

SRRTEP Committee: Mid-Atlantic PSE&G Supplemental Projects

October 18, 2020

Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Need Number: PSEG-2020-0010

Process Stage: Need Meeting 11/18/2020

Supplemental Project Driver:

- Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

[PSE&G 2019 Annual Assumptions](#)

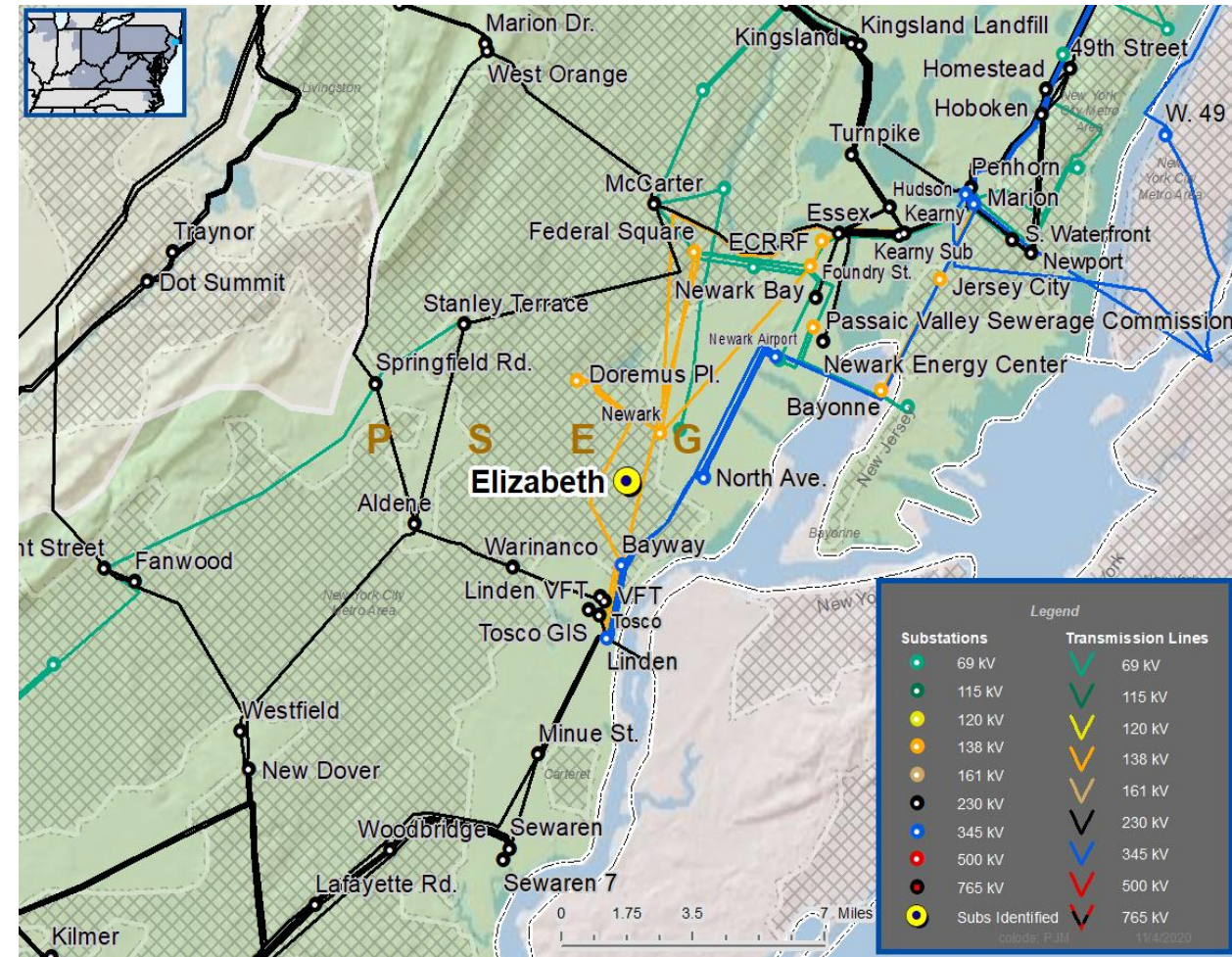
[August 2017 26kV to 69kV PSE&G Presentation](#)

- Equipment Reliability and Condition Assessment
- Asset Risk Model

Problem Statement:

- Elizabeth Substation is supplied by 26kV circuits with increasing performance problems.
 - Over the past decade, the four 26kV supply circuits have seen 11 momentary and 36 extended outages, with total duration of 1147 hours.
 - Station equipment at Elizabeth has been in service since 1914 and needs to be addressed.
 - Historical flooding has compromised some station structures.
 - Elizabeth serves 7,965 customers and 27.3 MVA of load.

Model: 2020 Series 2025 Summer RTEP 50/50



Need Number: PSEG-2020-0011

Process Stage: Need Meeting 11/18/2020

Supplemental Project Driver:

- Equipment Material Condition, Performance and Risk
- Infrastructure Resilience

Specific Assumption Reference:

[PSE&G 2019 Annual Assumptions](#)

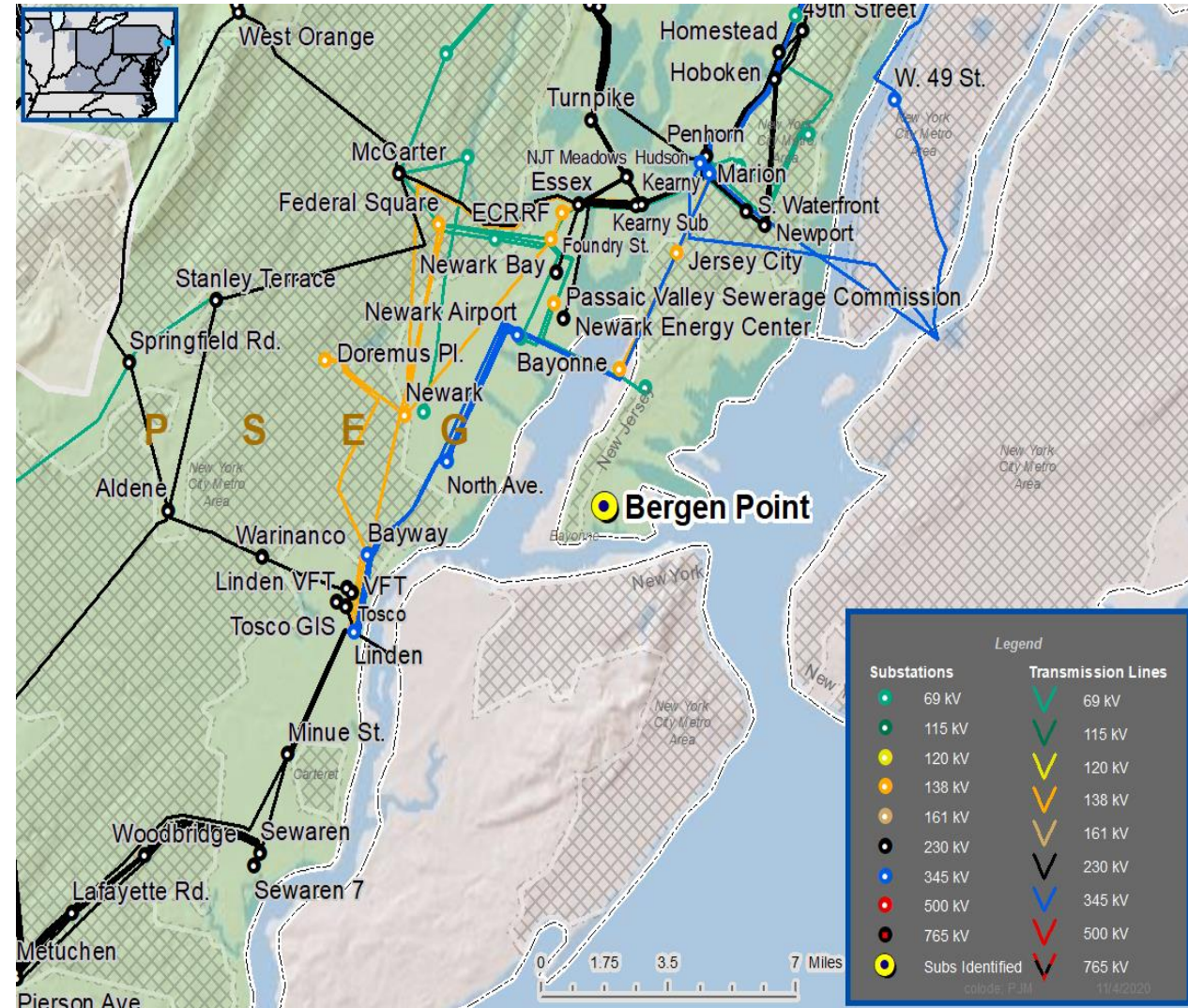
[August 2017 26kV to 69kV PSE&G Presentation](#)

- Equipment Reliability and Condition Assessment
- Asset Risk Model
- Storm Hardening

Problem Statement:

- Bergen Point Substation is supplied by 26kV circuits with increasing performance problems.
 - Over the past decade, the 26kV supply circuits have seen 13 momentary and 26 extended outages, with total duration of 315 hours.
 - Station equipment at Bergen Point has been in service since 1929 and needs to be addressed.
 - Physical condition of the building has deteriorated.
 - Bergen Point serves roughly 11,300 customers and 24.3 MVA of load.
- Constable Hook is a 26kV station that is currently below FEMA 100 year flood elevations and is at risk in case of a major storm event. Additionally, load growth in the area is projected to require additional capacity.

Model: 2020 Series 2025 Summer RTP 50/50



Need Number: PSEG-2020-0012

Process Stage: Need Meeting 11/18/2020

Supplemental Project Driver:

- Customer Service
- Infrastructure Resilience
- Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

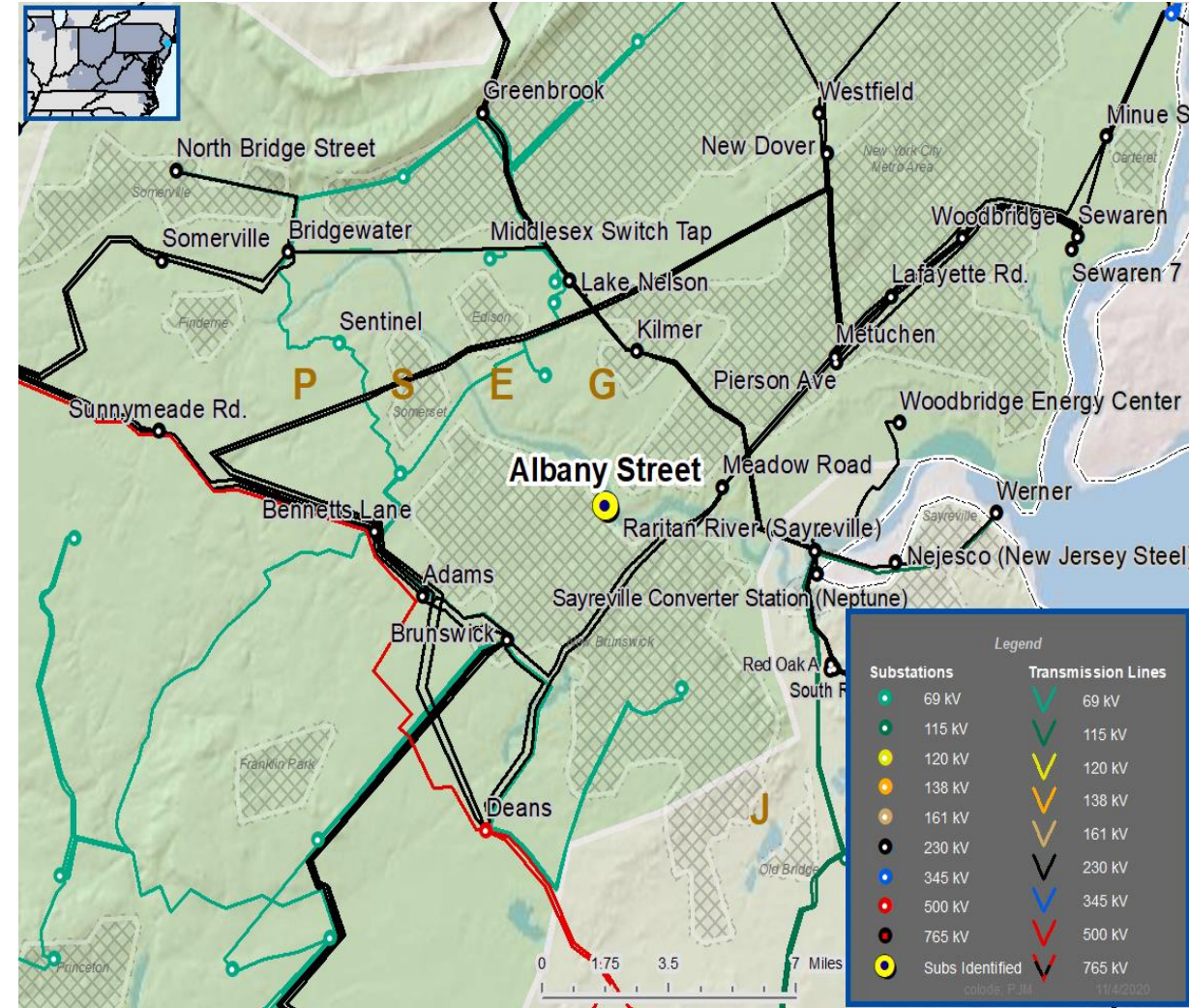
[PSE&G 2019 Annual Assumptions](#)

- Localized Load Growth & Contingency Overloads
- Storm Hardening
- Equipment Reliability and Condition Assessment
- Asset Risk Model

Problem Statement:

- Additional capacity is needed in New Brunswick for two new large customers.
- Albany St is supplied by 26kV circuits with increasing performance problems.
 - Albany St. provides network service to downtown New Brunswick.
 - Over the past decade, the 26kV underground supply circuits have seen 17 momentary and 19 extended outages, with total duration of 395 hours.
 - Albany St. station is at risk in a major storm event. Albany St. is on the banks of the Raritan River, surrounded by flood zone and is inaccessible for an extended period during a flooding event.

Model: 2020 Series 2025 Summer RTEP 50/50



Need Number: PSEG-2020-0013
Process Stage: Need Meeting 11/18/2020

Supplemental Project Driver:

- Customer Service

Specific Assumption Reference:

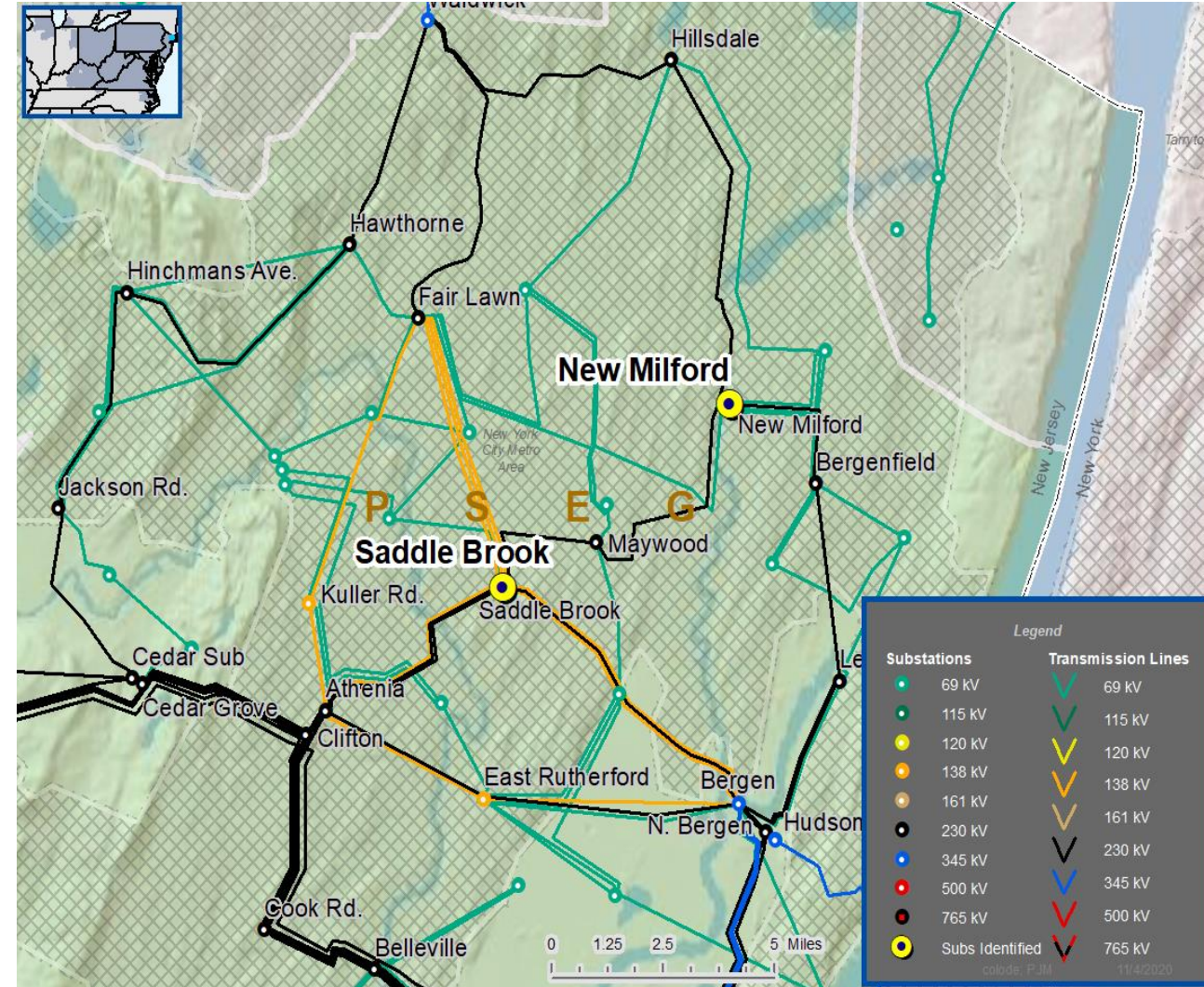
[PSE&G 2019 Annual Assumptions](#)

- Localized Load Growth & Contingency Overloads

Problem Statement:

- Saddle Brook is a station in the Paramus area with half the station overloaded and exceeding capacity of 60 MVA.
- The overloaded half of Saddle Brook serves 20,124 customers with peak load of 67.6 MVA in 2019.
- New Milford is a station in the Paramus area at capacity of 120 MVA.
- New Milford serves 33,472 customers with peak load of 131 MVA in 2019.

Model: 2020 Series 2025 Summer RTEP 50/50



Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Need Number: PSEG-2020-0008

Process Stage: Solutions Meeting 11/18/2020

Previously Presented: Need Meeting 9/10/2020

Supplemental Project Driver:

- Customer Service

Specific Assumption Reference:

[PSE&G 2019 Annual Assumptions](#)

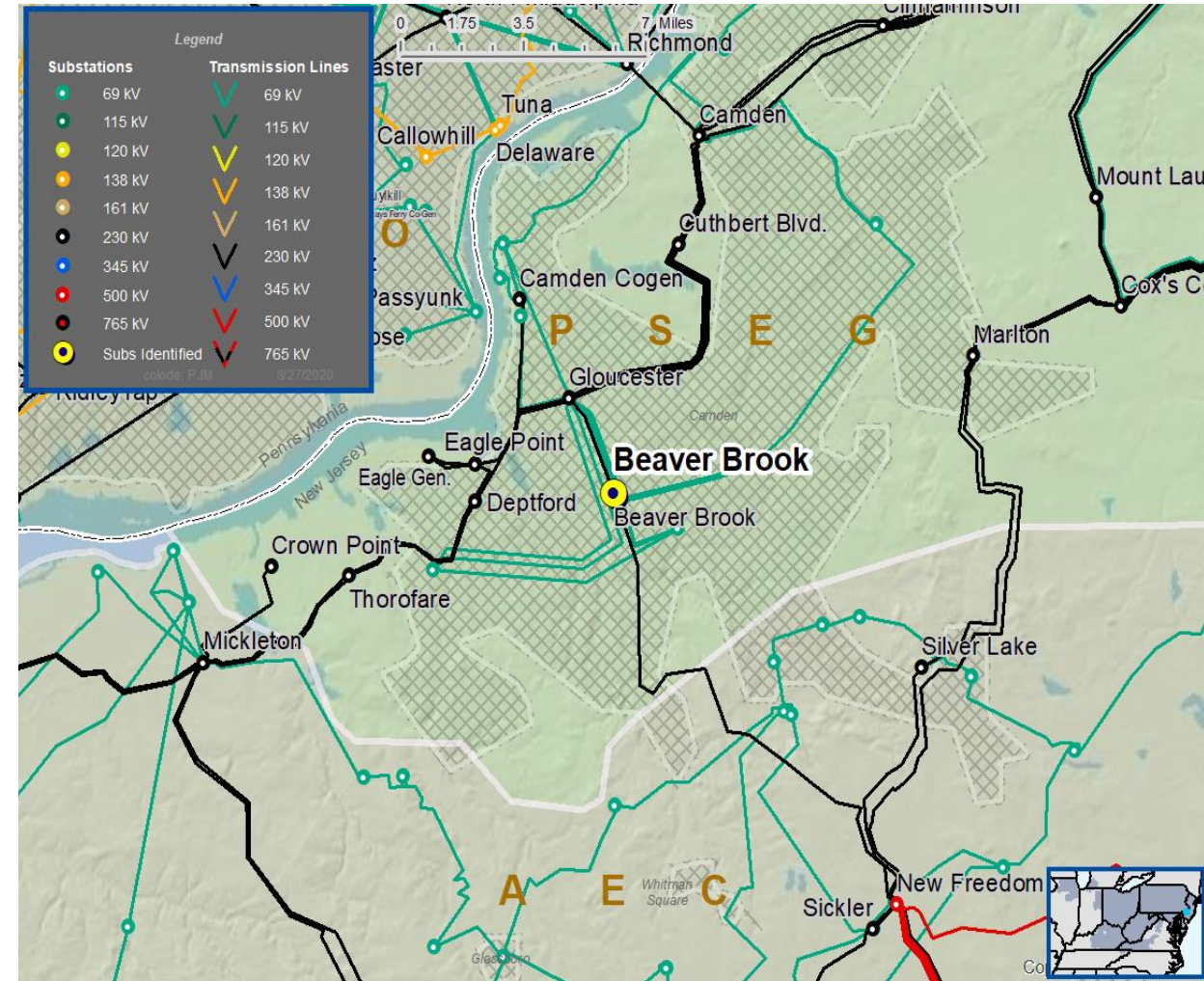
- Localized Load Growth & Contingency Overloads

Problem Statement:

Beaverbrook is a station in the Western Camden County area at capacity of 60 MVA.

- Beaverbrook serves roughly 22,000 customers with peak load of 70 MVA in 2019.

Model: 2020 Series 2025 Summer RTEP 50/50





PSE&G Transmission Zone M-3 Process Western Camden County Area

Need Number: PSEG-2020-0008

Process Stage: Solutions Meeting 11/18/2020

Proposed Solution:

- New 69/13kV Station in Audubon Area
 - Purchase Property to accommodate new construction.
 - Install a 69kV station with two (2) 69/13kV transformers.
 - Construct a 69kV network in the Audubon Area fed from nearby stations.
 - **Estimated Cost:** \$41.6M

Ancillary Benefits:

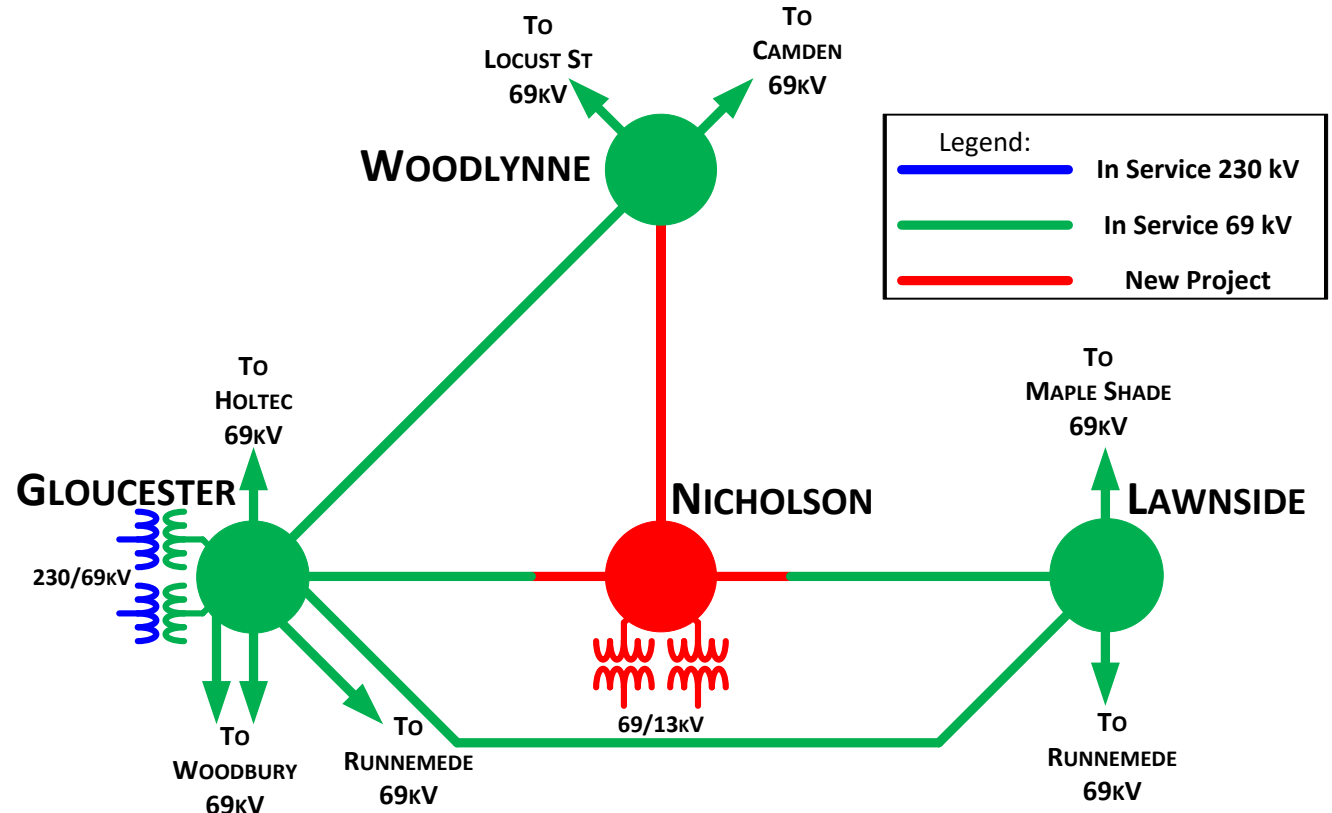
- Provides capacity increase and 13kV self healing loops.
- Facilitates future asset condition based retirements.

Alternatives Considered:

1. New 69/13kV Station in Audubon Area
 - Purchase Property to accommodate new construction.
 - Install a 69kV station with two (2) 69/13kV transformers.
 - Construct a 69kV network in the Audubon Area fed from different stations.
 - **Estimated Cost:** \$57.5M
2. Expand Beaver Brook 230kV Substation.
 - Expand station footprint on existing property.
 - Re-configure 230kV bus.
 - Install second set of distribution switchgear and two (2) 230/13kV transformers.
 - **Estimated Cost:** \$66.3M

Projected In-Service: 05/2025

Project Status: Conceptual



Need Number: PSEG-2020-0009

Process Stage: Solutions Meeting 11/18/2020

Previously Presented: Need Meeting 9/10/2020

Supplemental Project Driver:

- Customer Service
- Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

[PSE&G 2019 Annual Assumptions](#)

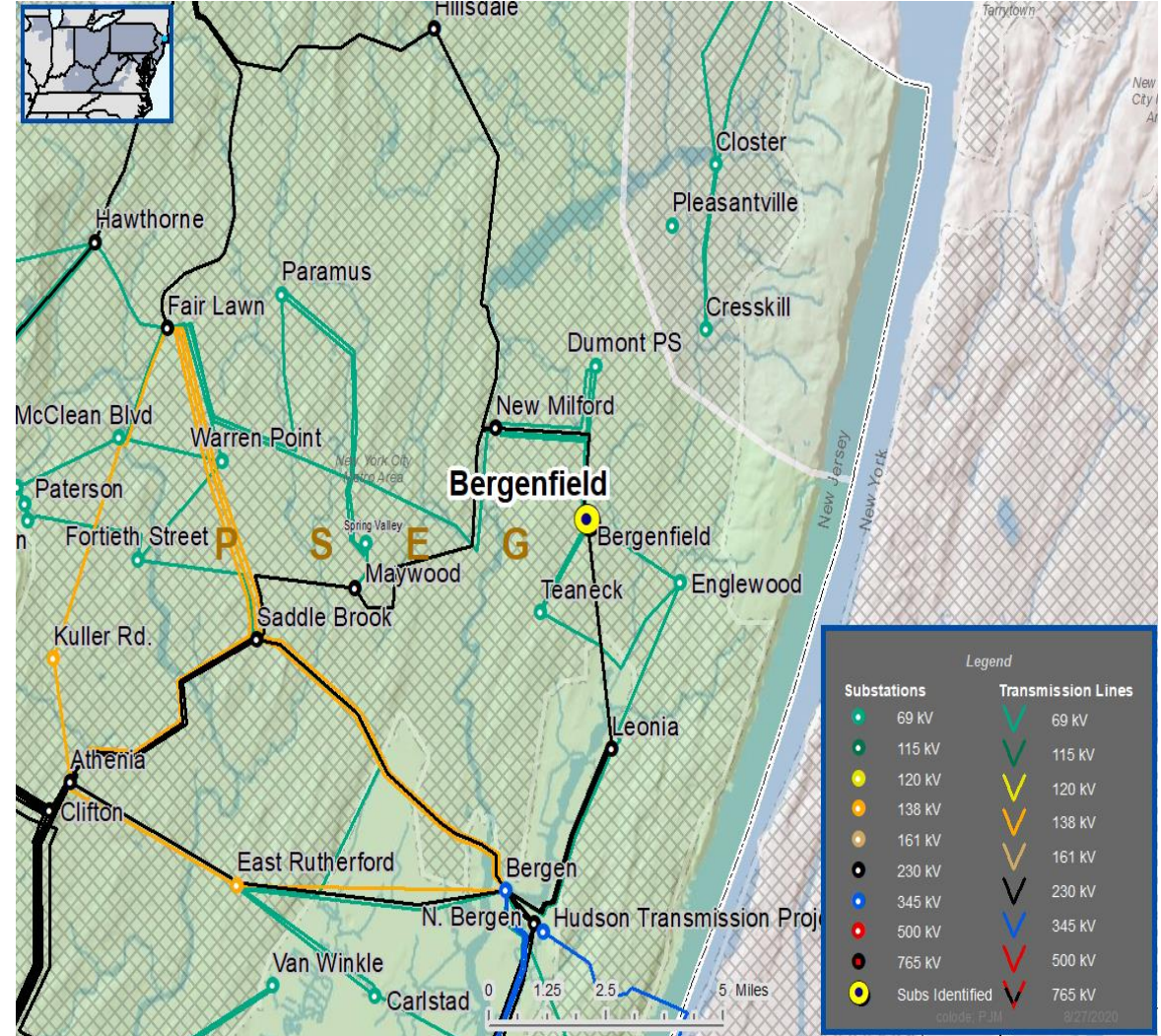
- Localized Load Growth & Contingency Overloads

Problem Statement:

Leonia is a station in the eastern Bergen County area at capacity of 120 MVA. Bergenfield is a station in the eastern Bergen County area at capacity of 60 MVA.

- Leonia serves roughly 34,800 customers with peak load of 145 MVA in 2019.
- Bergenfield serves roughly 19,200 customers with peak load of 72 MVA in 2019.

Model: 2020 Series 2025 Summer RTEP 50/50



Need Number: PSEG-2020-0009

Process Stage: Solutions Meeting 11/18/2020

Proposed Solution:

- New 69/13kV Station in Eastern Bergen County Area.
 - Eliminate Hudson Terrace 26kV Substation.
 - Construct a 69kV station with two (2) 69/13kV transformers on existing substation property.
 - Construct a 69kV network in the Eastern Bergen County Area fed from nearby stations.
 - **Estimated Cost:** \$99.2M

Ancillary Benefits:

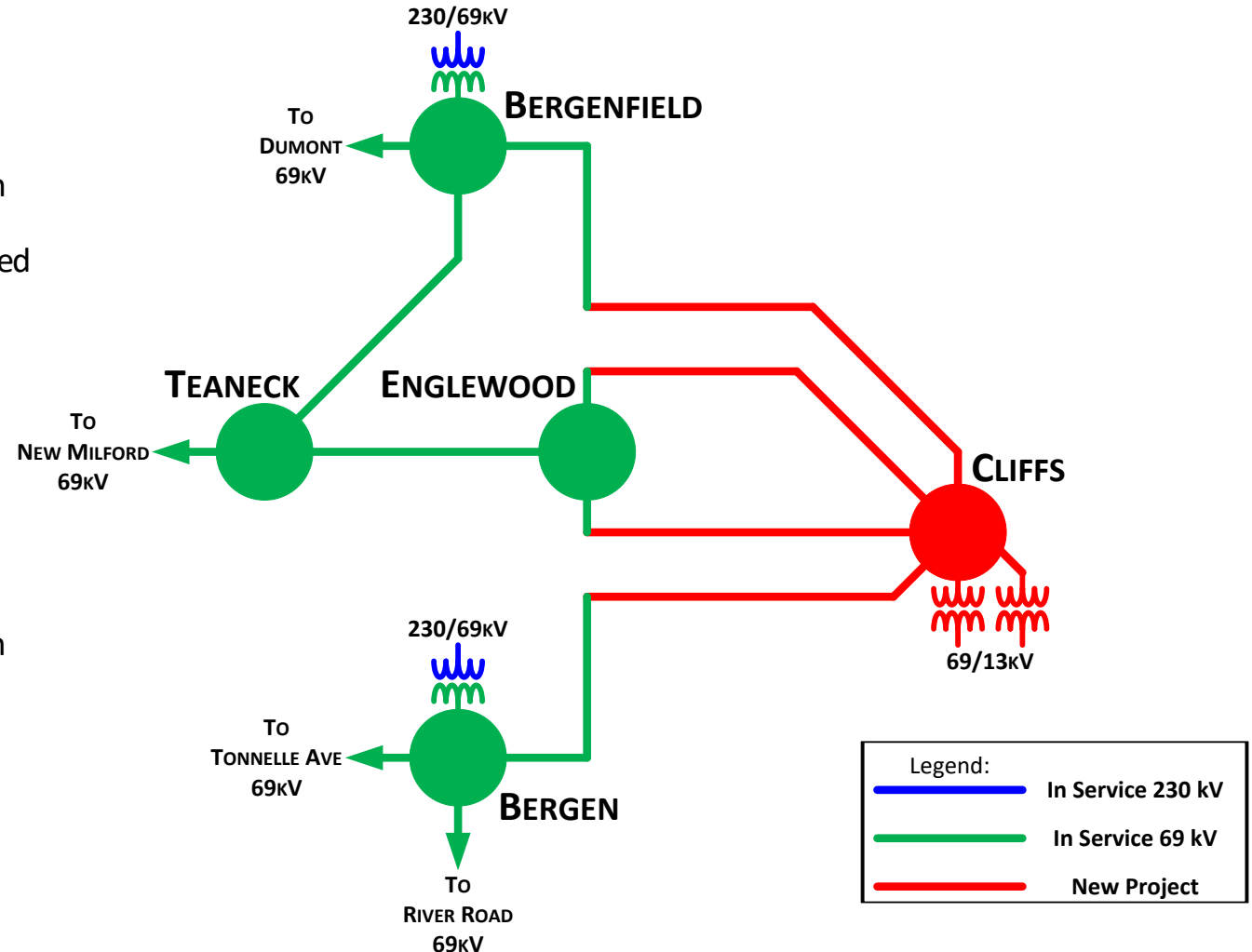
- Provides capacity increase and 13kV self healing loops.

Alternatives Considered:

- New 69/13kV Station in Eastern Bergen County Area.
 - Eliminate Hudson Terrace 26kV Substation.
 - Construct a 69kV station with two (2) 69/13kV transformers on existing substation property.
 - Construct an alternate 69kV network in the Eastern Bergen County Area fed from different stations.
 - **Estimated Cost:** \$107.2M

Projected In-Service: 05/2025

Project Status: Conceptual



Questions?



Appendix

High level M-3 Meeting Schedule

Assumptions	Activity	Timing
	Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
	Stakeholder comments	10 days after Assumptions Meeting
Needs	Activity	Timing
	TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
	Stakeholder comments	10 days after Needs Meeting
Solutions	Activity	Timing
	TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
	Stakeholder comments	10 days after Solutions Meeting
Submission of Supplemental Projects & Local Plan	Activity	Timing
	Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
	Post selected solution(s)	Following completion of DNH analysis
	Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
	Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions

Revision History

11/6/2020 – V1 – Original version posted to pjm.com