



Sub Regional RTEP Committee Mid-Atlantic

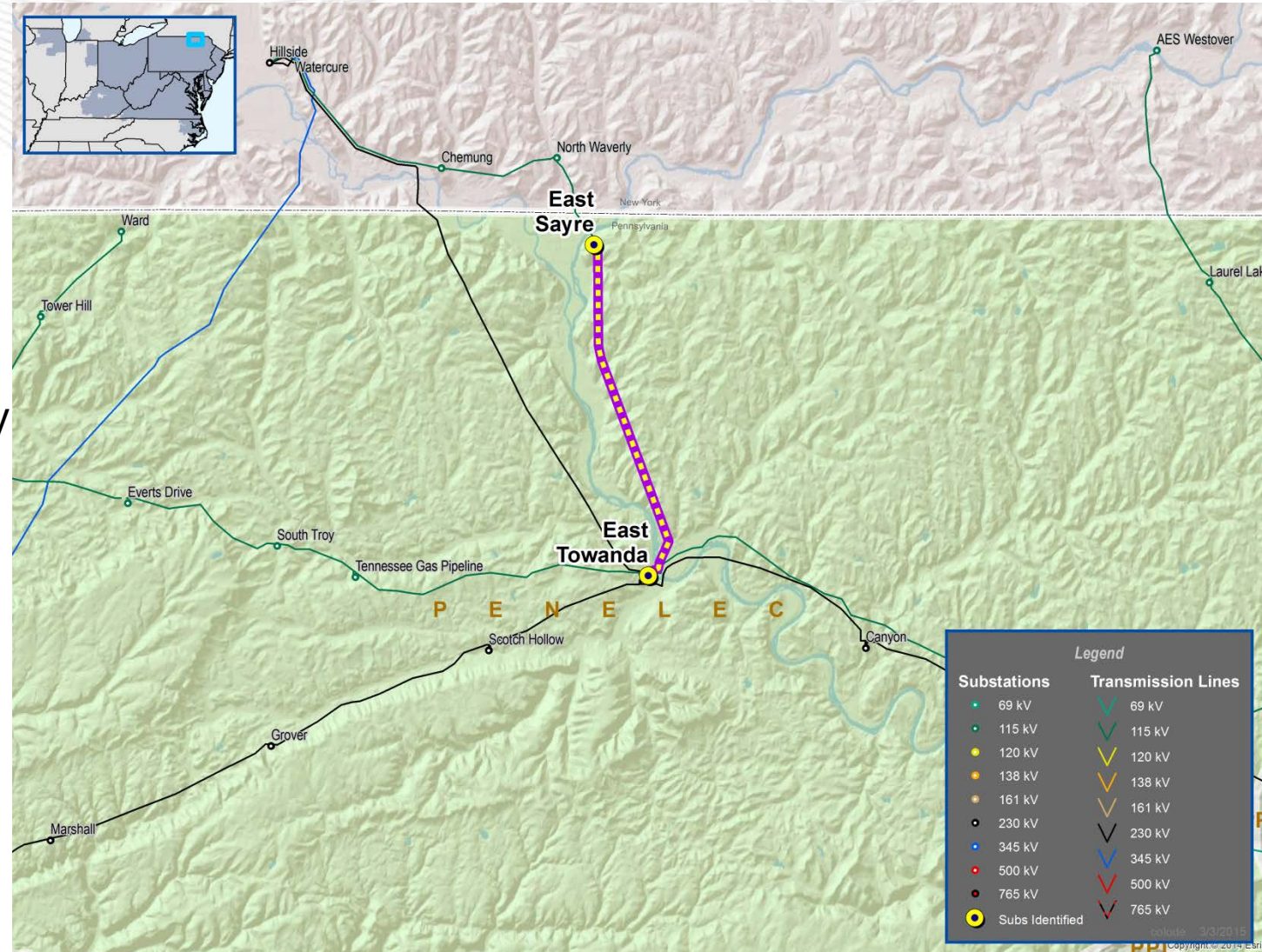
March 05, 2015



Reliability Analysis Update

- Pre-FERC 1000 cleanup Item
- Upgrade developed as part of the 2013 RTEP
- Included in 2013 – Present RTEP models
- Not previously presented to TEAC

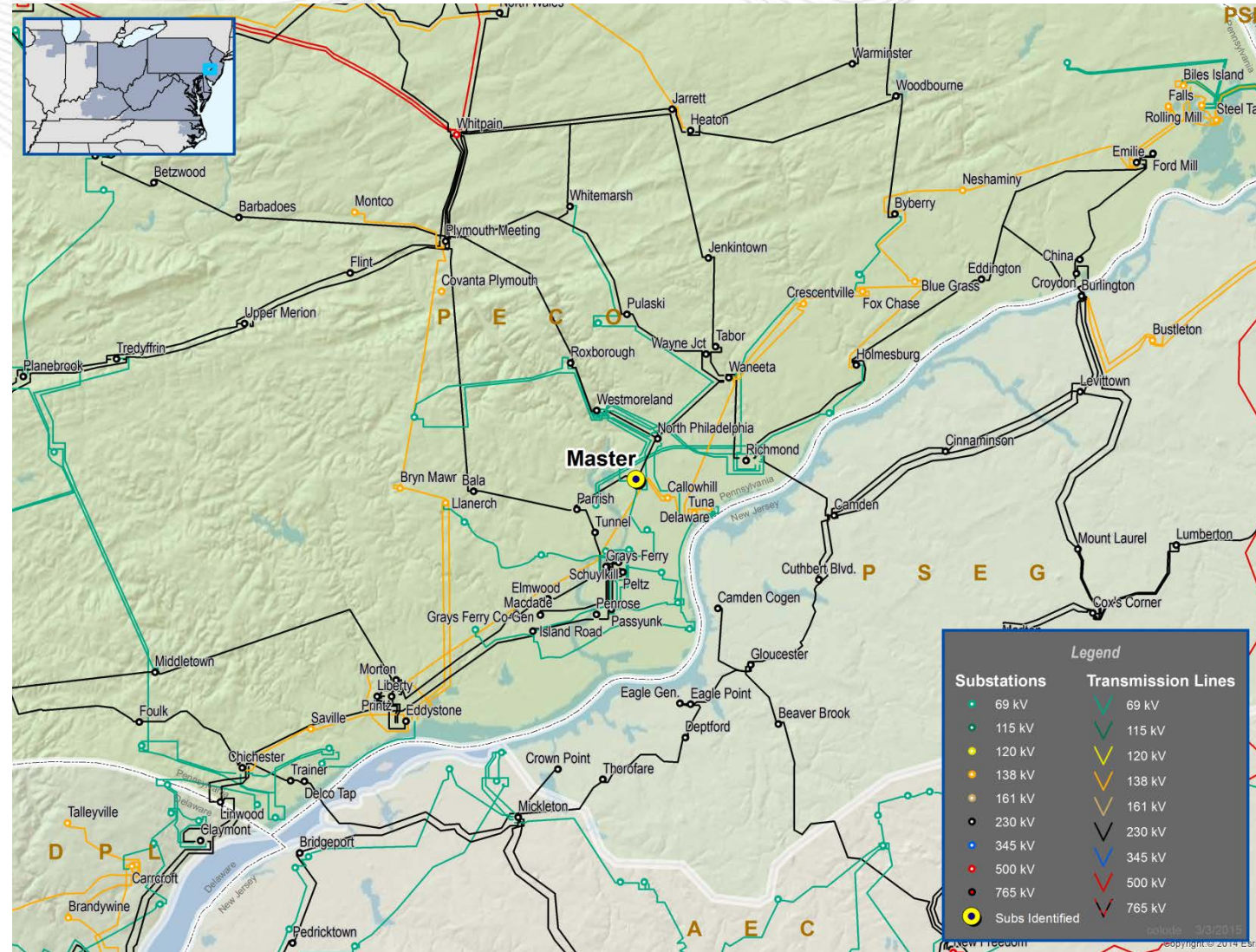
- Common Mode Outage:
- The East Towanda - East Sayre 115 kV circuit is overloaded for several contingencies.
- Proposed Solution:
 - Replace relays at East Towanda and East Sayre 115 kV substations (B2621).
- Estimated Project Cost: \$ 0.1 M
- Required IS Date: 6/1/2018



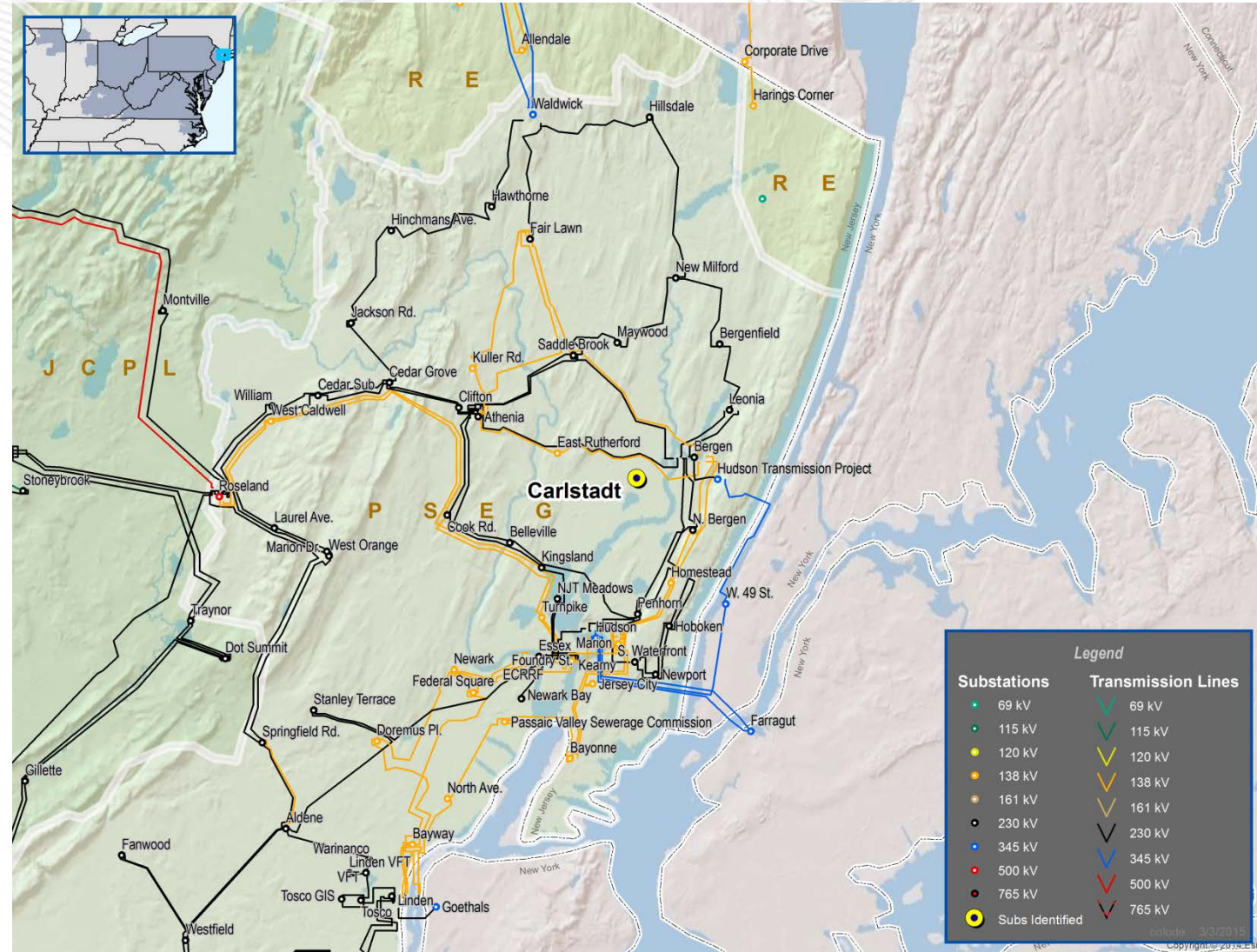


Supplemental

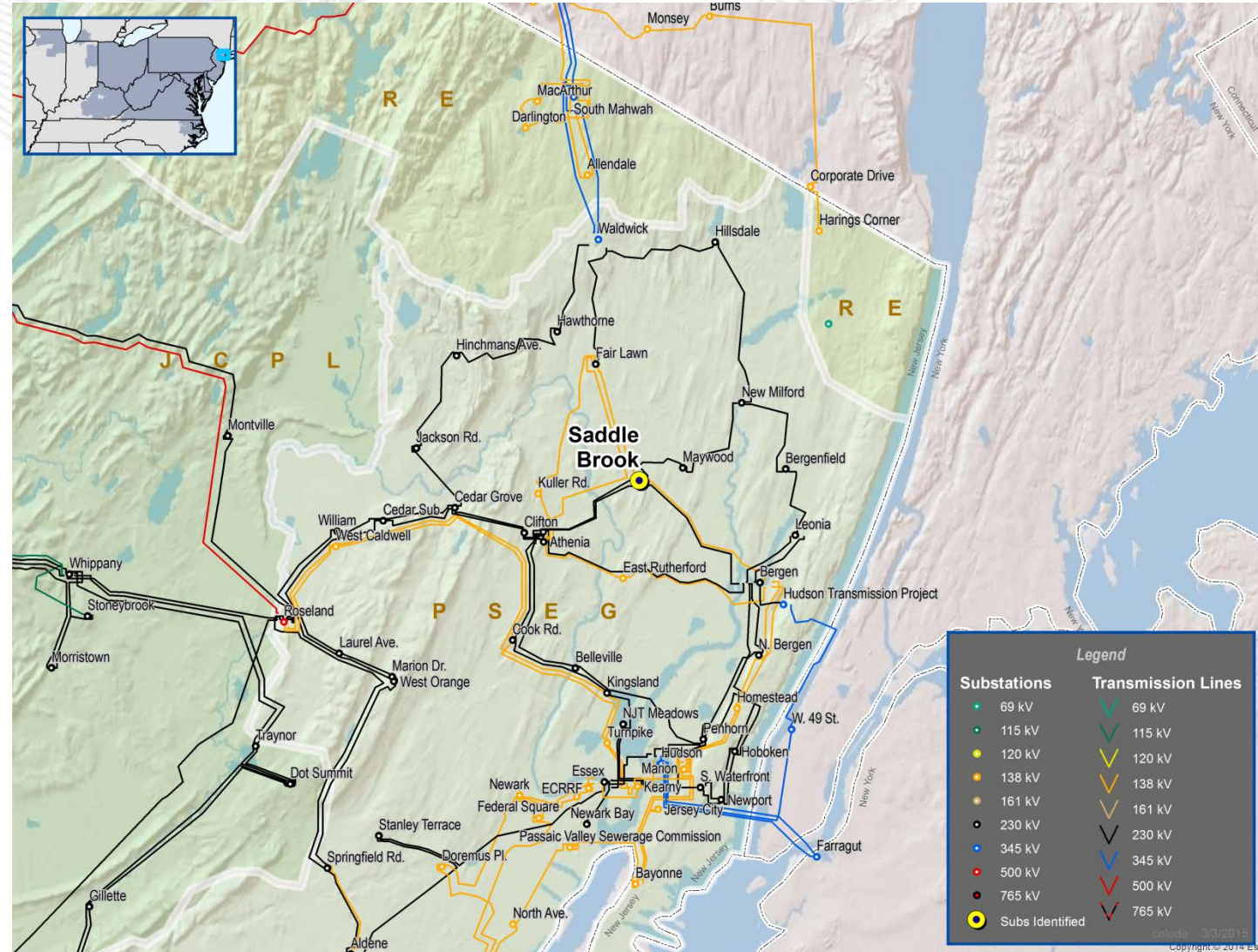
- Supplemental Upgrade:
- Build a new 230/13kV distribution substation (Master) and install two circuit breakers at the 230 kV Master bus (S0901).
- Estimated Project Cost: \$ 33.8 M
- Projected IS Date: 6/1/2016



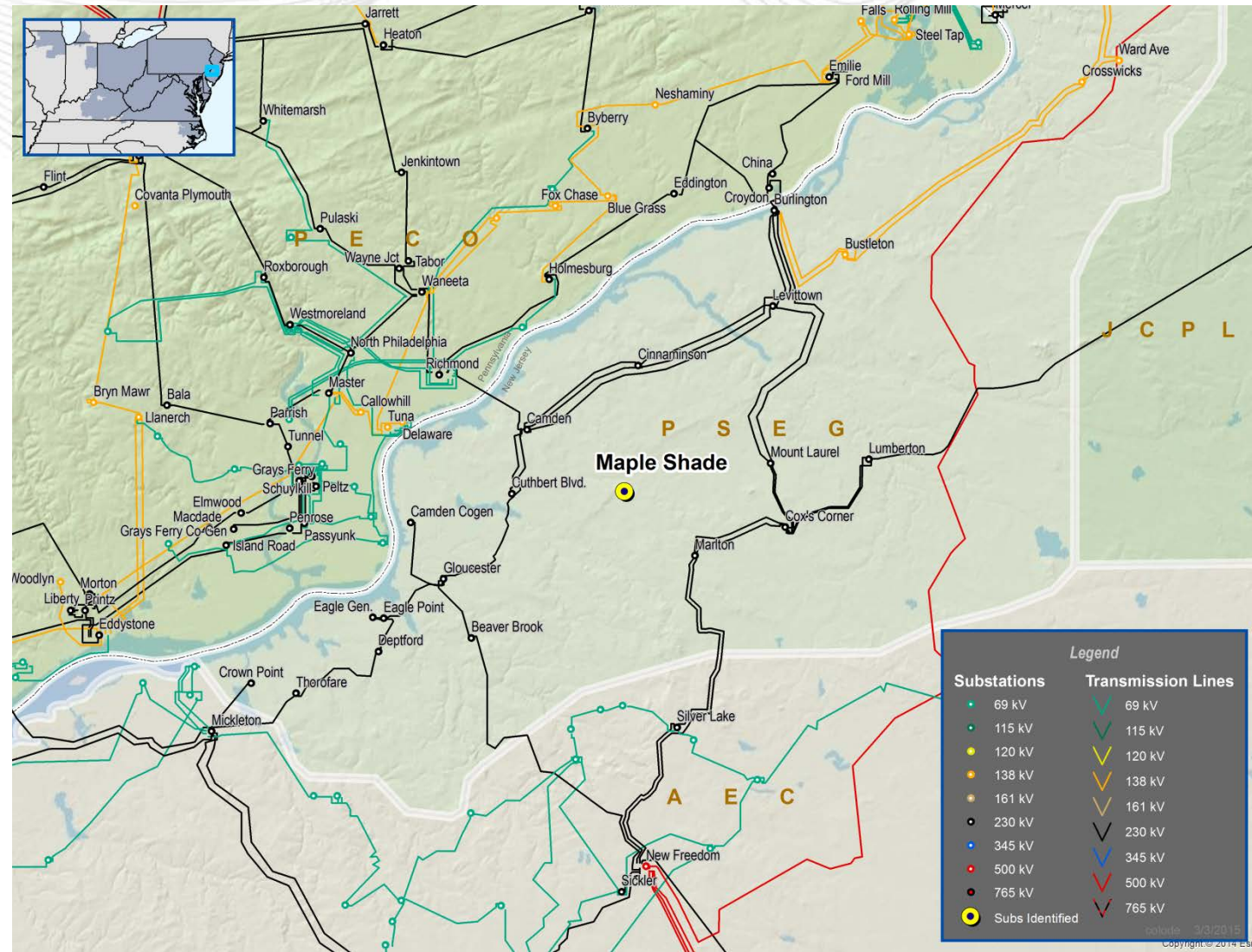
- Supplemental Upgrade :
- To improve reliability due to aging infrastructure.
- Proposed Solution:
 - Install 4th Bay and two 69/26 kV transformers at Carlstadt substation (S0876).
- Estimated Project Cost: \$ 22.1 M
- Projected IS Date: 6/1/2016



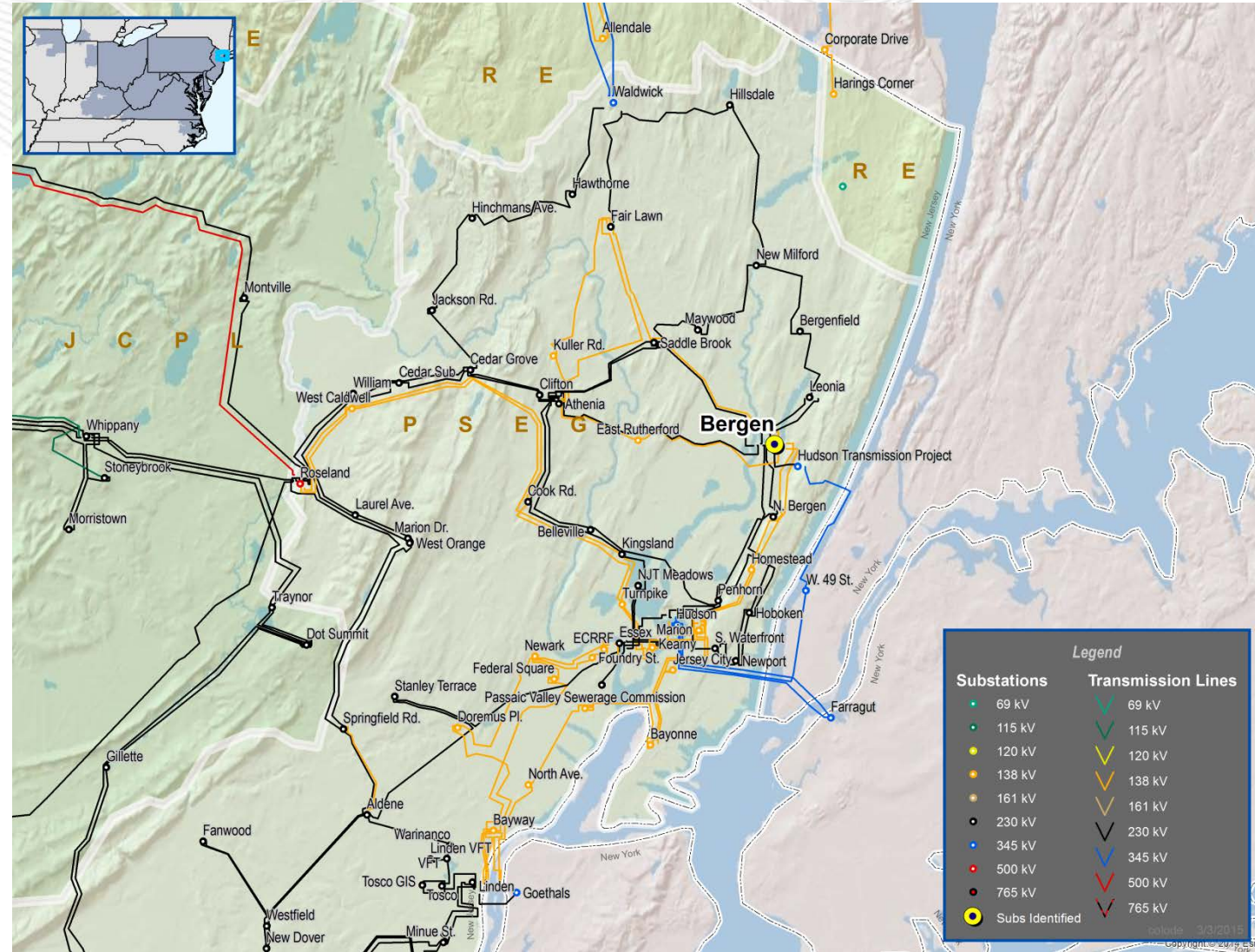
- Supplemental Upgrade :
- To improve reliability due to aging infrastructure.
- Proposed Solution:
 - Replace Saddle Brook T-1 and T-4 138/13 kV transformers (S0877).
- Estimated Project Cost: \$ 12.5 M
- Projected IS Date: 12/31/2017



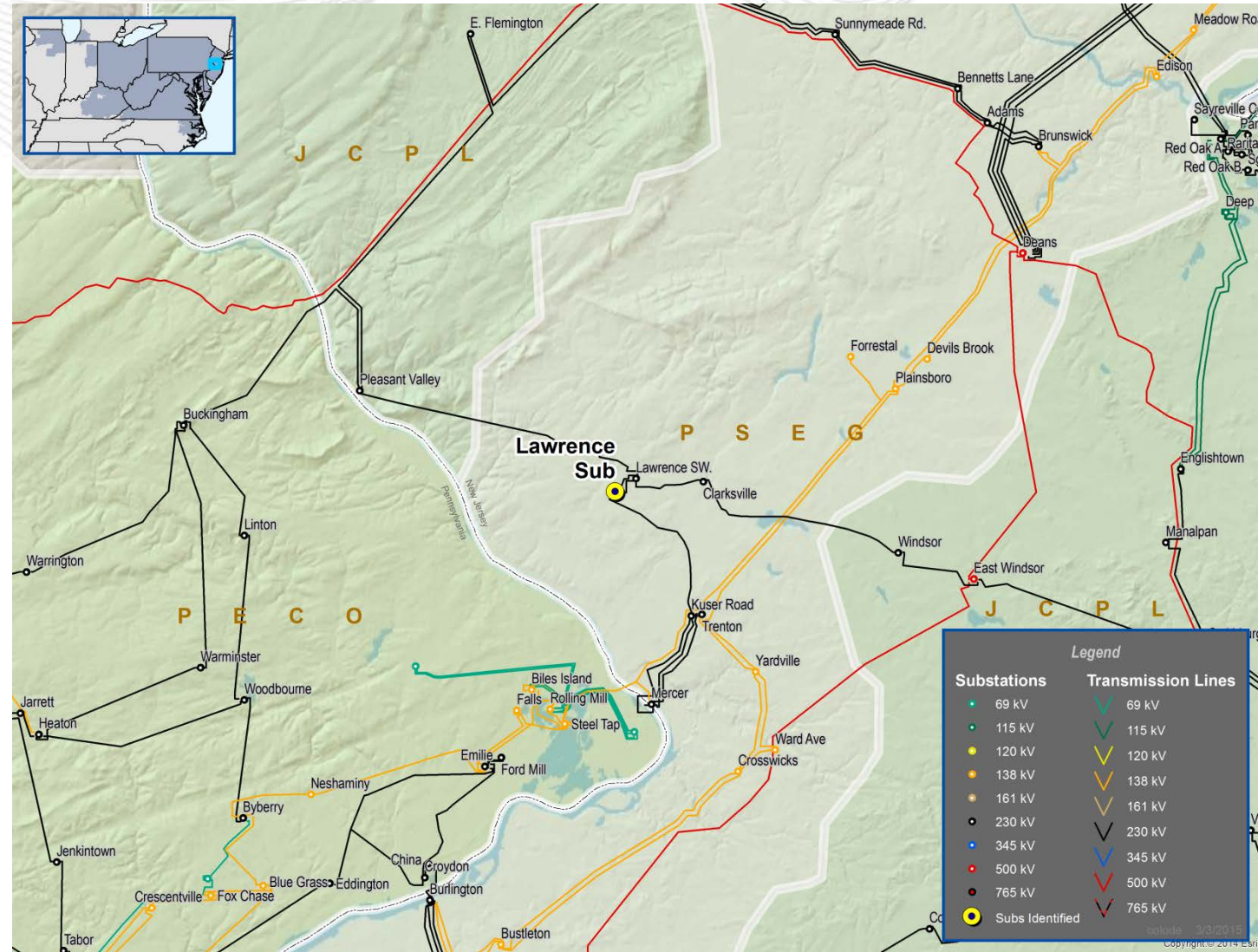
- Supplemental Upgrade :
- To improve reliability due to aging infrastructure.
- Proposed Solution:
 - Replace Maple Shade T-2 and T-3 69/13 kV transformers (S0878).
- Estimated Project Cost: \$ 12.5 M
- Projected IS Date: 12/31/2017



- Supplemental Upgrade :
- To improve reliability due to aging infrastructure.
- Proposed Solution:
 - Construct Bergen 138kV Ring Bus and upgrade to 80 kA (S0879).
- Estimated Project Cost: \$ 27.5 M
- Projected IS Date: 12/31/2017



- Supplemental Upgrade :
- To improve reliability by remotely monitoring major assets
- Proposed Solution:
 - Install microprocessor relays, transformer equipments, SCADA systems and alarm panels at Lawrence Sub T-40 and T-30, Hawthorne T-30, (S0903).
- Estimated Project Cost: \$ 4.5 M
- Projected IS Date: 12/31/2017



Questions?

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