BGE 2024

Submission of Supplemental Projects for
Inclusion in the Local Plan

BGE Transmission Zone M-3 Process

Need Number: BGE-2023-010

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

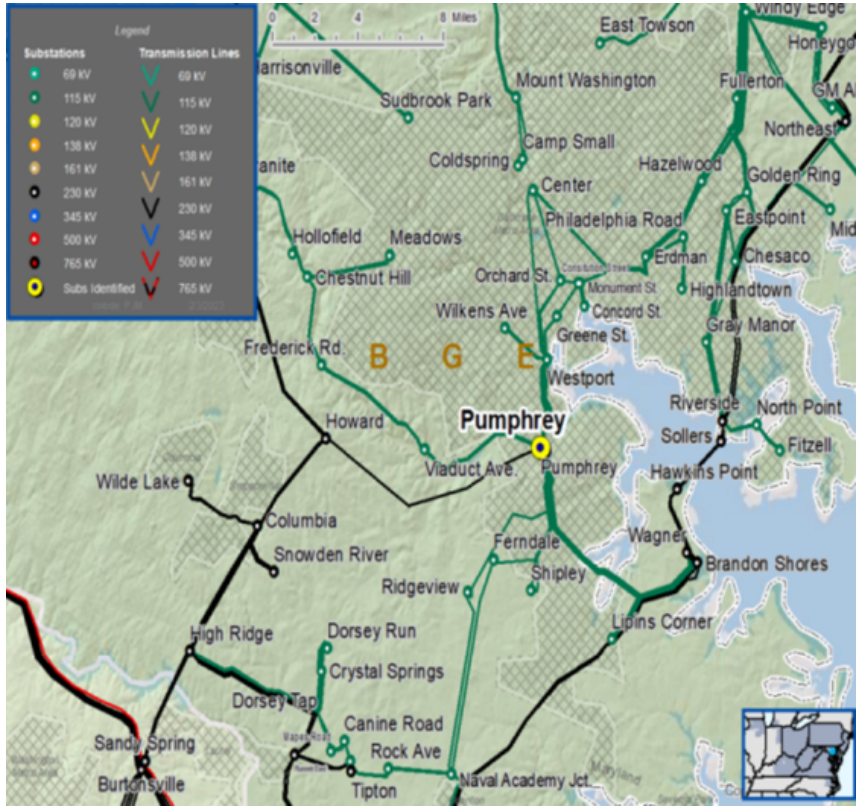
Previously Presented:
Need 10/19/2023
Solution 11/16/2023

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Pumphrey 115kV circuit breaker #B4 installed in 1977 is in deteriorating condition and has elevated maintenance costs



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-010

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

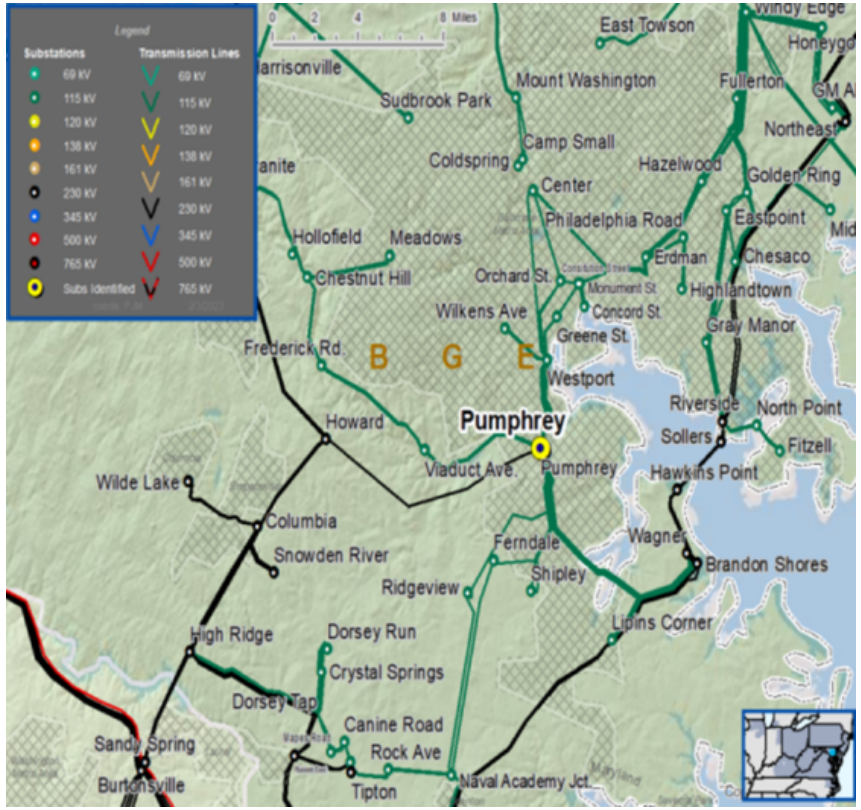
Selected Solution:
Replace Pumphrey circuit breaker B4

Estimated Cost: $0.7M

Projected In-Service: 4/5/2024

Supplemental Project ID: s3223.1

Project Status: In-service



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-011

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

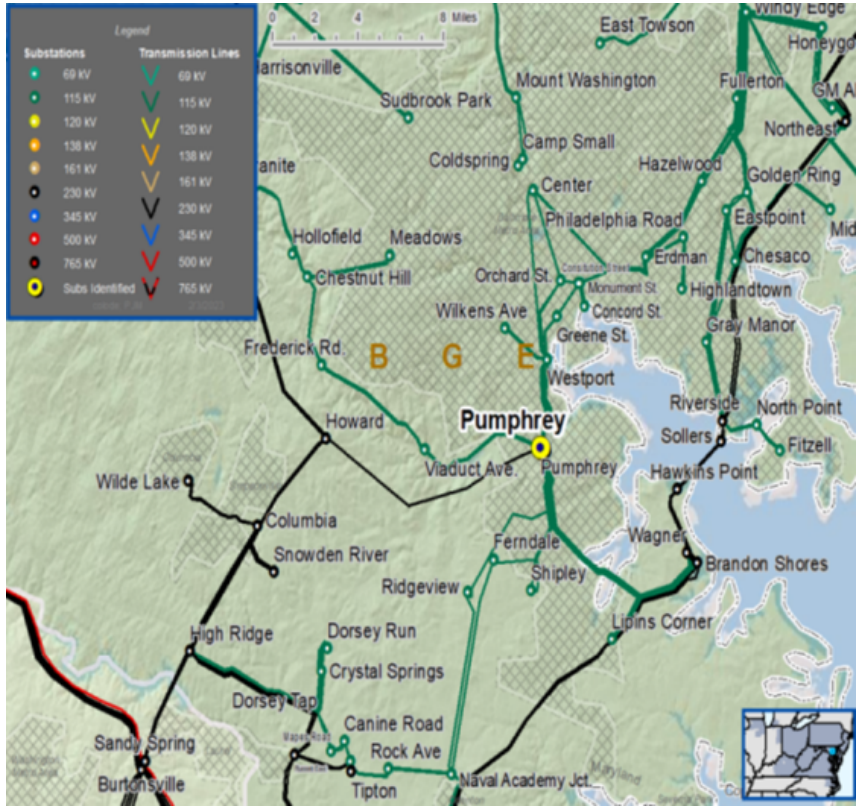
Previously Presented:
Need 10/19/2023
Solution 11/16/2023

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Pumphrey 115kV circuit breaker #B5 installed in 1979 is in deteriorating condition and has elevated maintenance costs



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-011

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

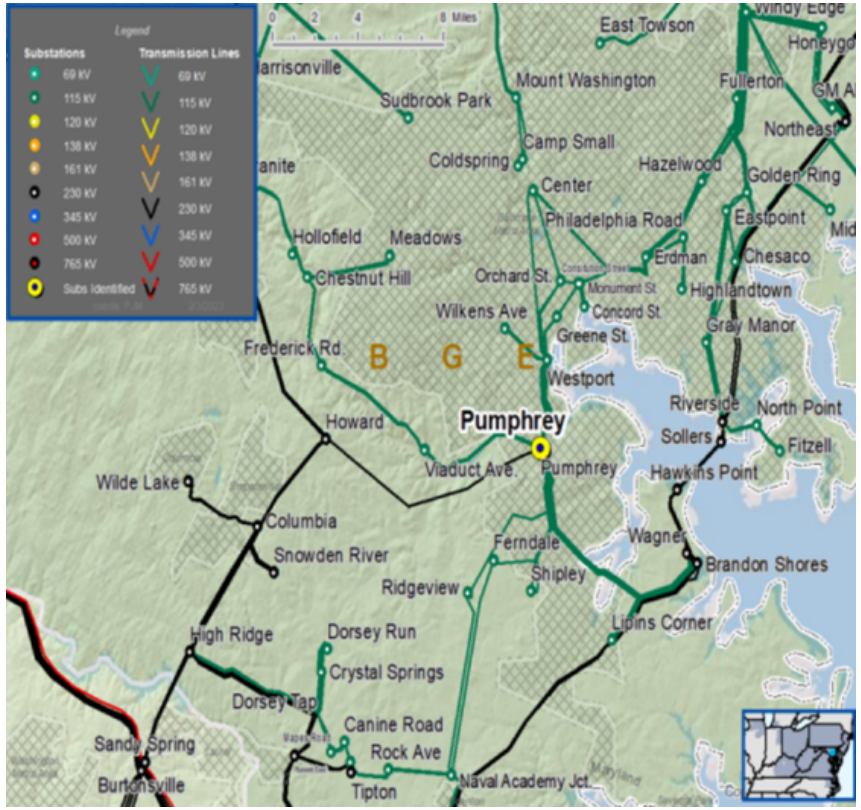
Selected Solution:
Replace Pumphrey circuit breaker B5

Estimated Cost: $0.7M

Projected In-Service: 5/10/2024

Supplemental Project ID: s3224.1

Project Status: Engineering



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-012

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

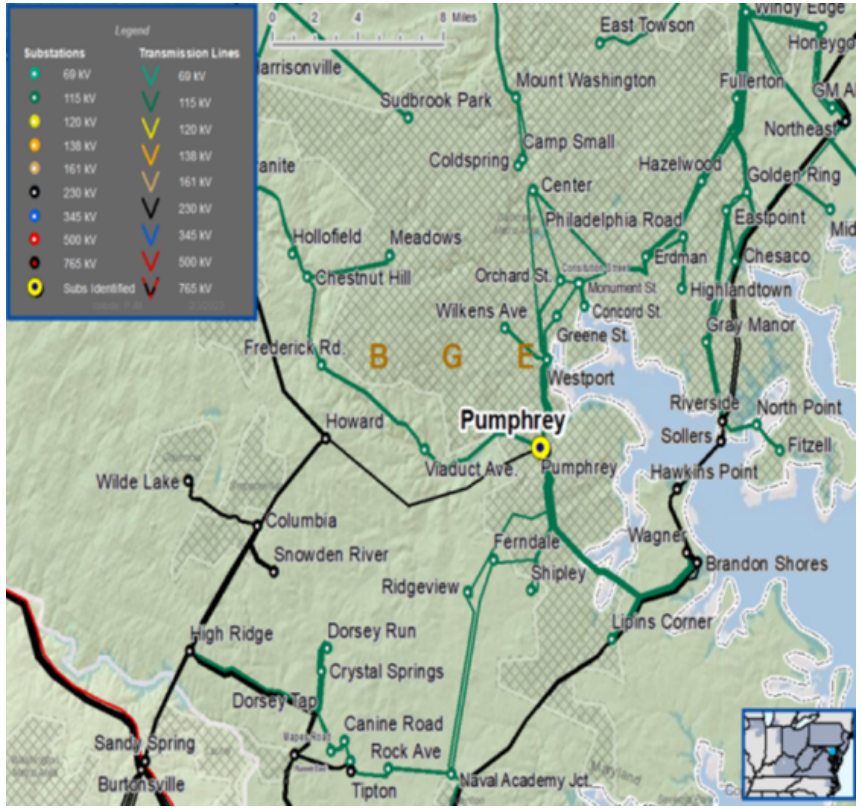
Previously Presented:
Need 10/19/2023
Solution 11/16/2023

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Pumphrey 115kV circuit breaker #B6 installed in 1977 is in deteriorating condition and has elevated maintenance costs



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-012

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

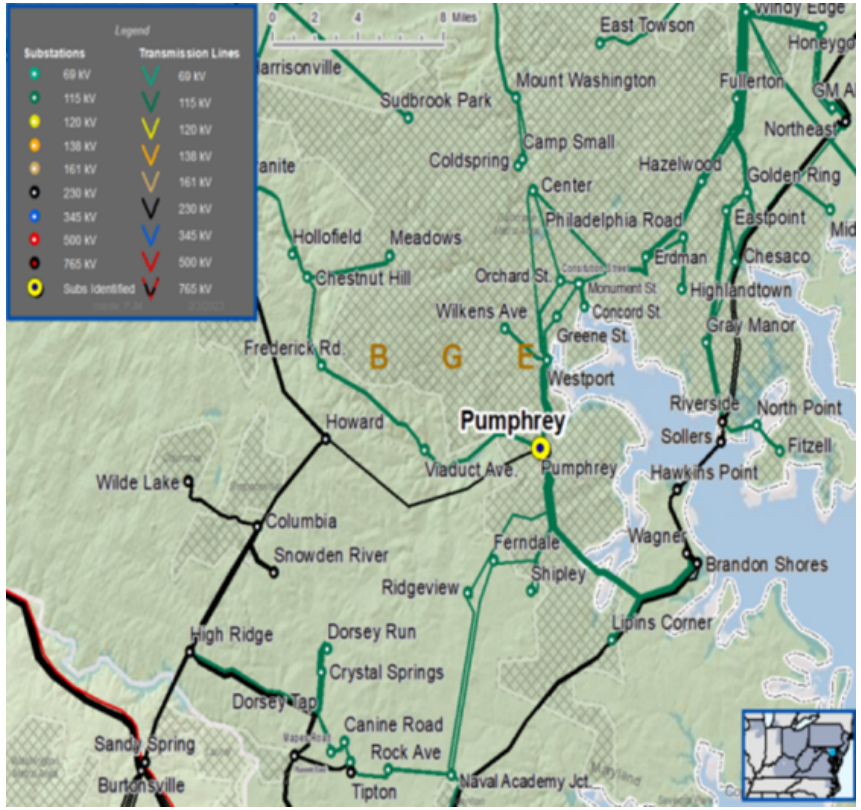
Selected Solution:
Replace Pumphrey circuit breaker B6

Estimated Cost: $0.7M

Projected In-Service: 6/13/2024

Supplemental Project ID: s3225.1

Project Status: Engineering



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-013

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

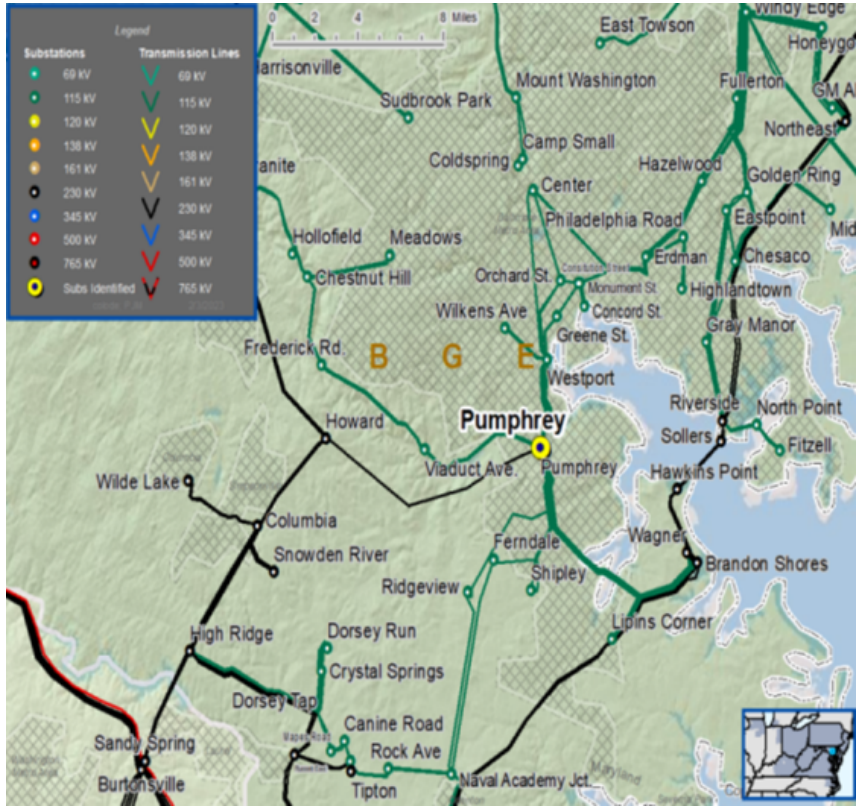
Previously Presented:
Need 10/19/2023
Solution 11/16/2023

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Pumphrey 115kV circuit breaker #B7 installed in 1977 is in deteriorating condition and has elevated maintenance costs



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-013

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

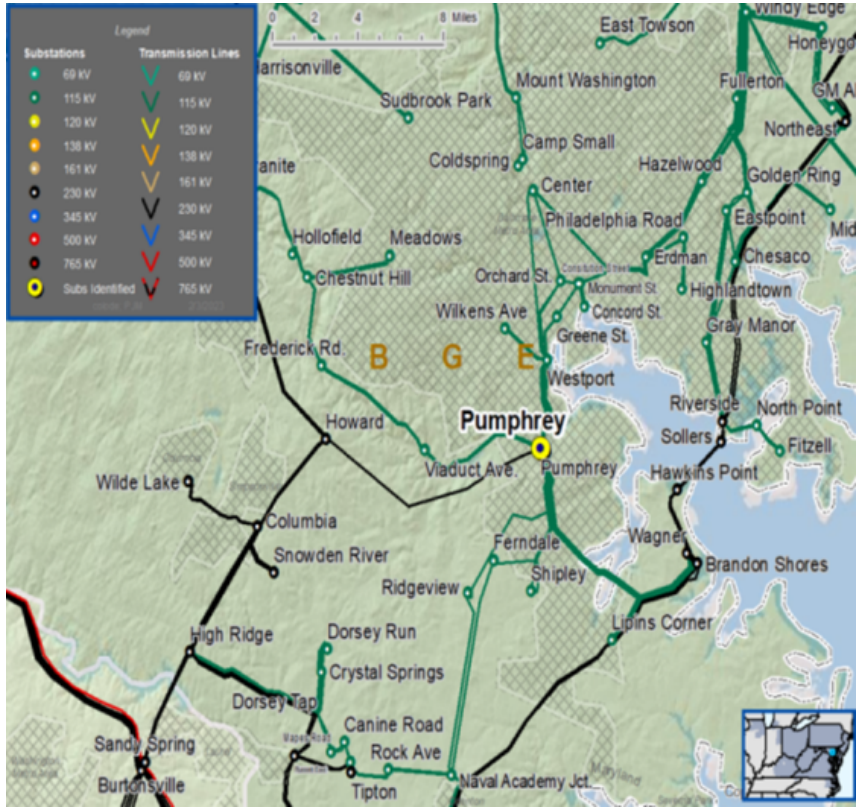
Selected Solution:
Replace Pumphrey circuit breaker B7

Estimated Cost: $0.7M

Projected In-Service: 11/28/2024

Supplemental Project ID: s3226.1

Project Status: Engineering



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-014

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

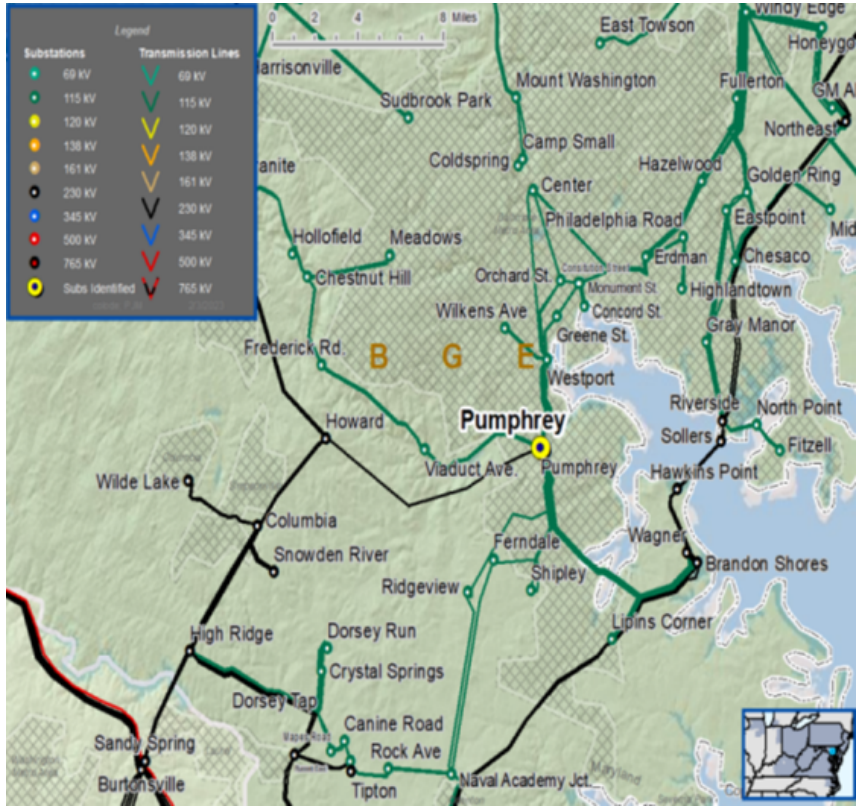
Previously Presented:
Need 10/19/2023
Solution 11/16/2023

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Pumphrey 115kV circuit breaker #B9 installed in 1977 is in deteriorating condition and has elevated maintenance costs



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-014

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

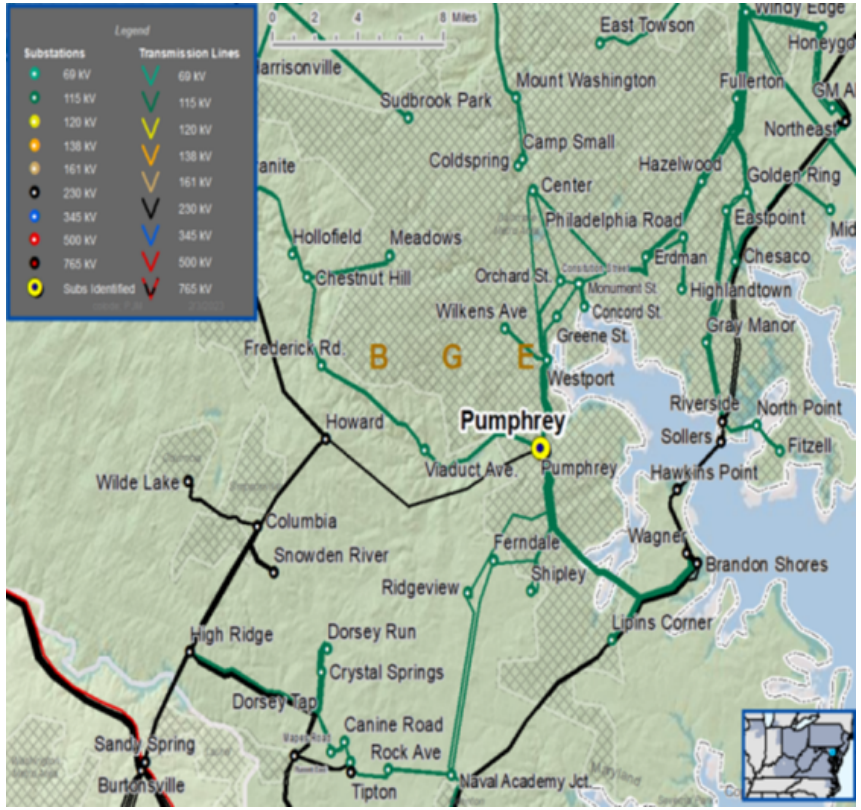
Selected Solution:
Replace Pumphrey circuit breaker B9

Estimated Cost: $0.7M

Projected In-Service: 10/18/2024

Supplemental Project ID: s3227.1

Project Status: Engineering



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-015

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

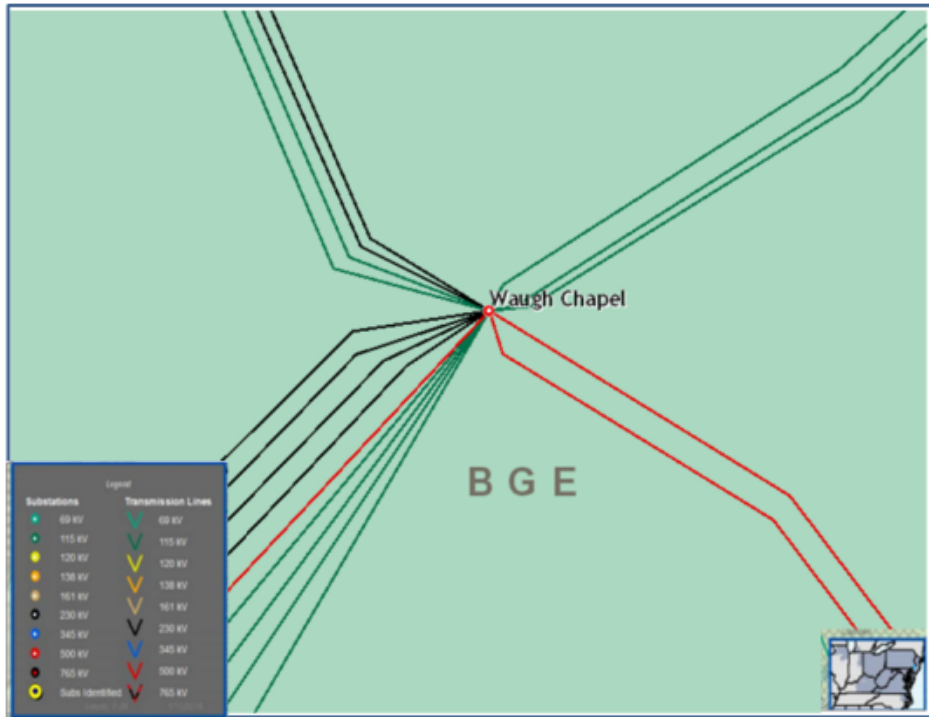
Previously Presented:
Need 10/19/2023
Solution 11/16/2023

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Waugh Chapel 115kV circuit breaker #B6 installed in 1996 is in deteriorating condition and has elevated maintenance costs



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-015

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

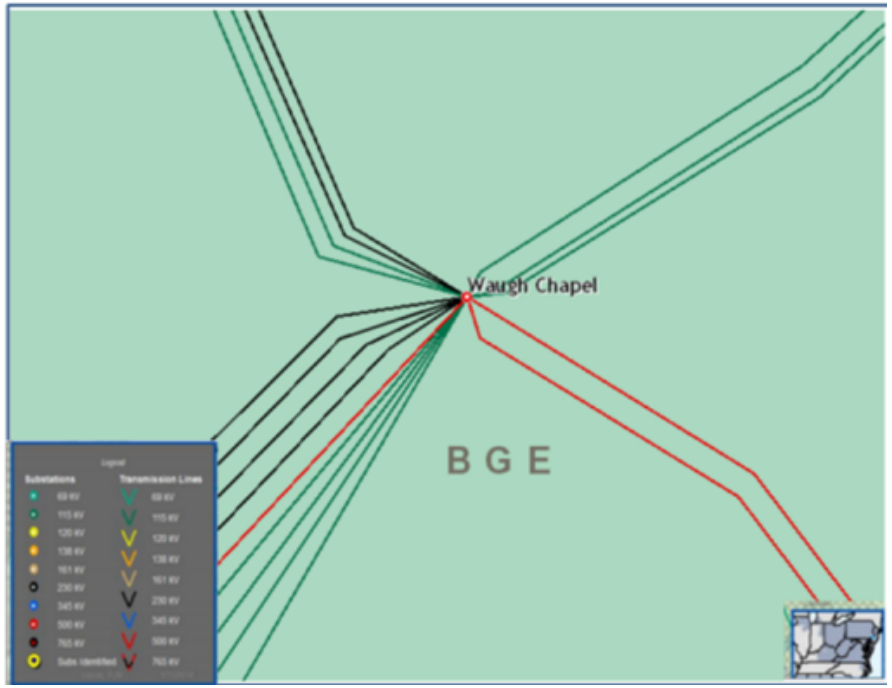
Selected Solution:
Replace Waugh Chapel circuit breaker B6

Estimated Cost: $0.7M

Projected In-Service: 10/17/2024

Supplemental Project ID: s3228.1

Project Status: Engineering



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-016

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

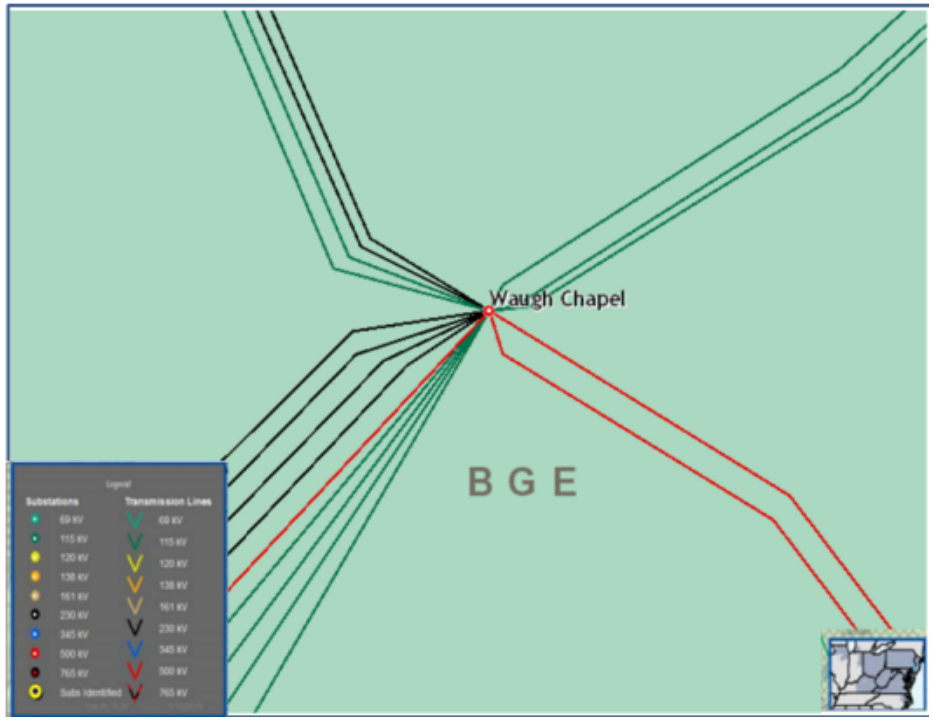
Previously Presented:
Need 10/19/2023
Solution 11/16/2023

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Waugh Chapel 115kV circuit breaker #B9 installed in 1996 is in deteriorating condition and has elevated maintenance costs



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-016

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

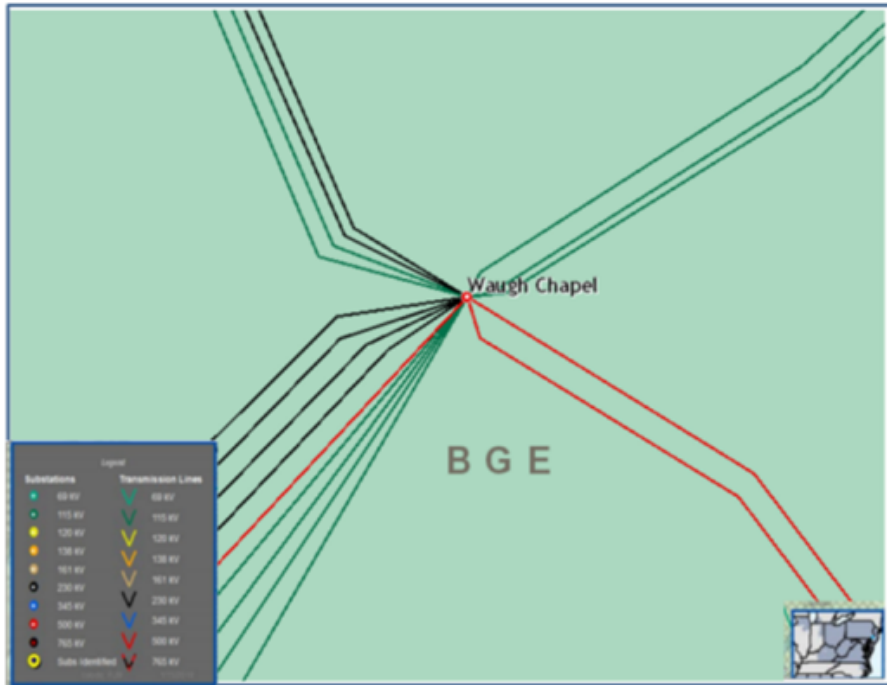
Selected Solution:
Replace Waugh Chapel circuit breaker B9

Estimated Cost: $0.7M

Projected In-Service: 6/6/2024

Supplemental Project ID: s3229.1

Project Status: Engineering



BGE Transmission Zone M-3 Process

Need Number: BGE-2023-017

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

Previously Presented:
Need 10/19/2023
Solution 11/16/2023

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Windy Edge 115kV circuit breaker #B19 installed in 1961 is in deteriorating condition and has elevated maintenance costs

BGE Transmission Zone M-3 Process

Need Number: BGE-2023-017

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

Selected Solution:
Replace Windy Edge circuit breaker B19

Estimated Cost: $0.7M

Projected In-Service: 11/4/2024

Supplemental Project ID: s3230.1

Project Status: Engineering

BGE Transmission Zone M-3 Process

Need Number: BGE-2023-018

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

Previously Presented:
Need 10/19/2023
Solution 11/16/2023

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Windy Edge 115kV circuit breaker #B20 installed in 1961 is in deteriorating condition and has elevated maintenance costs

BGE Transmission Zone M-3 Process

Need Number: BGE-2023-018

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 4/17/2024

Selected Solution:
Replace Windy Edge circuit breaker B20

Estimated Cost: $0.7M

Projected In-Service: 10/10/2024

Supplemental Project ID: s3231.1

Project Status: Engineering

BGE Transmission Zone M-3 Process

Need Number: BGE-2023-019

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 5/13/2024

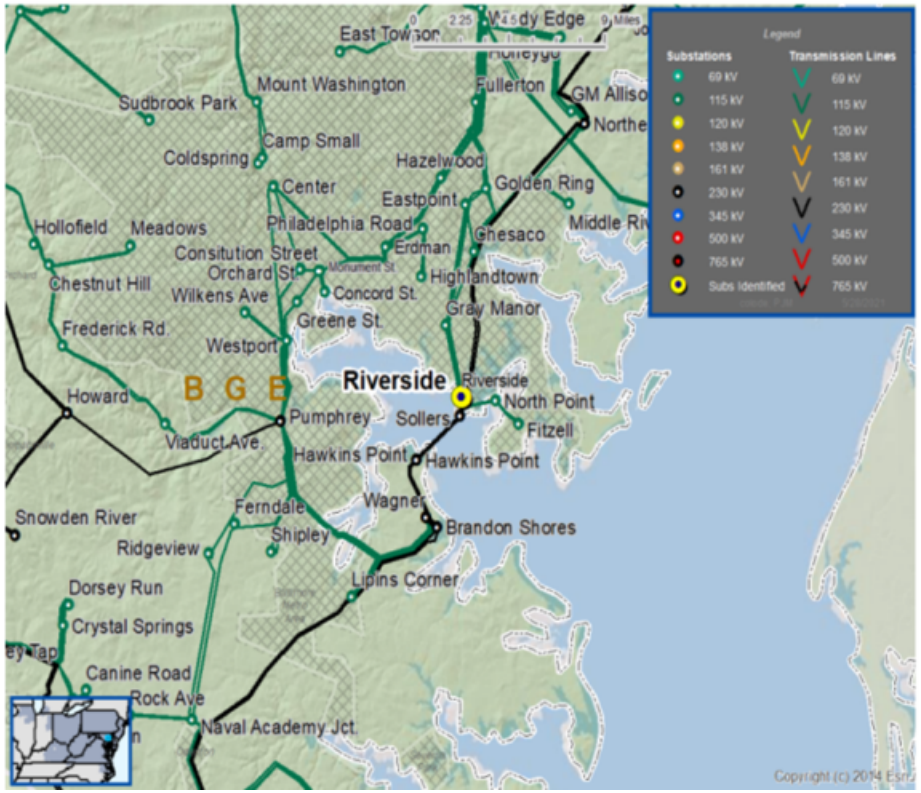
Previously Presented:
Need 12/13/2023
Solution 2/15/2024

Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:
• Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
• Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- Riverside 115kV substation originally constructed in 1947 was built to operate as a straight bus configuration consisting of two 115kV bus sections normally tied together with two bus tie breakers.
  - The configuration of the station results in a complicated non-standard control and protection scheme.
  - Operations switching is difficult because of existing protection schemes required for straight bus configuration.
  - Configuration creates reliability concerns with multiple element outages for various contingency scenarios including Bus and Faulted Breaker contingencies.
- Eleven 115kV oil breakers with their associated switches are currently in service with nine of the breakers being greater than 50 years old.
  - Much of the remaining equipment is original to the station.
- Frequent corrective maintenance throughout the substation
  - Maintenance items have included but are not limited to deteriorating foundations, oil leaks, relay misoperations, ground grid issues and control cables.



BGE Transmission Zone M-3 Process

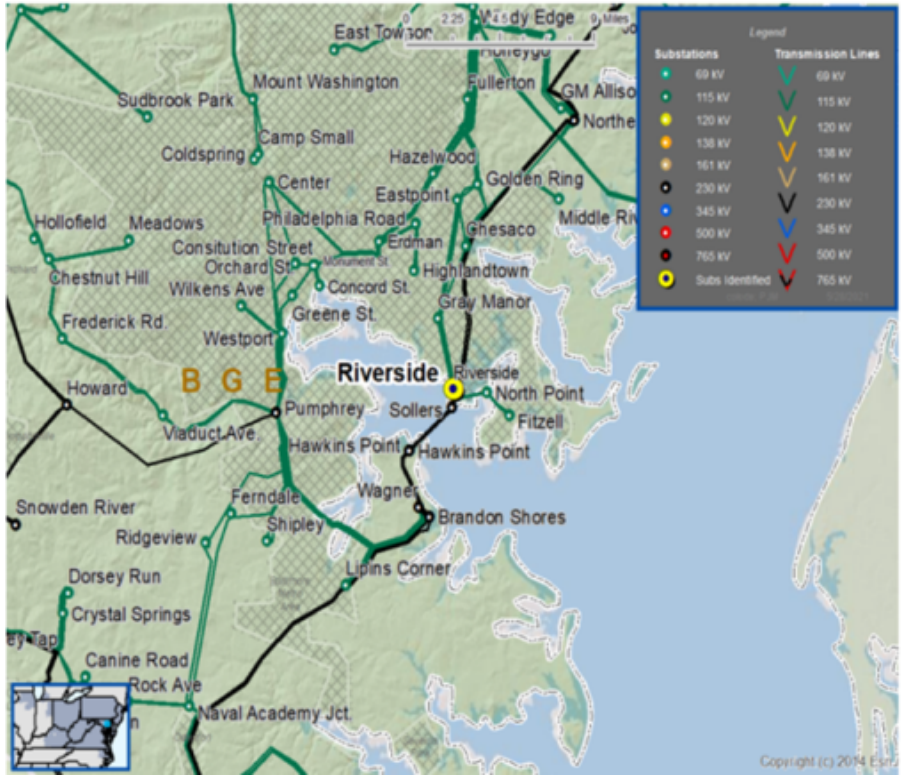
Need Number: BGE-2023-019

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 5/13/2024

Selected Solution:

Rebuild Riverside 115kV station as 12 position GIS Breaker and Half Substation on existing BGE owned property

- Install 115 kV, 4000A, 63kA interrupting current equipment
- Install Relay and Control Panels
- Re-terminate existing transmission lines and transformer connections into new GIS equipment



Estimated Cost: $84.3M

Projected In-Service: 12/31/2028

Supplemental Project ID: s3279.1

Project Status: Engineering

Revision History

- 4/17/2024 – V1 – Local Plan posted for s3223.1 – s3231.1
- 5/13/2024 – V2 – added s3297.1