

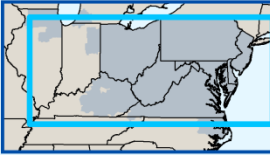
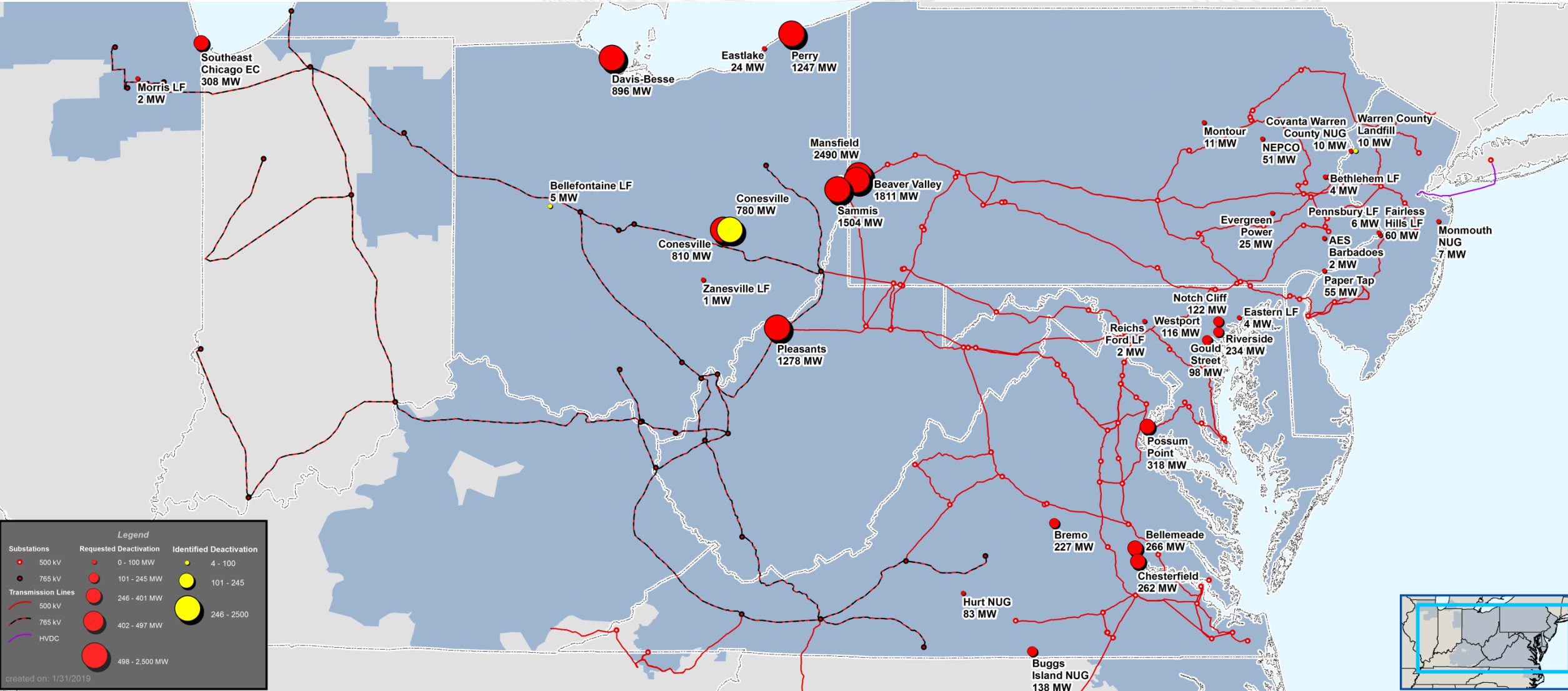


Generation Deactivation Notification Update

Transmission Expansion Advisory
Committee

March 7, 2019

Generation Deactivations for 2018-2019



| Unit(s) | Transmission Zone | Requested Deactivation Date | PJM Reliability Status |
|-----------------------|-------------------|-----------------------------|--|
| Conesville 4 (780 MW) | AEP | 6/01/2020 | Reliability analysis complete. Existing baselines (B2966, B2967, and B3031) and new baselines resolves identified impacts. Unit can retire per the requested schedule. Operational flexibility allows to bridge any delays with the transmission upgrades. |

Problem Statement: N-1-1 thermal

Hyatt - Maliszewski 138 kV line is overloaded for the following contingency scenarios:

- Loss of Hyatt 345/138 kV 1A & 1B transformers followed by the loss of Hyatt - Maliszewski #2 138 kV.
- Loss of Marysville 765/345 kV #2 transformer followed by Hyatt - Maliszewski #2 138 kV.

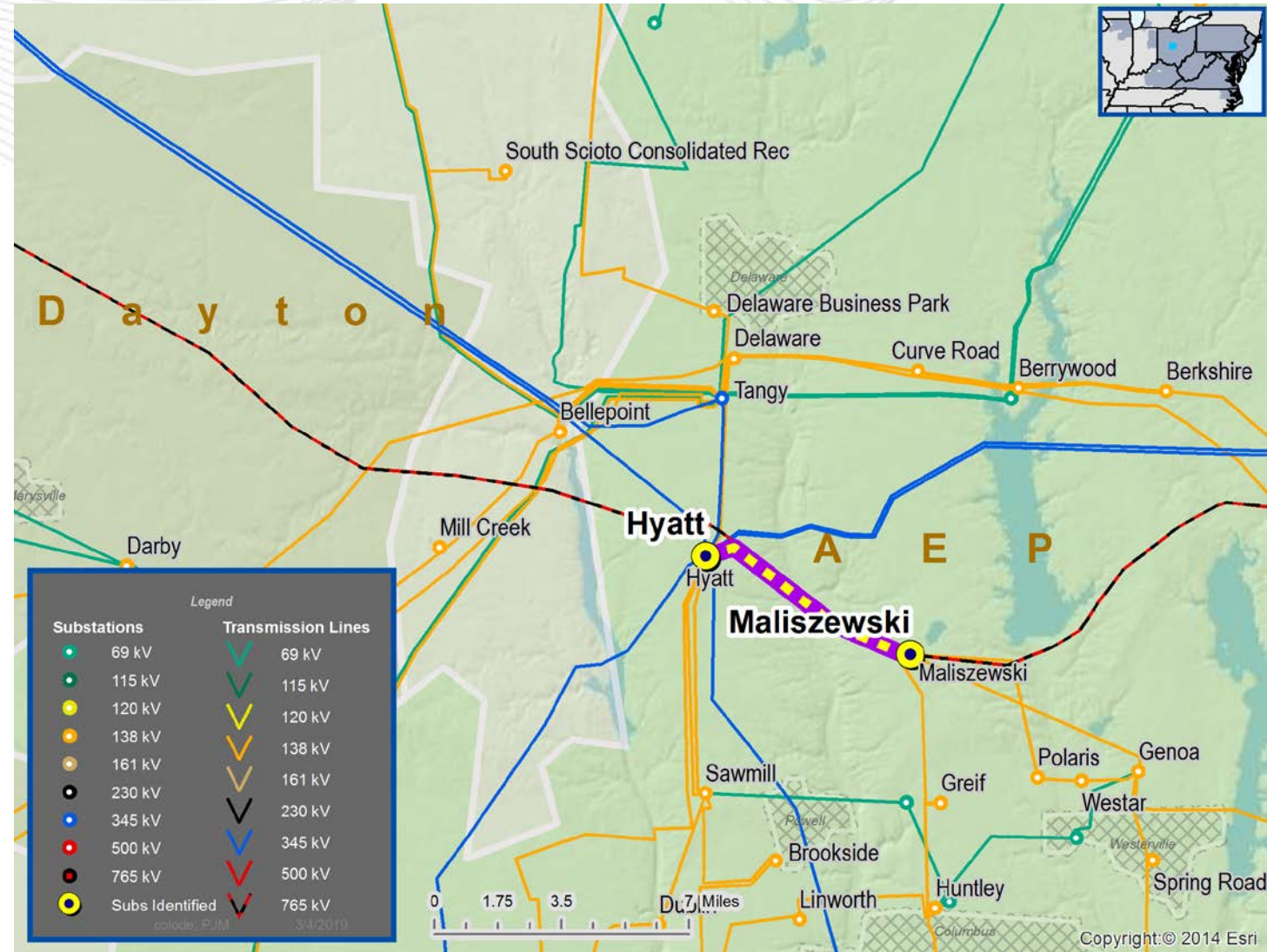
Recommended Solution:

- B3106: Perform a sag study (~ 6.8 miles) to increase the Summer Emergency rating.
- Current rating: SN 223 MVA / SE 226 MVA
- New rating: SN 257 MVA / SE 310 MVA

Estimated Project Cost: \$ 0.5M

Required IS Date: 06/01/2020

Projected IS Date: 06/01/2020



Problem Statement: N-1-1 thermal

Polaris - Westerville 138 kV line is overloaded for the following contingency scenarios:

- Loss of Vassel - Vassel TR1 Lead 345 kV followed by the loss of Genoa - Maliszewski #2 138 kV.
- Loss of Vassel 765/345 kV transformer followed by the loss of Genoa - Maliszewski ckt 2 138 kV.
- Loss of Genoa - Maliszewski #2 138 kV followed by loss of Vassel - Vassel TR1 Lead 345 kV.
- Loss of Genoa - Maliszewski #2 138 kV followed by loss of Vassel 765/345 kV transformer.

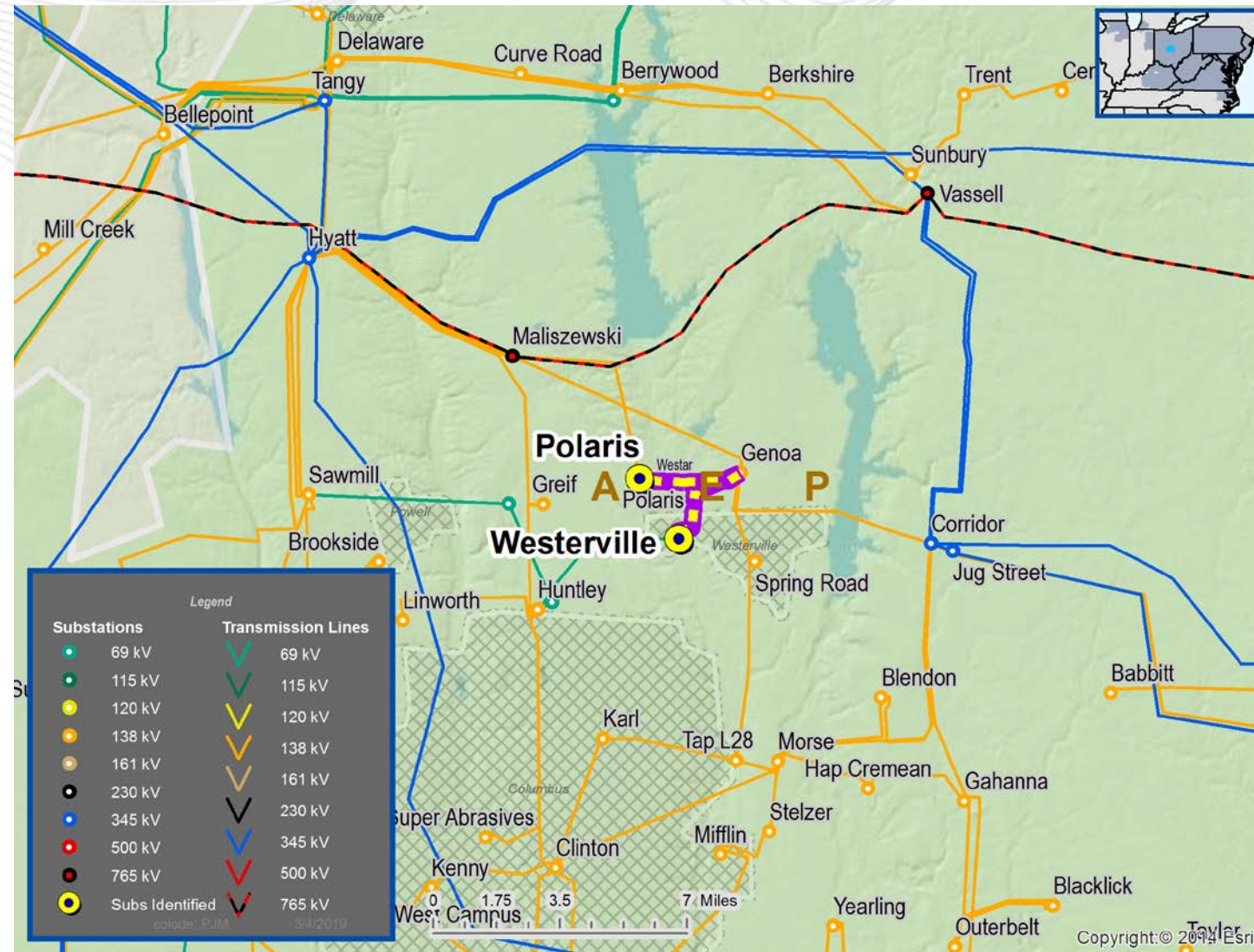
Recommended Solution:

- B3104: Perform a sag study (~ 3.6 miles) to increase the Summer Emergency rating to 310 MVA.
- Current rating: SN 223 MVA / SE 226 MVA
- New rating: SN 223 MVA / SE 310 MVA

Estimated Project Cost: \$ 0.5M

Required IS Date: 06/01/2020

Projected IS Date: 06/01/2020



Problem Statement: N-1-1 thermal

Delaware - Hyatt 138 kV line is overloaded for the following contingency scenarios:

- Loss of Delaware - Vassel 138 kV (N-1-0)
- Loss of Vassel 345/138 kV transformer (N-1-0)

Recommended Solution:

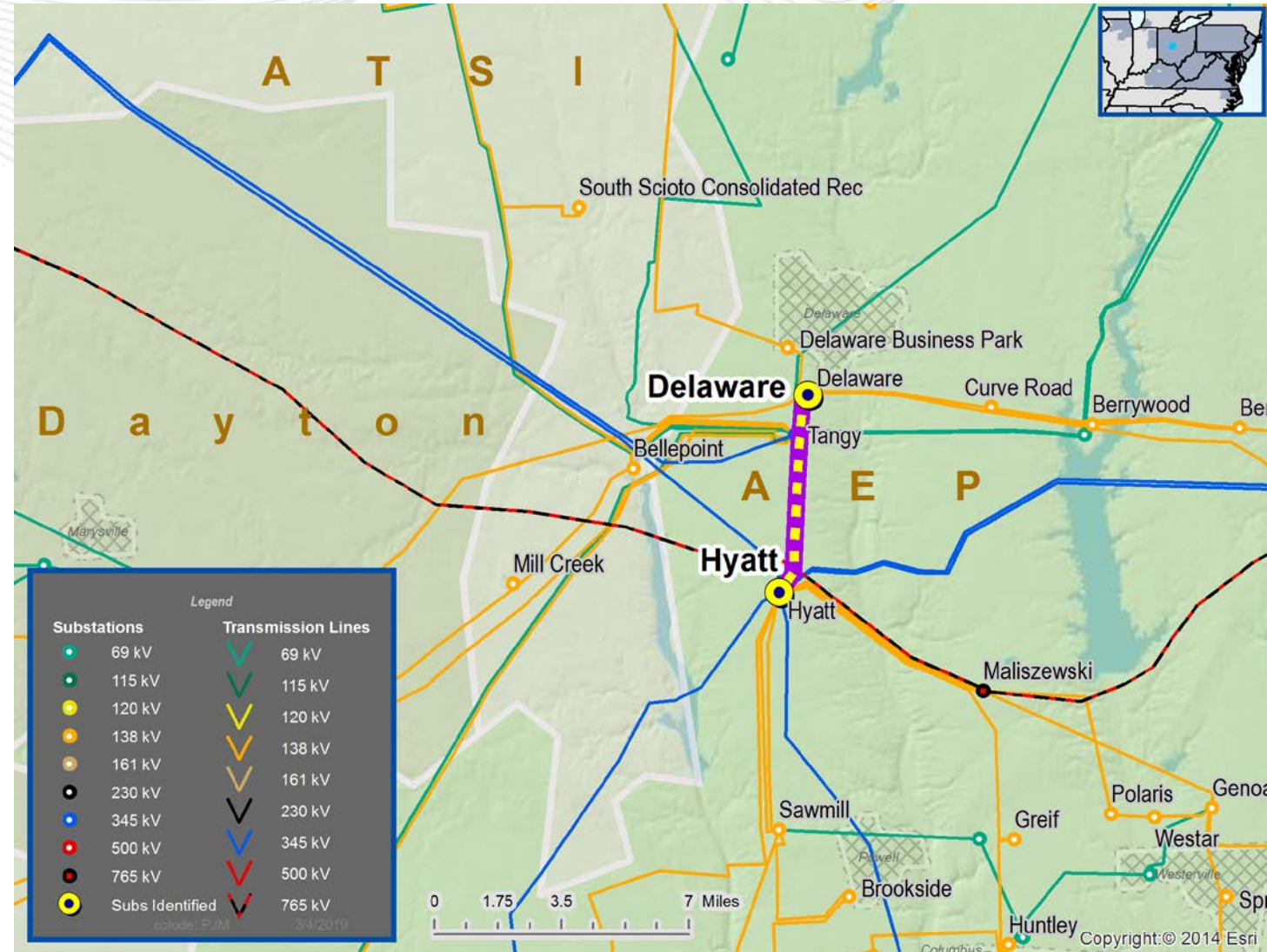
- B3105: Rebuild the Delaware – Hyatt 138 kV line (~ 4.3 miles) along with replacing conductors at both Hyatt and Delaware substations.
- Current rating: SN 223 MVA / SE 330 MVA
- New rating: SN 256 MVA / SE 360 MVA

Estimated Project Cost: \$ 16M

Required IS Date: 06/01/2020

Projected IS Date: 06/01/2022

* Operating measures identified to mitigate reliability impacts in interim



- V1 - 03/04/2019 - Original Slides Posted
- V2 - 03/06/2019 - With the updated information from TO, the following changes were made:
 - Project scope update (Slide 4)
 - Rating correction (Slide 5)
 - The upgrade for the Hyatt - Maliszewski 138 kV line is not required.
- V3 - 03/08/2019 – Typo Fixed from B3021 to B3031 (Slide 3).