td>72 hour</td>
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<tr>
<td>3/1/2020 – 6/12/2020</td>
<td>None</td>
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Outage Impacts

Operational Impact

• May require generation redispatch to address voltage concerns or stability concerns
  – Voltage concerns more limiting than stability concerns.
• With recall availability during 2020 Winter Peak period (1/1/2020 – 3/1/2020), PJM does not foresee any reliability concerns at this time.