

PSEG 2024

Submission of Supplemental Projects for Inclusion in the Local Plan

Need Number: PSEG-2023-0008

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 02/07/2024

Previously Presented:

- Need Meeting 07/20/2023
- Solutions Meeting 08/17/2023

Supplemental Project Driver:

- Customer Service
- Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

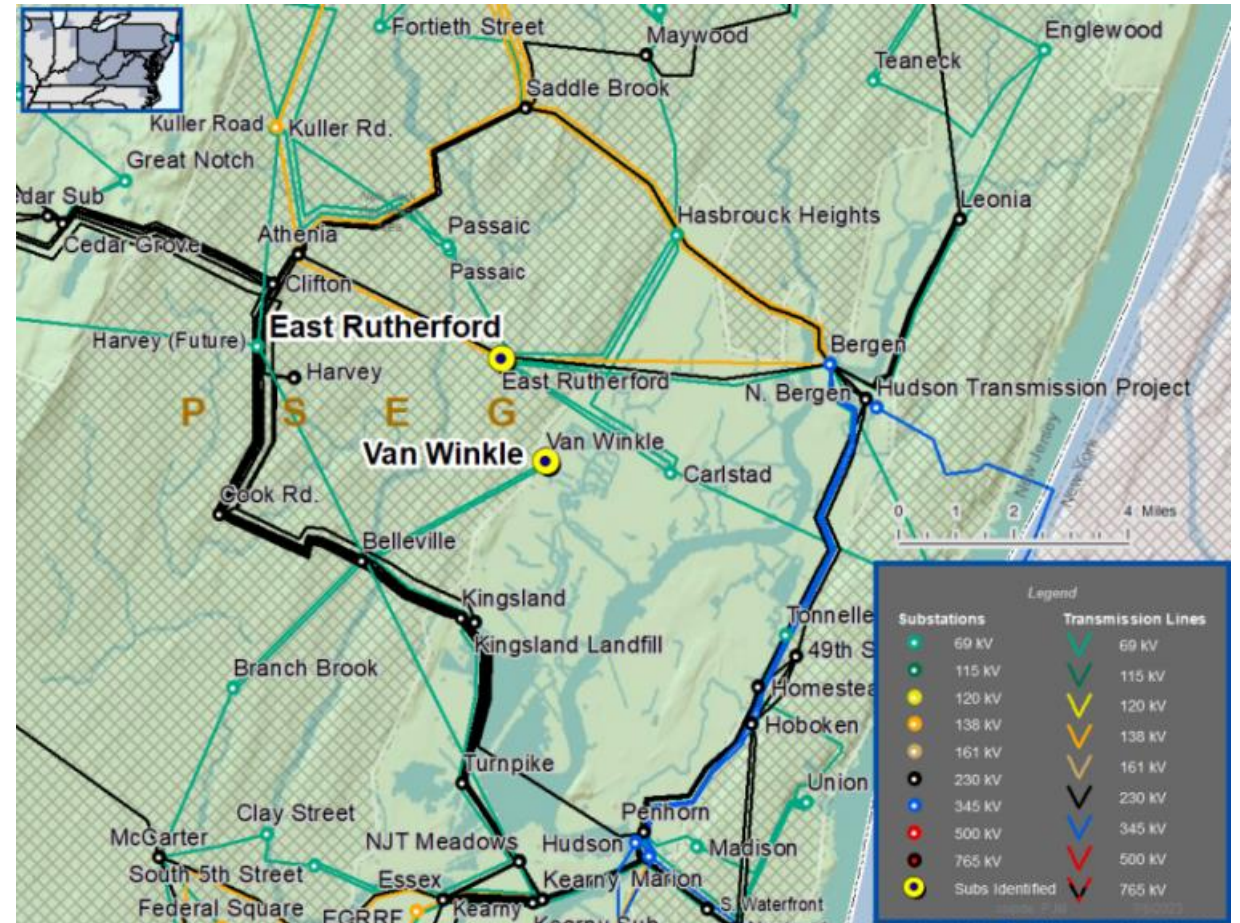
[PSEG 2023 Annual Assumptions](#)

- Localized Load Growth & Contingency Overloads
- Equipment Reliability and Condition Assessment

Problem Statement:

- East Rutherford is a station in the Bergen county area with no additional station capacity.
 - East Rutherford serves over 17,600 customers with a peak load of over 70.9MVA in 2021.
 - The actual station capacity is 62.5MVA. Contingency overload is 113%.
- The Van Winkle Substation building is over 80 years old, is in poor condition, and is not in compliance with today's NJ UCC requirements.
 - Van Winkle serves over 5,400 customers.

Model: 2021 Series 2026 Summer RTEP 50/50



Need Number: PSEG-2023-0008

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 02/07/2024

Selected Solution:

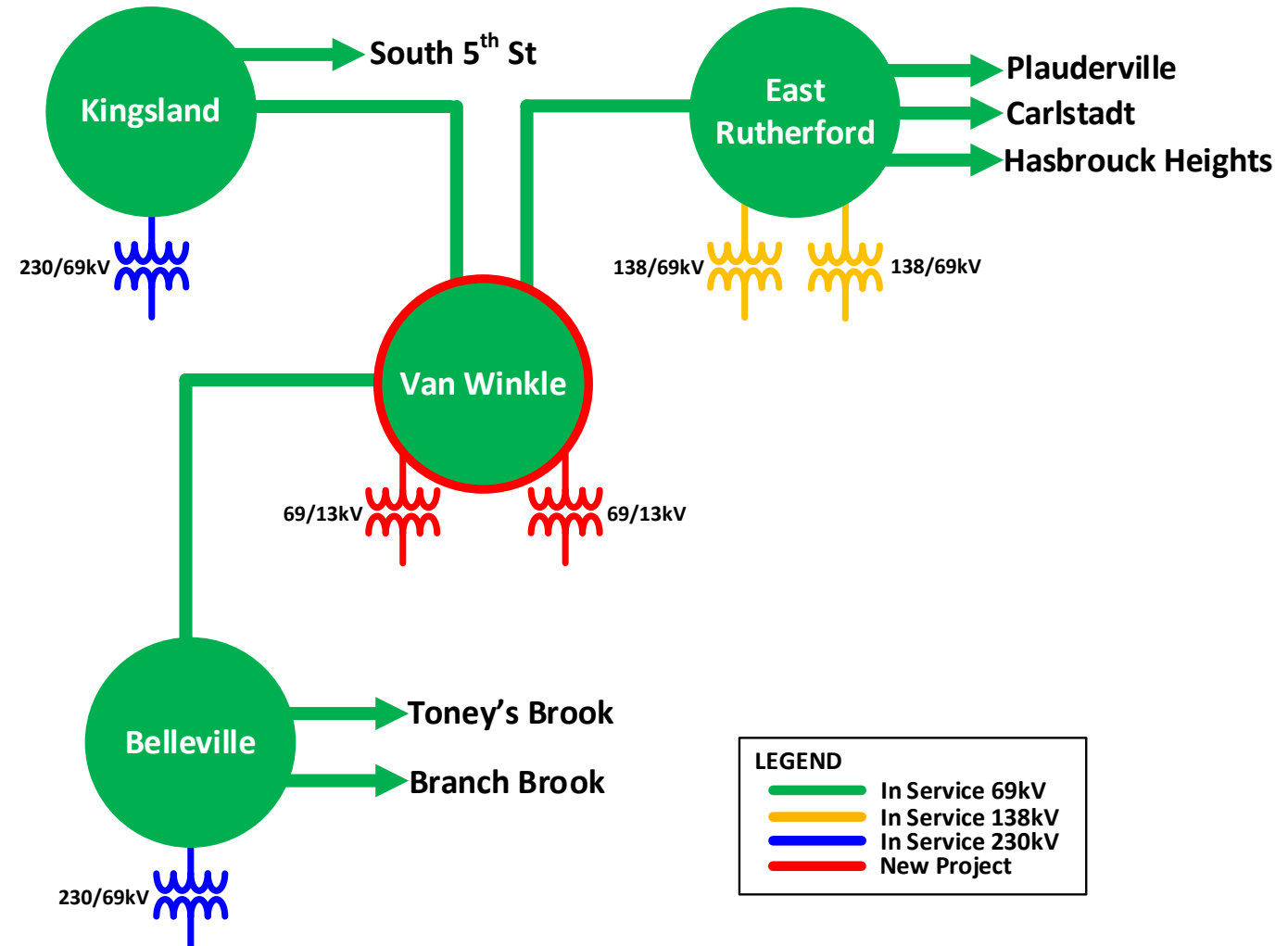
- Upgrade Van Winkle to a 69-13kV substation.
 - To ensure continuity of service, the project requires a temporary 69kV contingency during the construction sequence.
 - Remove existing transformers and associated equipment at Van Winkle.
 - Install two (2) 69-13kV transformers and associated equipment.

Estimated Cost: \$32.5M

Projected In-Service: 06/2027

Supplemental Project ID: s3010

Project Status: Engineering and Planning



Need Number: PSEG-2023-0005

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 02/07/2024

Previously Presented:

- Need Meeting 05/18/2023
- Solutions Meeting 07/20/2023

Supplemental Project Driver:

- Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

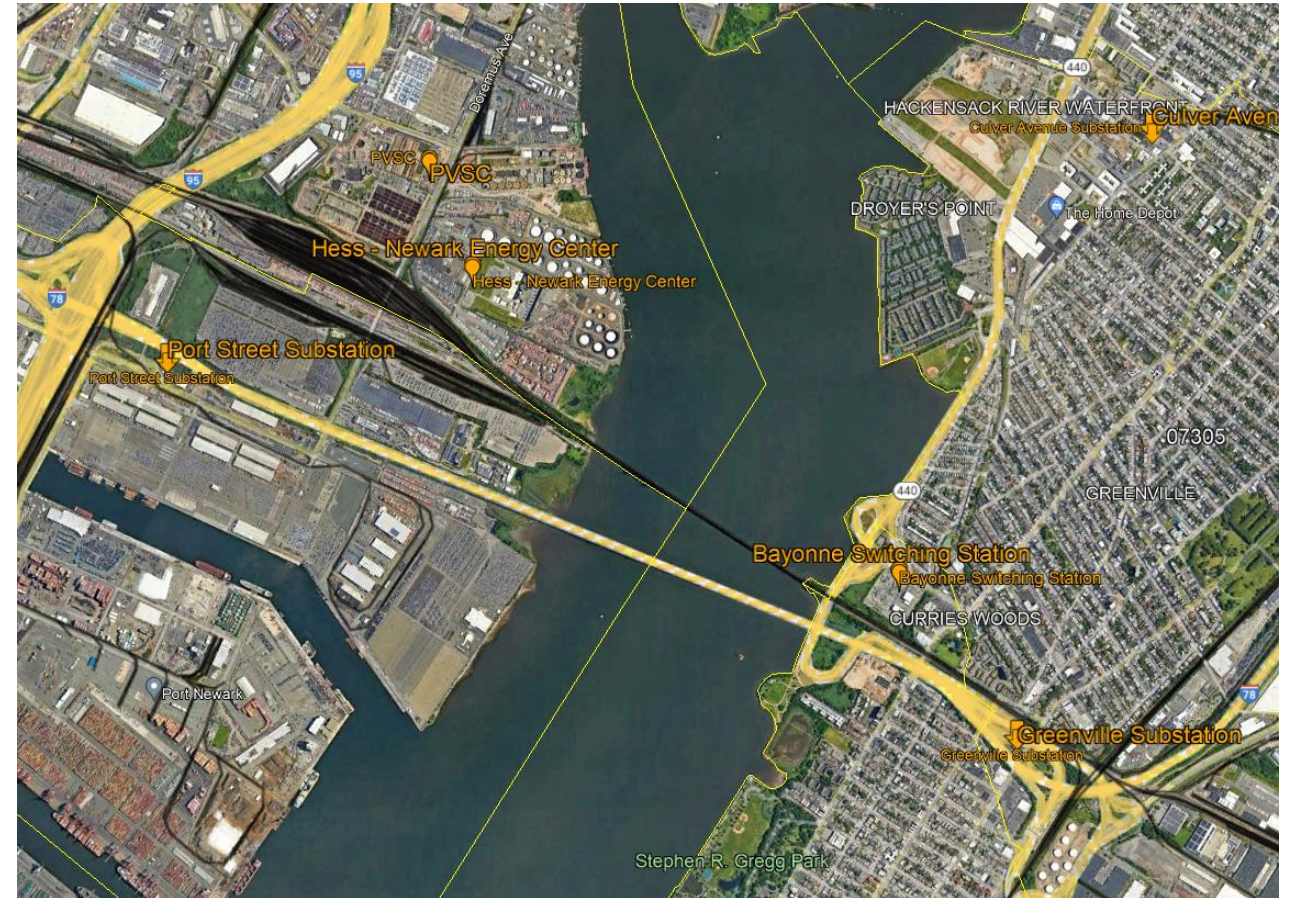
[PSEG 2023 Annual Assumptions](#)

- Equipment Criticality, Consequence of Failure

Problem Statement:

- The cable connecting Newark and Bayonne 69kV networks is a high pressure fluid-filled circuit and is an environmental risk. The high pressure fluid-filled line was constructed in 1963. The line length totals to 2.3 miles with approximately 4800 feet underwater in the Newark Bay.
- The circuit contains over 23,000 gallons of dielectric fluid. There is a potential risk of an un-controlled leak of up to 56% of that fluid into Newark Bay.

Model: 2022 Series 2027 Summer RTEP 50/50



Need Number: PSEG-2023-0005

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 02/07/2024

Selected Solution:

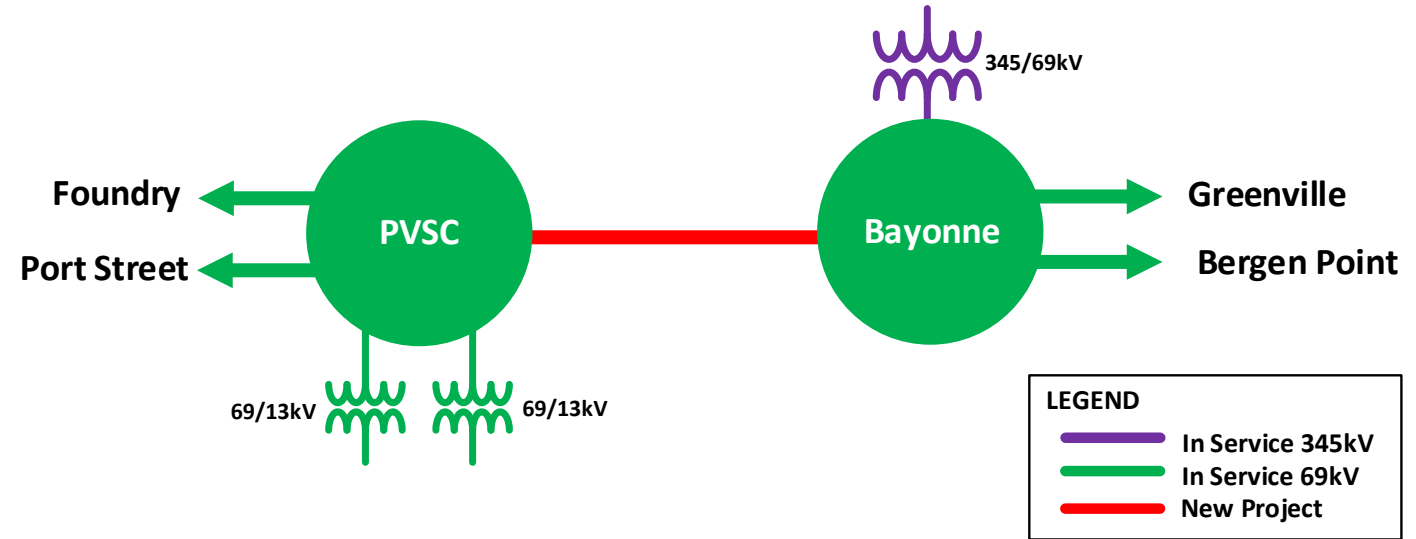
- Replace the G-709 High Pressure Fluid Filled (HPFF) cable with Extruded Pipe (EP) cable.
 - Replace 2.3 miles of HPFF cable with EP cable.
 - Re-use the existing G-709 pipe and route for the cable replacement.
 - Modify terminal equipment at PVSC and Bayonne stations to accommodate the EP cables
 - At Bayonne station, de-commission and remove the oil pumping equipment including pumping plant, tank, controls, and piping associated with the cable.

Estimated Cost: \$25.6M

Projected In-Service: 12/2025

Supplemental Project ID: s3007

Project Status: Engineering and Planning



Need Number: PSEG-2023-0006

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 02/07/2024

Previously Presented:

- Needs Meeting 7/11/2023
- Solutions Meeting 9/05/2029

Supplemental Project Driver:

- Customer Service

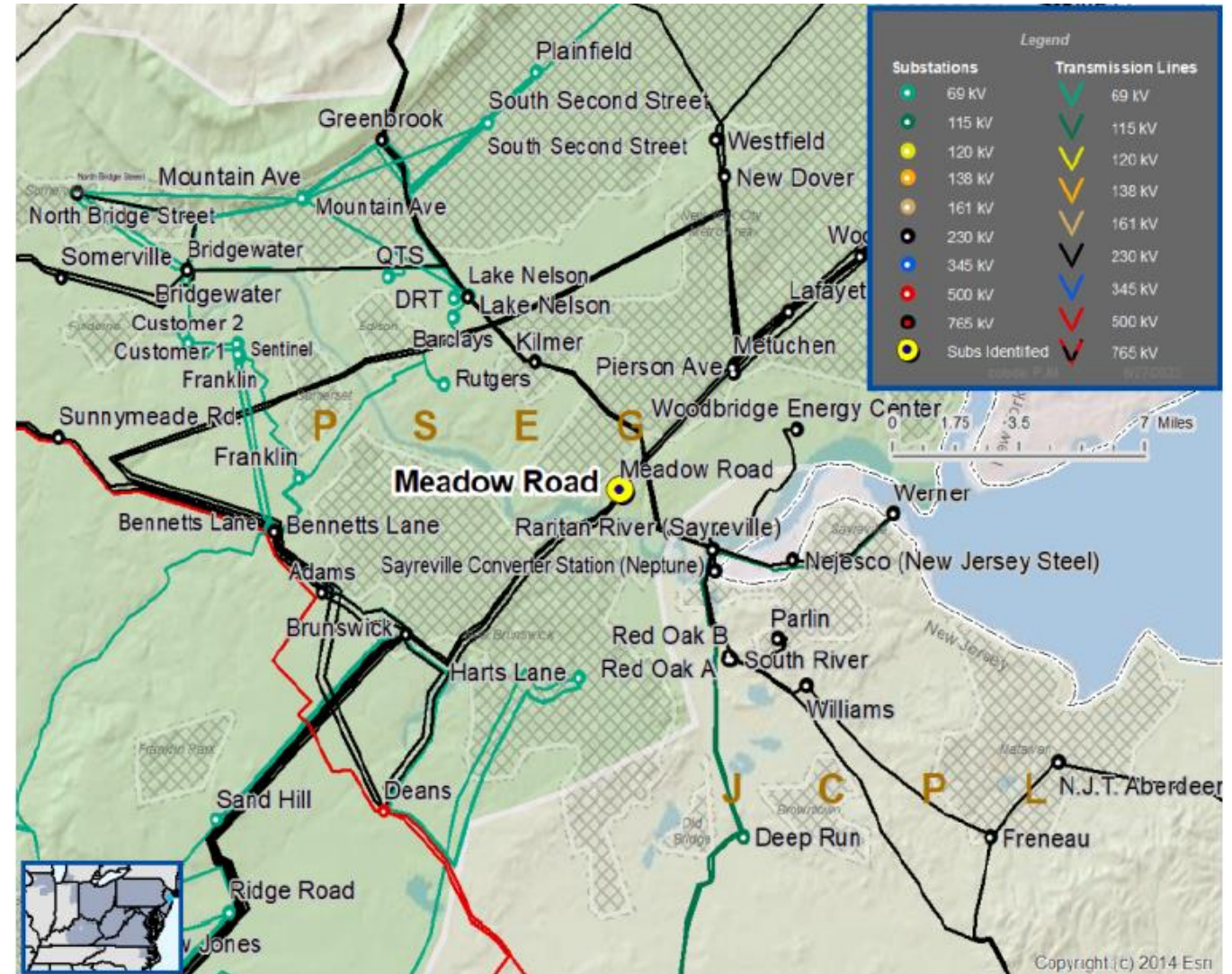
Specific Assumption Reference:

[PSE&G 2023 Annual Assumptions](#)

- Localized Load Growth & Contingency Overloads

Problem Statement:

- Meadow Road Substation is a station in the Edison area with no additional station capacity.
 - Meadow Road serves over 14,000 customers with a peak load of over 73.9 MVA in 2022.
 - The actual station capacity is 59.4 MVA. Contingency overload is 124%.
- **Model:** 2022 Series 2027 Summer RTEP 50/50



Need Number: PSEG-2023-0006

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 02/07/2024

Selected Solution:

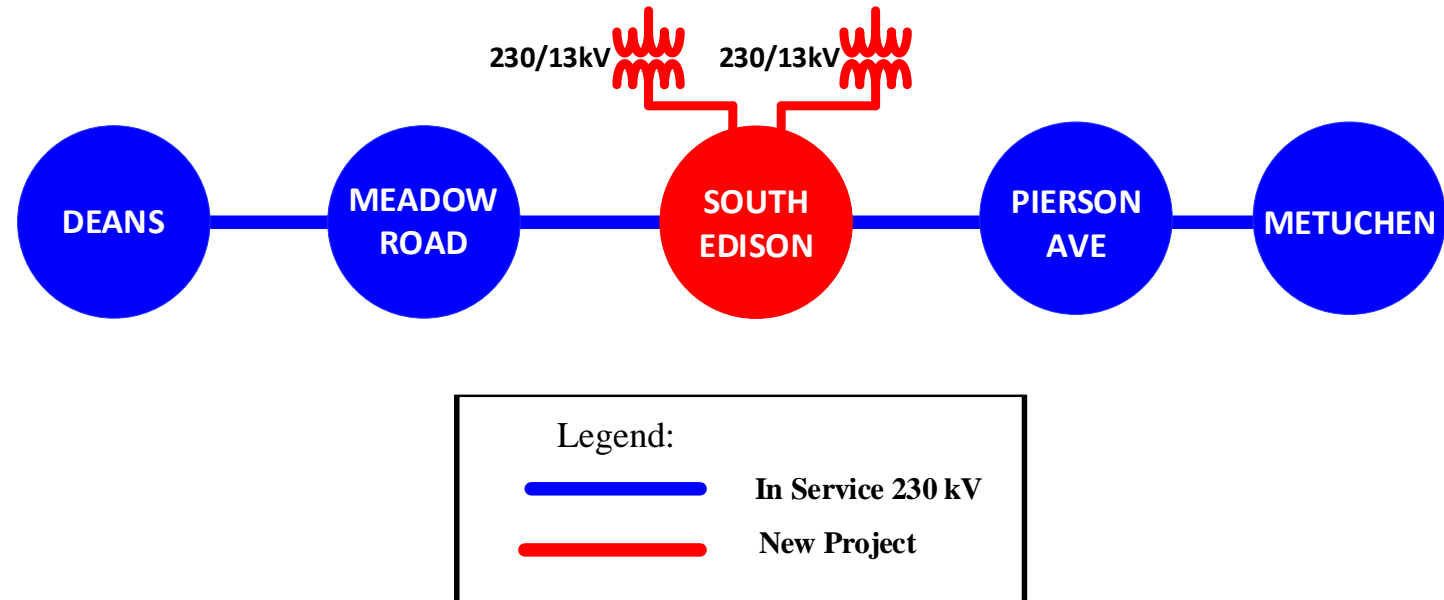
- Construct a 230-13kV Substation at PSEG property adjacent to Meadow Road substation.
 - Construct a 230kV substation.
 - Install two (2) 230-13kV transformers.
 - Resolves contingency overload at Meadow Road substation.

Estimated Cost: \$56.1M

Projected In-Service: 05/2028

Supplemental Project ID: s3008

Project Status: Engineering and Planning





Need Number: PSEG-2023-0007

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan
02/07/2024

Previously Presented:

- Needs Meeting 7/11/2023
- Solutions Meeting 9/05/2029

Supplemental Project Driver:

- Customer Service
- Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

[PSE&G 2023 Annual Assumptions](#)

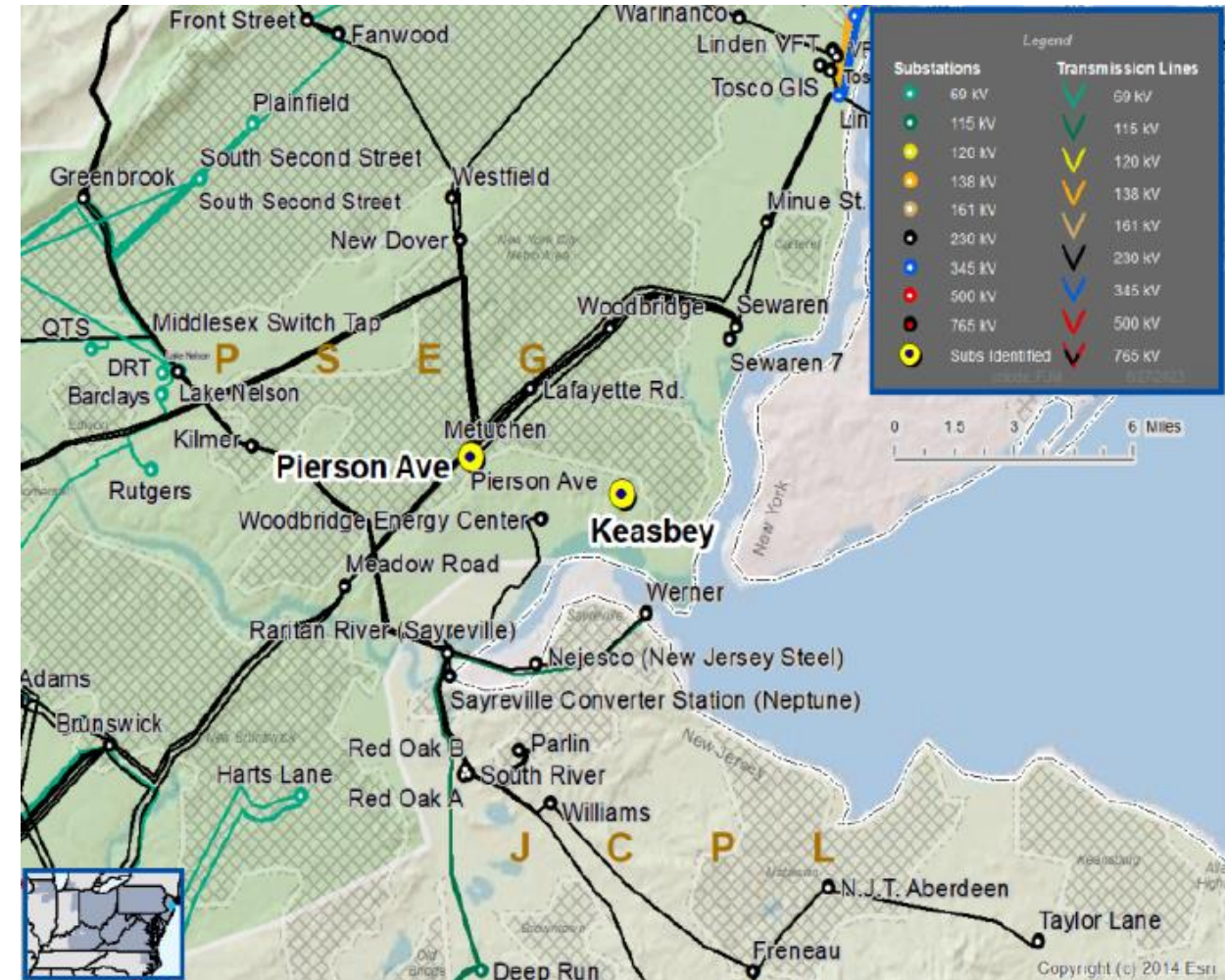
- Localized Load Growth & Contingency Overloads
- Equipment Reliability and Condition Assessment
- Asset Risk Model

Problem Statement:

- Pierson Ave. Substation is a station in the Perth Amboy area with no additional station capacity.
 - Pierson Ave. serves over 14,600 customers with a peak load of over 75.42 MVA in 2021.
 - The actual station capacity is 61.17MVA. Contingency overload is 123.3%.
- Keasbey substation is a station in the Perth Amboy Area with equipment and building condition issues.
 - Station equipment at Keasbey is in poor condition and will need to be addressed.
 - Keasbey Substation building is nearly 100 years old, is in poor condition, and is not in compliance with today's NJ UCC requirements.

Model: 2022 Series 2027 Summer RTEP 50/50
PSEG Local Plan - 2024

PSE&G Transmission Zone M-3 Process Perth Amboy Area



Need Number: PSEG-2023-0007

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 02/07/2024

Selected Solution:

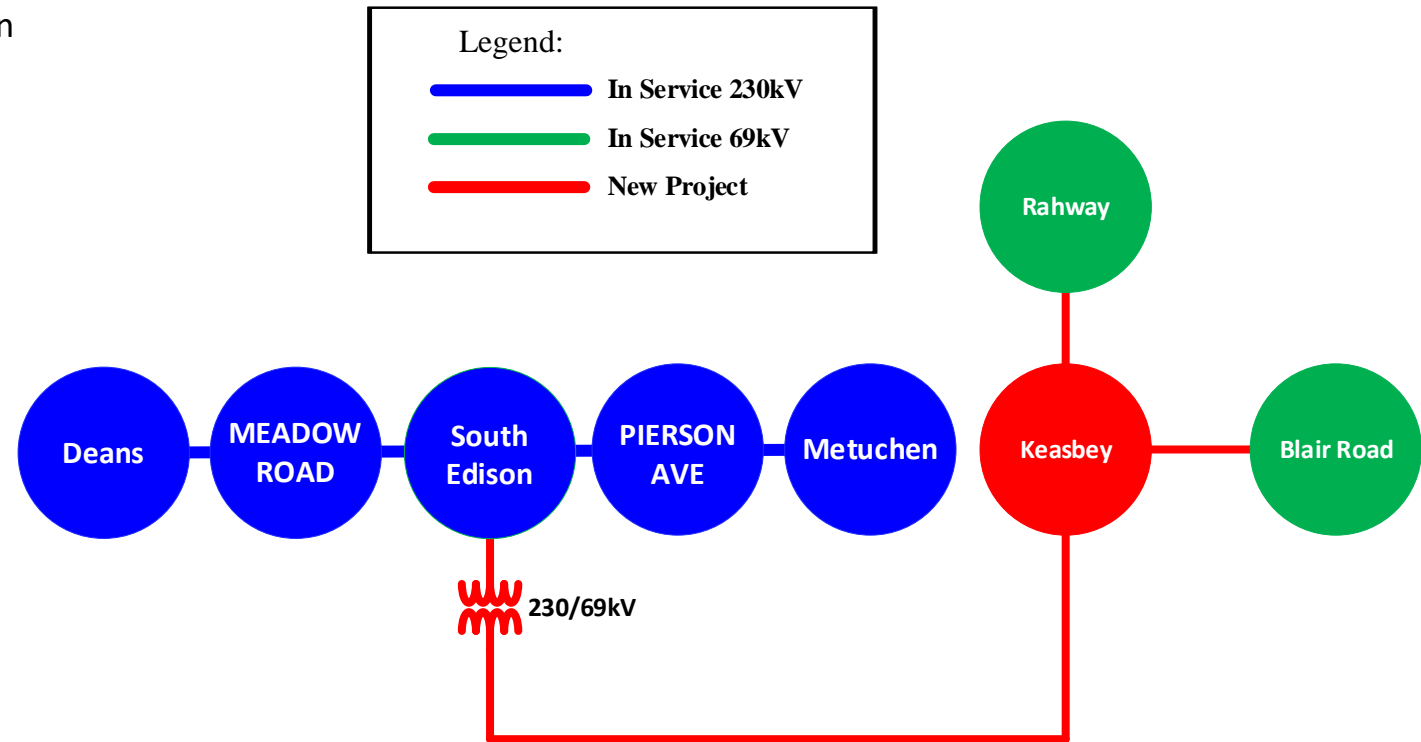
- Construct a new 69/13kV station on PSE&G owned adjacent property to Keasbey station.
 - Build a new 69kV line to Rahway station.
 - Build a new 69kV line to Blair Rd.
 - Install one (1) 230/69kV transformer at South Edison.
 - Build a new 69kV line to South Edison.

Estimated Cost: \$220.68M

Projected In-Service: 12/2028

Supplemental Project ID: s3009

Project Status: Engineering and Planning



Need Number: PSEG-2023-0009

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 02/26/2024

Previously Presented:

- Need Meeting 09/05/2023
- Solutions Meeting 10/31/2023

Supplemental Project Driver:

- Customer Service

Specific Assumption Reference:

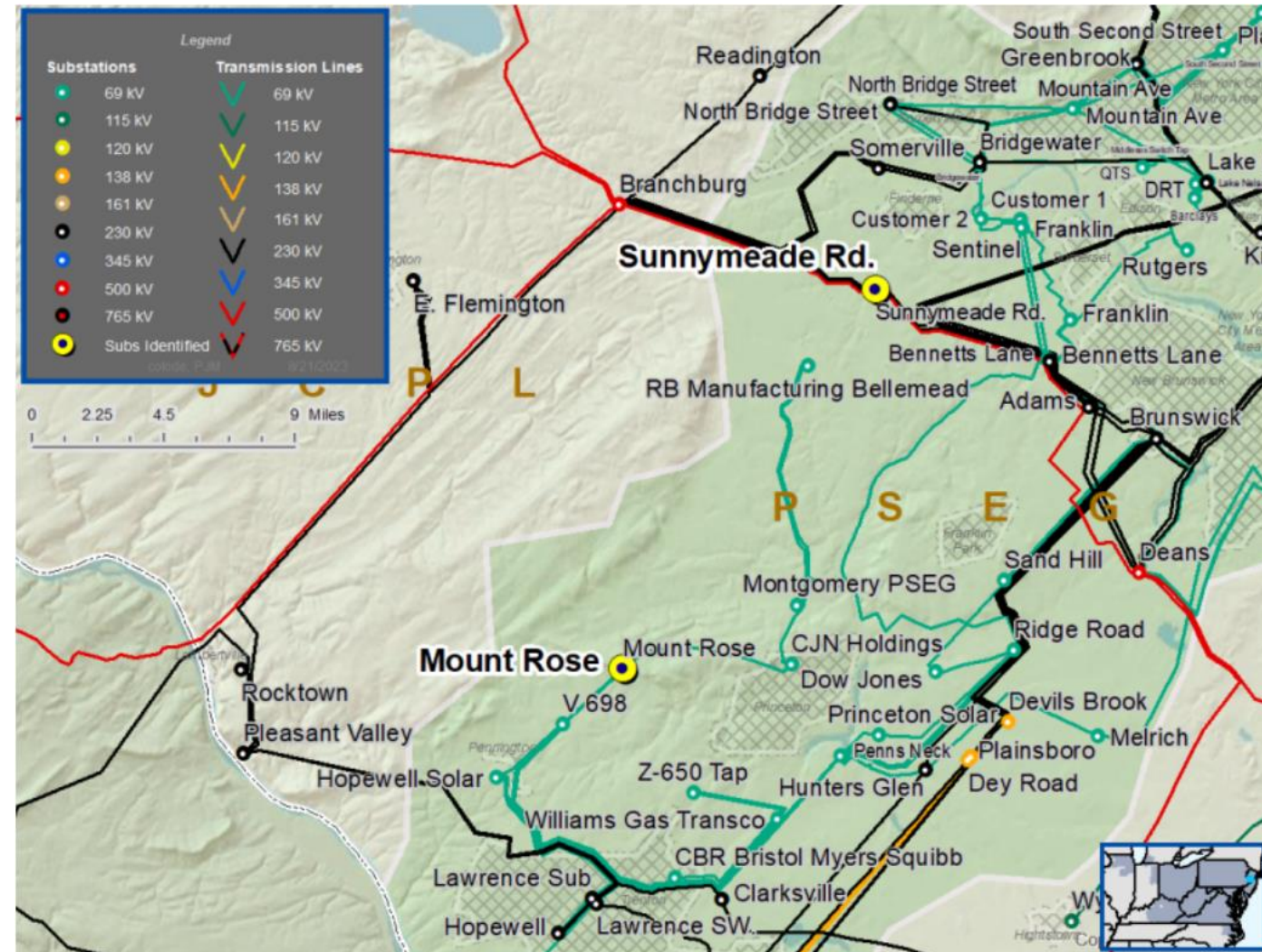
[PSE&G 2023 Annual Assumptions](#)

- Localized Load Growth & Contingency Overloads

Problem Statement:

- Sunnymeade Substation is a station in the Hillsborough area with no additional station capacity.
 - Sunnymeade serves over 21,400 customers with a peak load of over 63.4 MVA in 2021.
 - The actual station capacity is 61.43MVA. Contingency overload is 103.2%.
- Mount Rose Substation is a station in the Mount Rose area with no additional station capacity.
 - Mount Rose serves over 11,800 customers with a peak load of over 65.0 MVA in 2021.
 - The actual station capacity is 61.47MVA. Contingency overload is 105.7%.

Model: 2022 Series 2027 Summer RTEP 50/50



Need Number: PSEG-2023-0009

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 02/26/2024

Selected Solution:

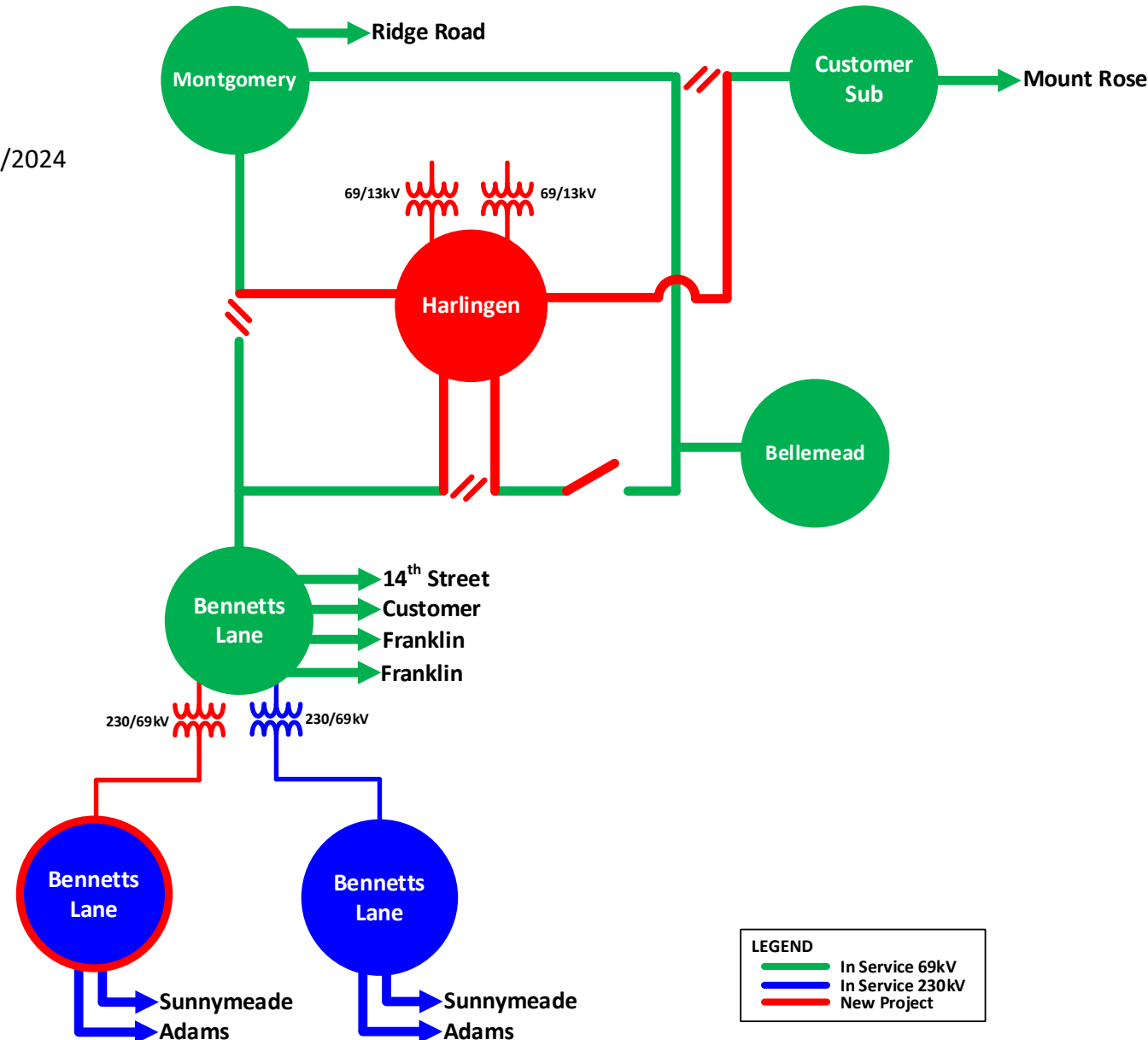
- Construct a new 69-13kV substation in the Harlingen area
 - Construct new 69-13kV station on new property
 - Install two (2) 69-13kV transformers
 - Cut and loop the Bennetts Lane-Montgomery 69kV line into the new substation
 - Cut and loop the Montgomery-Customer Sub 69kV line into the new substation
 - Resolves contingency overload at Sunnymead and Mount Rose substation
- Construct a second 230-69kV transformer at the Bennetts Lane substation
 - Install one (1) 230-69kV transformer
 - Modify 230kV bus at Bennetts Lane
 - Modify 69kV bus at Bennetts Lane

Estimated Cost: \$105.1M

Projected In-Service: 12/2029

Supplemental Project ID: s3090

Project Status: Engineering and Planning



Need Number: PSEG-2023-0012

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/15/2024

Previously Presented:

- Need Meeting 11/16/2023
- Solutions Meeting 01/18/2024

Supplemental Project Driver:

- Customer Service

Specific Assumption Reference:

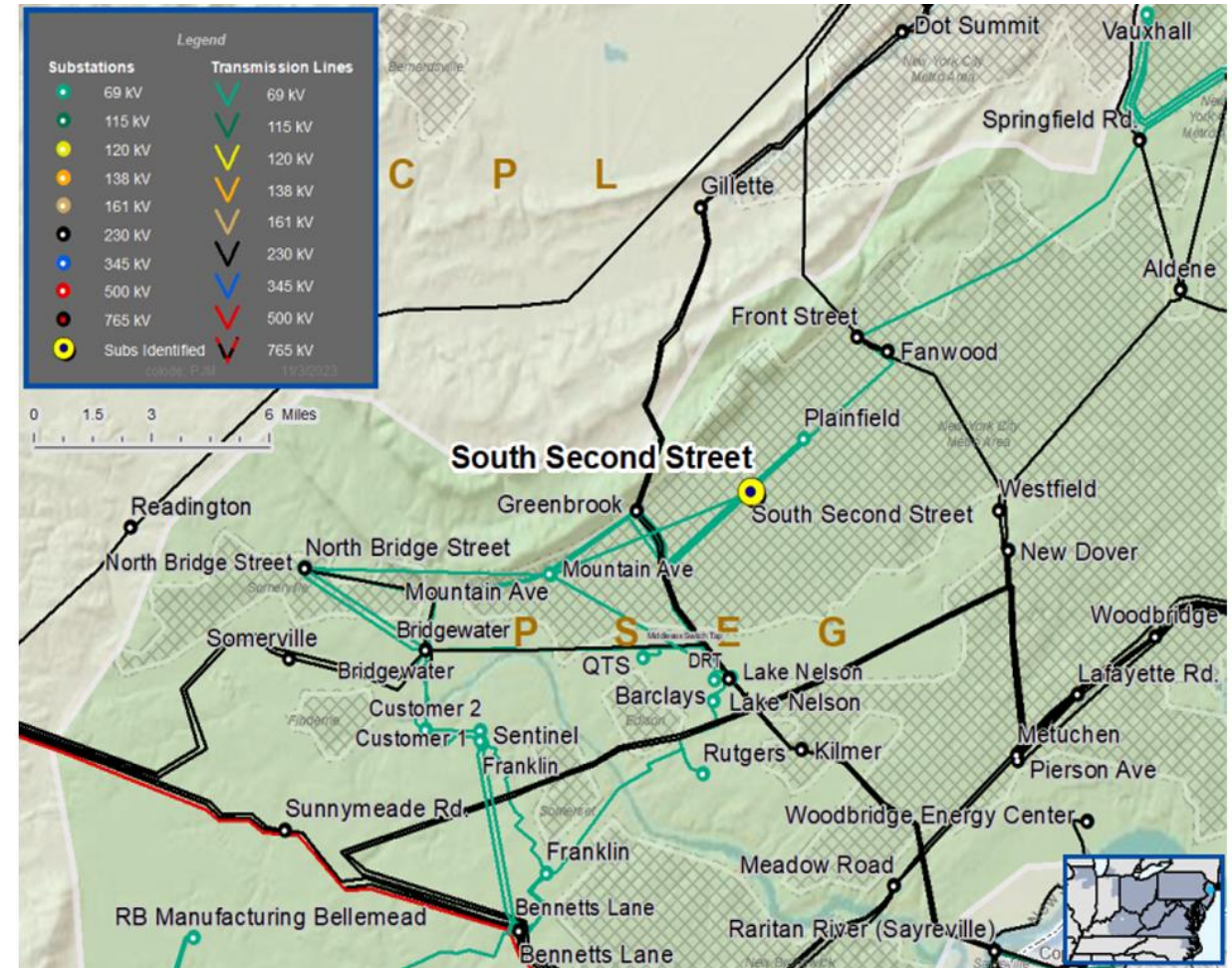
[PSE&G 2023 Annual Assumptions](#)

- Localized Load Growth & Contingency Overloads

Problem Statement:

- South Second Street Substation is a station in the Plainfield area with no additional station capacity.
 - South Second Street serves about 12,000 customers with a projected load of 66MVA in 2024.
 - The actual station capacity is 60.3MVA. Projected contingency overload is 109.5%.

Model: 2022 Series 2027 Summer RTEP 50/50



Need Number: PSEG-2023-0012

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/15/2024

Selected Solution:

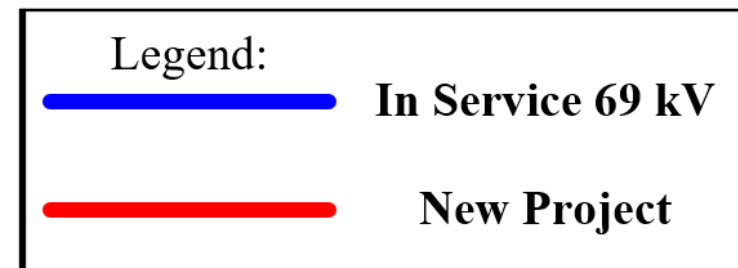
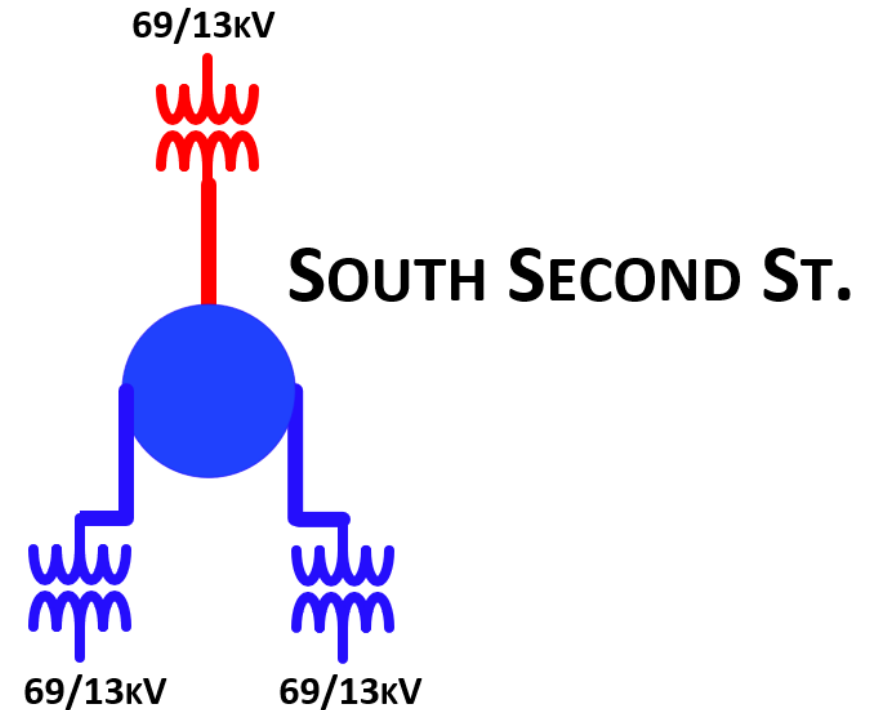
- Construct a third transformer at existing South Second St. Station
 - Install one (1) 69/13kV transformer.

Estimated Cost: \$6.5M

Projected In-Service: 12/2029

Supplemental Project ID: s3184.1

Project Status: Engineering and Planning



Revision History

2/7/2024 – V1 – s3007, s3008, s3009, s3010

2/26/2024 – V2 – s3090

3/15/2024 – V3 – s3184.1