PPL 2025
Submission of Supplemental Projects for Inclusion in the Local Plan

PPL Transmission Zone M-3 Process
Beavertown, PA

Need Number: PPL-2019-0003

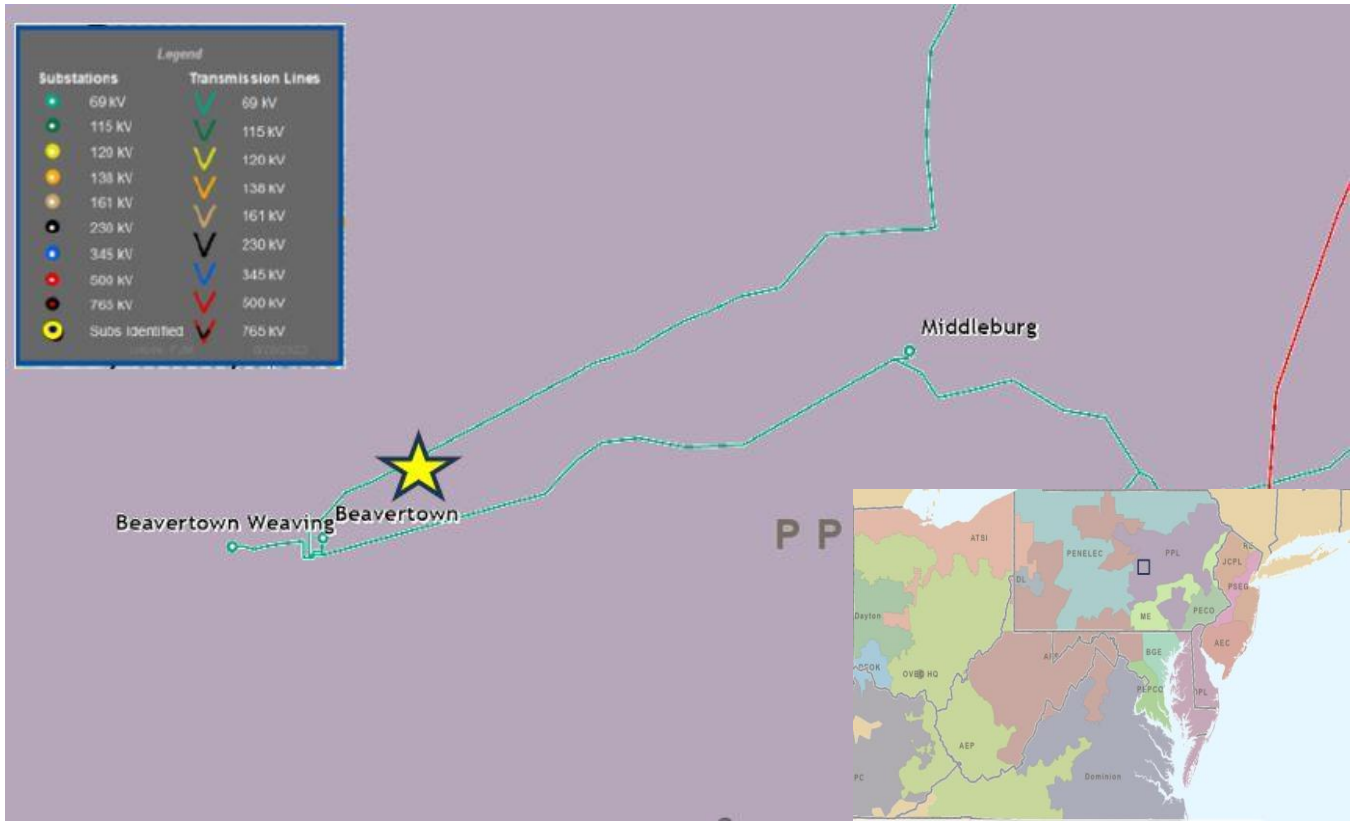
Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 10/17/2024, 02/22/2019

Project Driver: Equipment Condition/Performance/Risk, Customer Service

Specific Assumption References:

PPL 2024 Annual Assumptions



Problem Statement:

The Beavertown Tap 69kV line is a reliability risk due to poor asset health. The line is in poor condition with the original assets installed in 1962. The line consists of 76 vintage wood poles, and 89 steel poles. The 4/0 ACSR conductor is original.

PPL Distribution has requested a second 69kV source at the Beavertown substation to support a substation rebuild project.

PPL Transmission Zone M-3 Process
Middleburg, PA/Penns, PA/Middleburg, PA/Beavertown, PA

Need number(s): PPL-2019-0003

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Sunbury-Middleburg #1 & #2 69kV Lines: Add second 69kV circuit (556ACSR) on the existing single circuit, built for double circuit SUNB-MIDD 69kV line for ~6.4 miles.. Estimated Cost: $6.5 M (s3554.1)

Beavertown 69kV Tap: Rebuild the existing 9.1-mile single circuit Beavertown 69kV tap to double circuit 69kV. Conductor to be 556 ACSR.. Estimated Cost: $26.5 M (s3554.2)

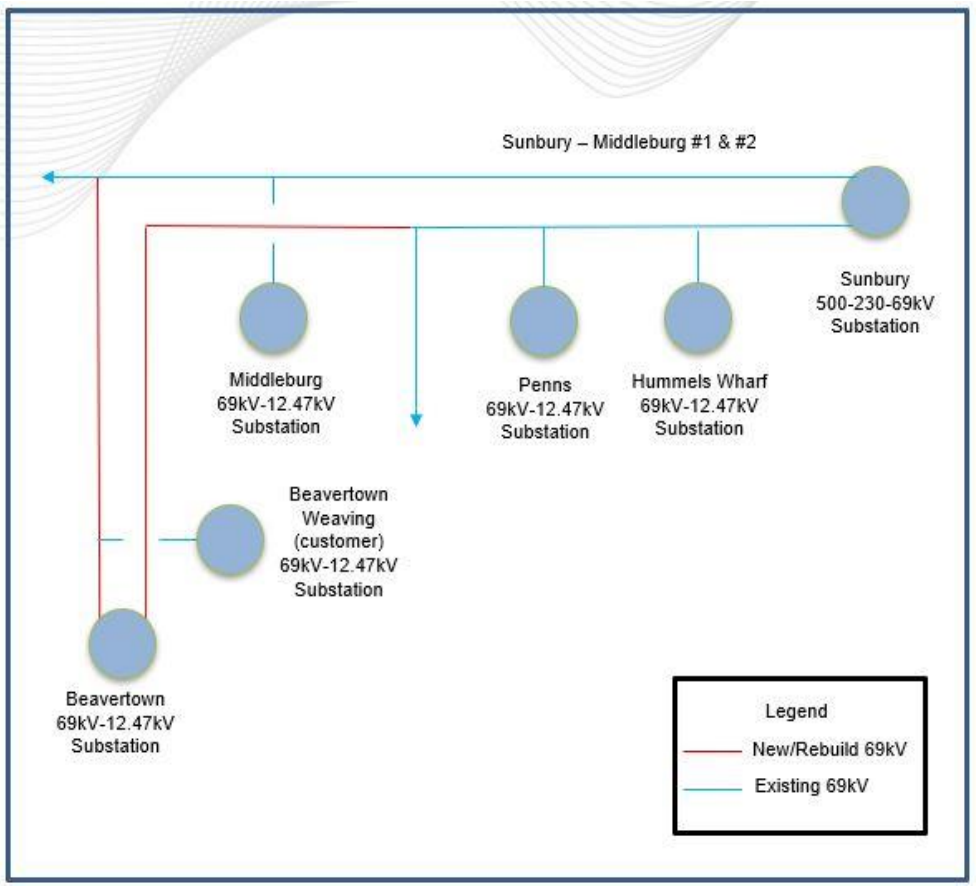
Transmission Cost Estimate: $33 M

Alternatives Considered:

No feasible alternatives

Projected In-Service: 05/31/2028

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Donnelley, PA

Need Number: PPL-2024-0011

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 10/08/2024

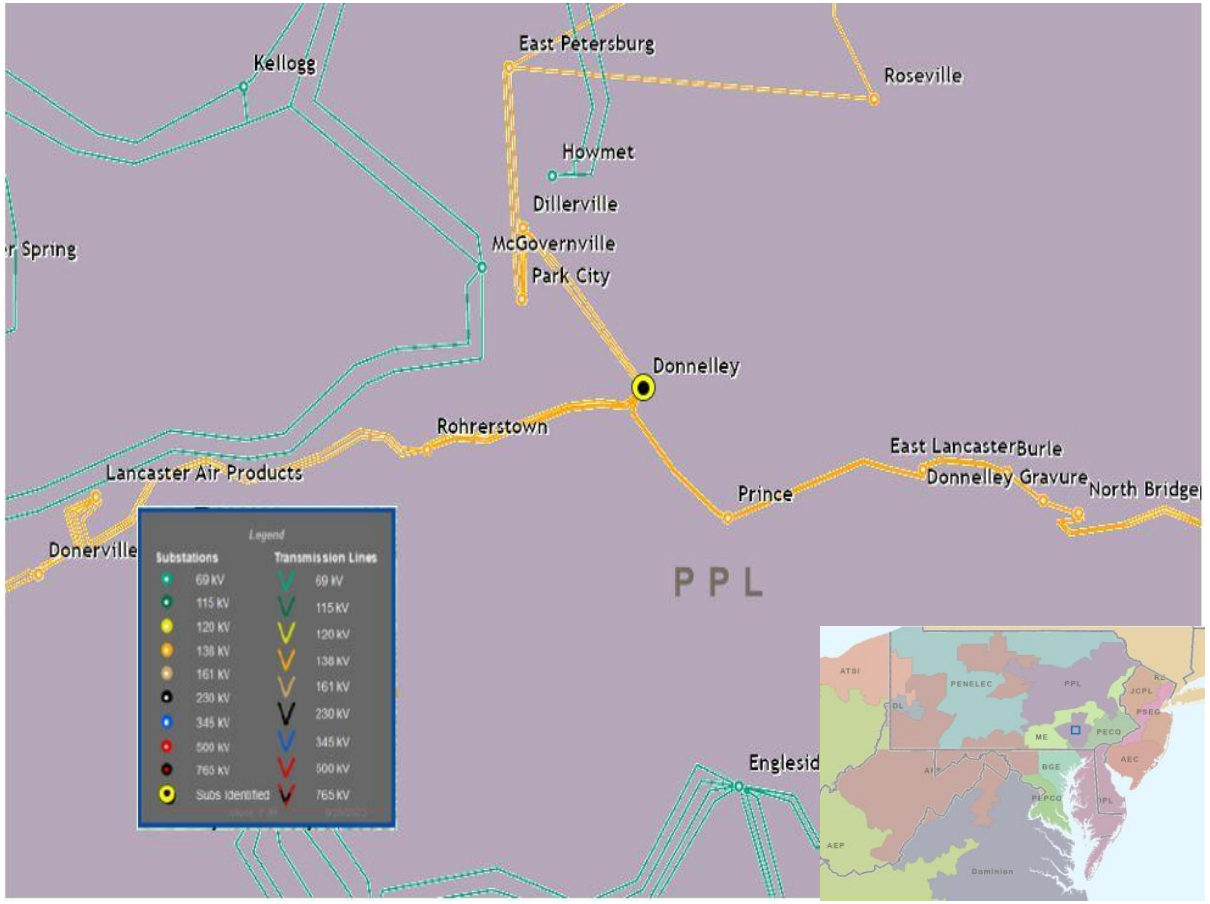
Project Driver: Customer Service

Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

An existing 138kV customer in Lancaster, PA has submitted a request to increase their facility load. The total facility load will be approximately 350 MW (2029).



PPL Transmission Zone M-3 Process

North Lancaster, PA/North Lancaster, PA/W. Hempfield, PA/S. Akron, PA/North Lancaster, PA/Donnelley, PA/North Lancaster, PA/W. Hempfield, PA/North Lancaster, PA

Need number(s): PPL-2024-0011

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

North Lancaster 138kV Switchyard: Construct a new five bay BAAH 138kV switchyard near the customer's facility.. Estimated Cost: $34 M (s3548.1)

West Hempfield - Prince #1 & #2 138kV lines: Bifurcate the West Hempfield- Prince #1 & #2 138kV and terminate at the new North Lancaster 138kV switchyard. Extend the 138kV lines approximately 0.2 miles into the new North Lancaster 138kV switchyard.. Estimated Cost: $3 M (s3548.2)

South Akron - Dillerville #1 & #2 138kV Lines: Bifurcate the South Akron - Dillerville #1 & #2 138kV and terminate at the new North Lancaster 138kV switchyard. Extend the 138kV lines approximately 0.2 miles into the new North Lancaster 138kV switchyard.. Estimated Cost: $3 M (s3548.3)

138kV Customer Tap Lines: Extend three 138kV circuits for approximately 0.1 miles from the North Lancaster 138kV switchyard to the customer's facility.. Estimated Cost: $3.5 M (s3548.4)

West Hempfield - Prince (NLAN) #1 & #2 138kV Rebuild: Rebuild 8.1 miles the West Hempfield – Prince (NLAN) #1 &#2 138kV lines from West Hempfield to new North Lancaster Switchyard.. Estimated Cost: $24 M (s3548.5)

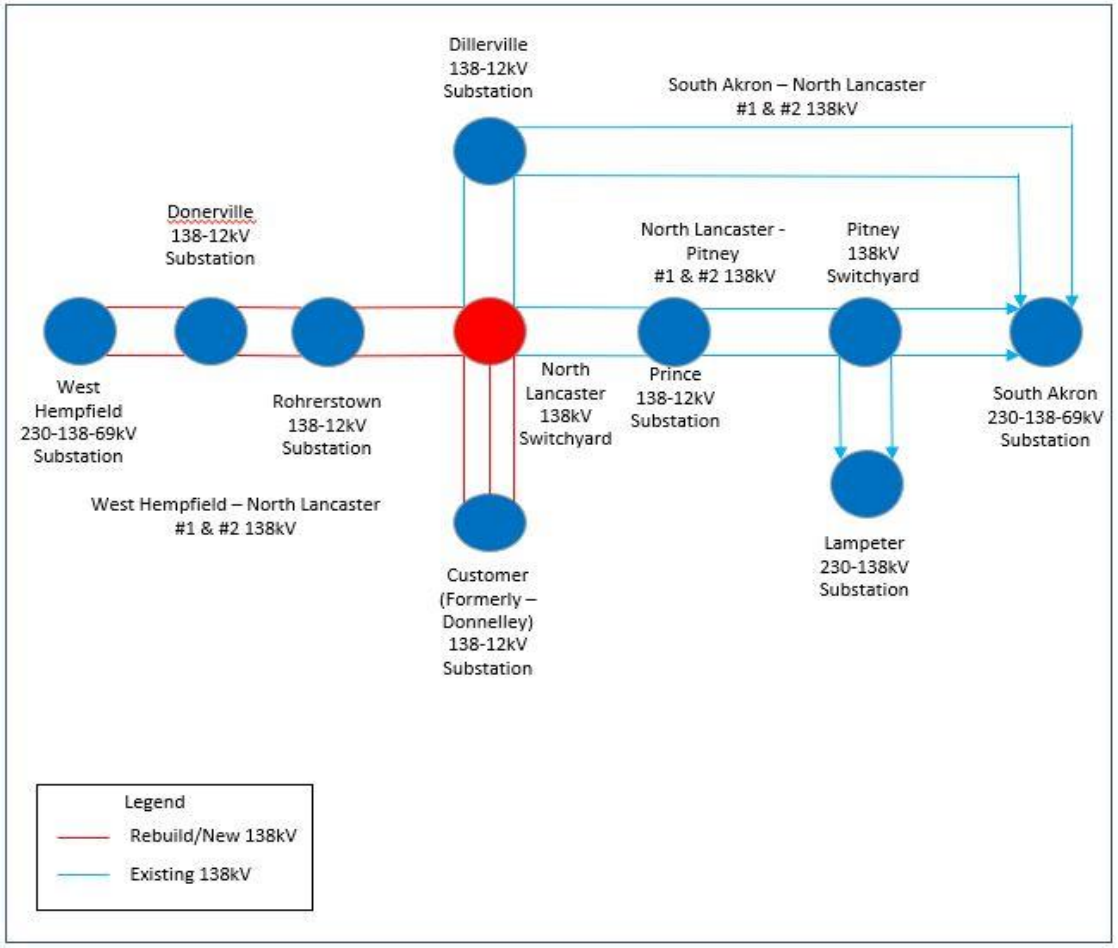
Transmission Cost Estimate: $67.5 M

Alternatives Considered:

No feasible alternatives

Projected In-Service: 06/01/2028

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Harwood, PA

Need Number: PPL-2024-0012

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 10/08/2024

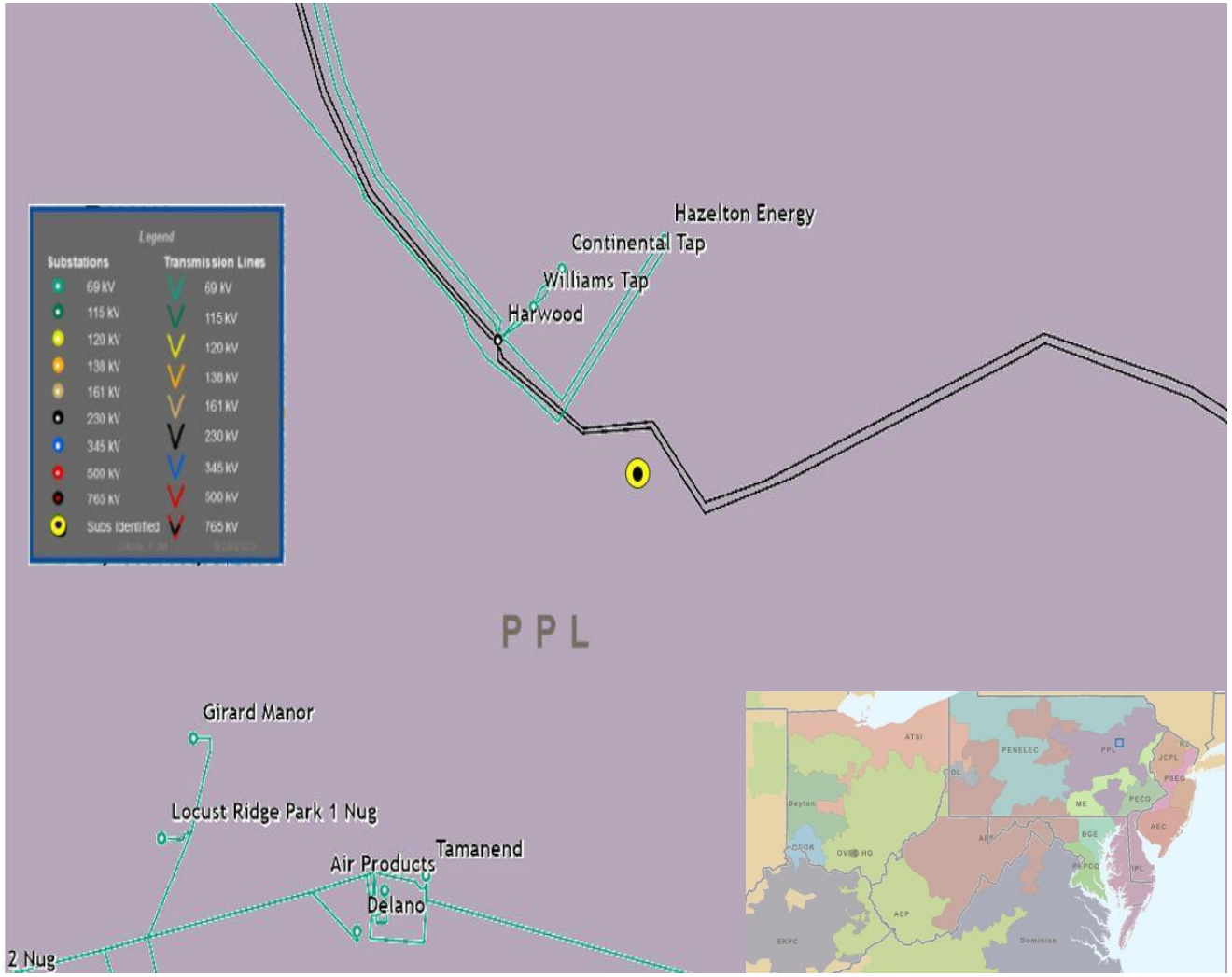
Project Driver: Customer Service

Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

A customer has submitted a request to have their facility served from a 230kV source in Hazleton, PA. The total facility load is approximately 1,000 MW (2030). The requested in service date is 05/2027. Projected 2027 load: 250MW Projected 2028 load: 500MW Projected 2030 load: 1000MW



PPL Transmission Zone M-3 Process
Harwood, PA

Need number(s): PPL-2024-0012

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Harwood - Tresckow #1 & #2 230kV Lines: Bifurcate the Harwood - Tresckow #1 & #2 230kV lines and terminate at the new Slykerville 230kV switchyard. Extend lines approximately .2 miles into the new Slykerville 230kV switchyard.. Estimated Cost: $4 M (s3549.1)

Slykerville 230kV Switchyard: Install a four bay BAAH 230kV switchyard with a 125MVAR Capacitor bank.. Estimated Cost: $45 M (s3549.2)

Slykerville Customer Taps 230kV: Install three 230kV lead lines for approximately 0.1 miles from Slykerville 230kV switchyard to the customer facility.. Estimated Cost: $4 M (s3549.3)

Susquehanna - Harwood Reactors: Install 15 ohm series reactors on the Susquehanna - Harwood #1 and #2 230kV line at Susquehanna 230kV switchyard. Estimated Cost: $8 M (s3549.4)

Susquehanna T10 - Susquehanna #1 & #2 230kV lines: Reconductor the 2.7 miles of the Susquehanna T10 - Susquehanna #1 & #2 230kV lines. Replace 3 MODS at Susquehanna. Estimated Cost: $8.1 M (s3549.5)

Harwood 230kV Yard: Replace four MODs on each of the Harwood - Slykerville #1 & #2 230kV lines (eight total) at Harwood 230kV yard.. Estimated Cost: $4.2 M (s3549.6)

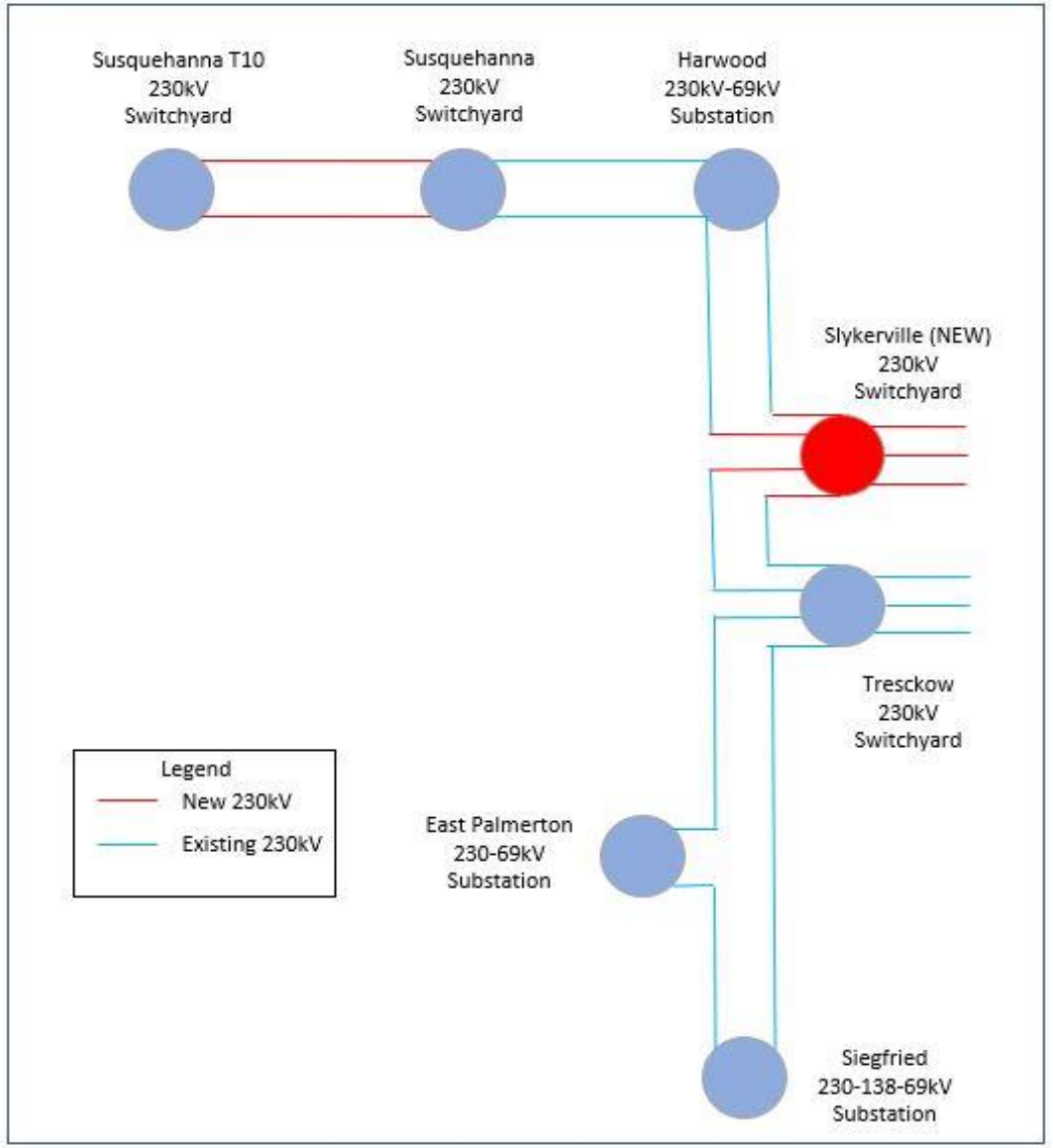
Transmission Cost Estimate: $73.3 M

Alternatives Considered:

No feasible alternatives

Projected In-Service: 05/30/2028

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Alburtis, PA

Need Number: PPL-2024-0013

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 10/08/2024

Project Driver: Equipment Condition/Performance/Risk

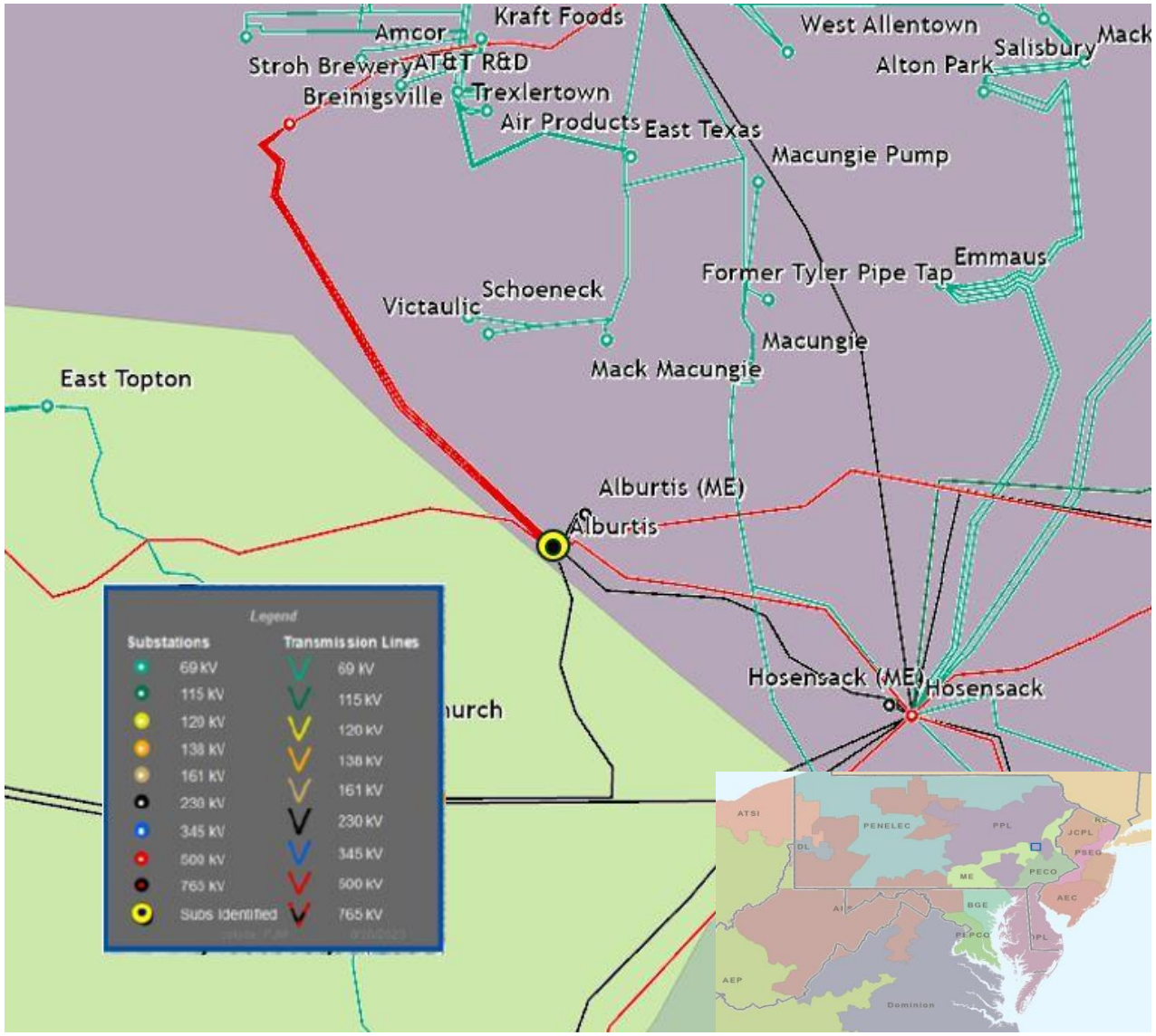
Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

The Alburtis substation 500/230kV Transformer 1 is about 54 years old and reaching the end of its useful service life. It has experienced significant maintenance over its operation, including:

- Replacing failed fans, and flow gauges
- Replacing pressure relief devices
- Replacing C-Phase winding temp gauge
- Investigate and repair C-Phase Bank 1 pumps
- Replacing a failed pump contactor



PPL Transmission Zone M-3 Process
Alburtis, PA

Need number(s): PPL-2024-0013

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Alburtis T1 500-230kV Replacement: Install new 250MVA 500/230kV transformers as an in-kind replacement for each of the three units of the current 500/230kV Alburtis Transformer 1 (750MVA Total).. Estimated Cost: $19.9 M (s3550.1)

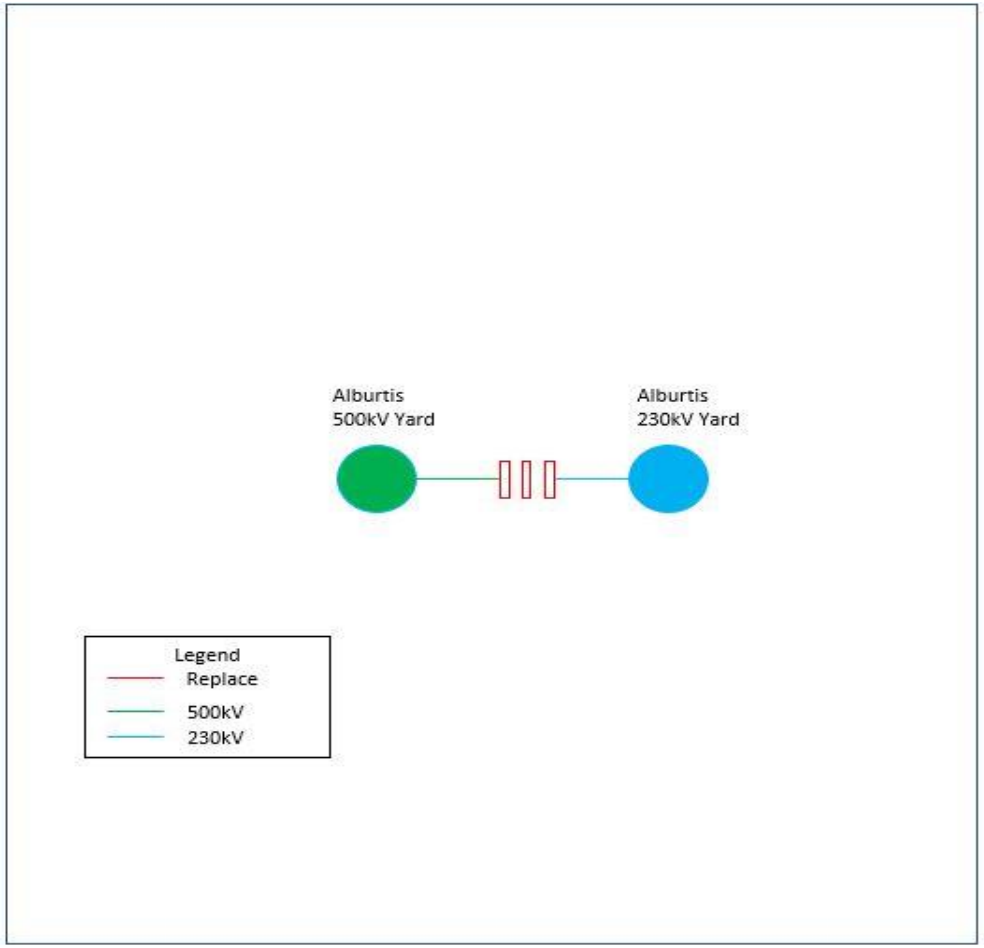
Transmission Cost Estimate: $19.9 M

Alternatives Considered:

No Feasible Alternative.

Projected In-Service: 12/31/2026

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Wescosville, PA

Need Number: PPL-2024-0014

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 10/08/2024

Project Driver: Equipment Condition/Performance/Risk

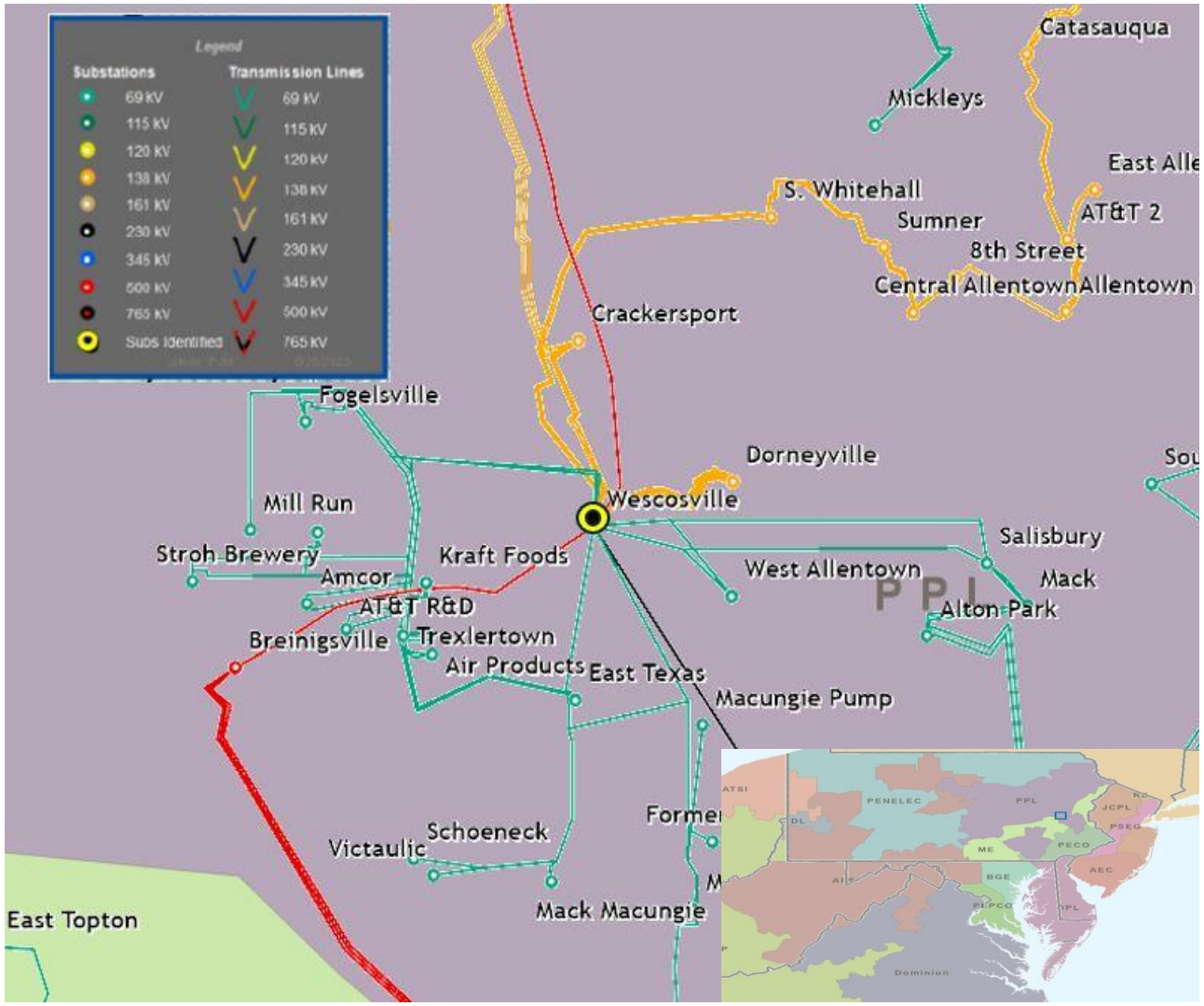
Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

The Wescosville substation 500/138kV Transformer 3 is about 45 years old and reaching the end of its useful service life. It has experienced significant maintenance over its operation, including:

- Replacing fans and fan motors
- Investigating TCUL trouble reports
- Repairing a hotspot on the C-Phase
- Investigating and repairing the LTC lowering operation
- Repairing a leaking high-side bushing



PPL Transmission Zone M-3 Process
Wescosville, PA

Need number(s): PPL-2024-0014

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Wescosville 500-138kV T3 Replacement: Install a new 340MVA, 500-138kV transformer as an in-kind replacement of the existing 500-138kV Wescosville Transformer 3.. Estimated Cost: $15.5 M (s3551.1)

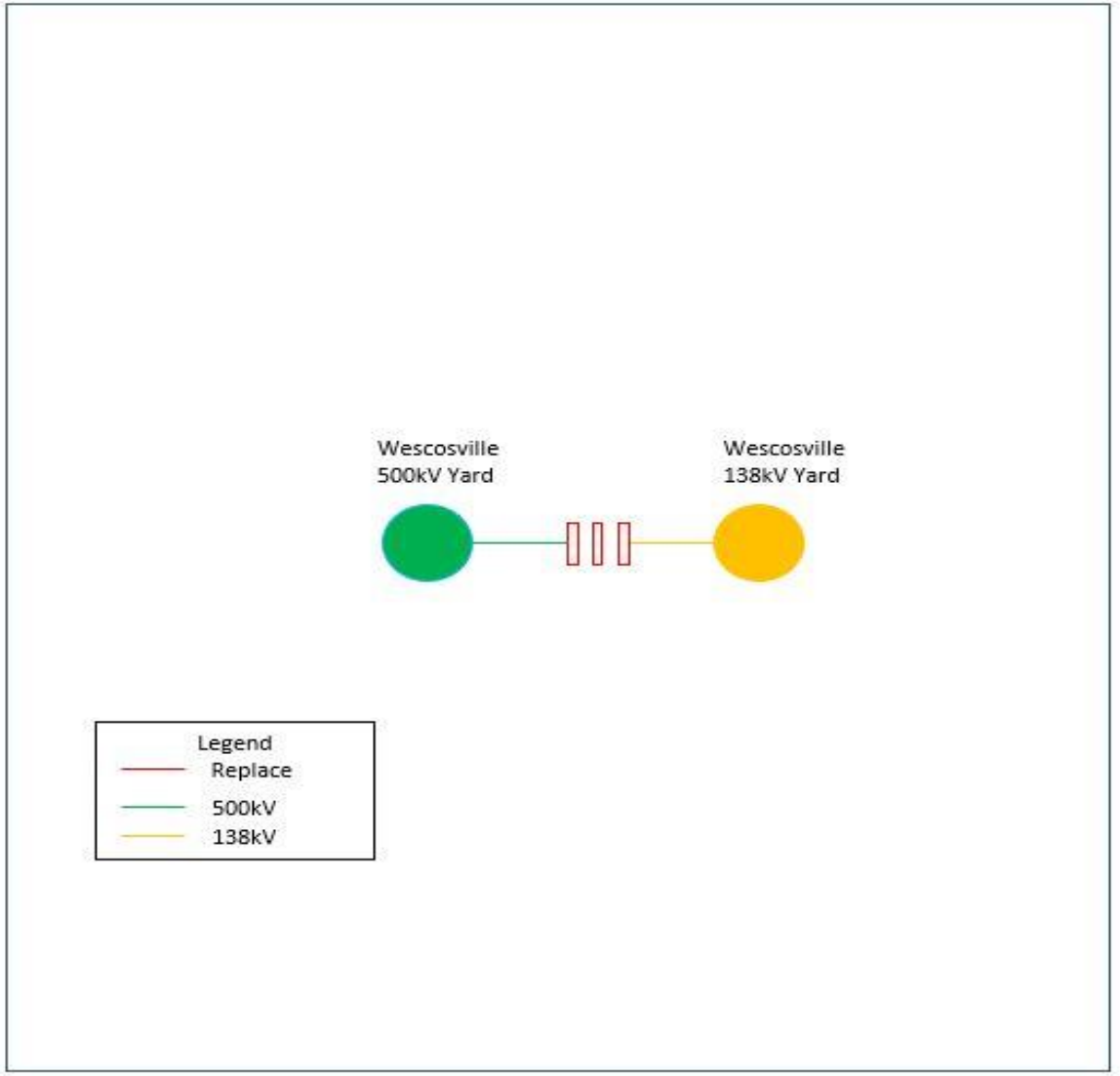
Transmission Cost Estimate: $15.5 M

Alternatives Considered:

No Feasible Alternative.

Projected In-Service: 12/31/2026

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Lackawanna, PA

Need Number: PPL-2024-0015

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 10/08/2024

Project Driver: Equipment Condition/Performance/Risk

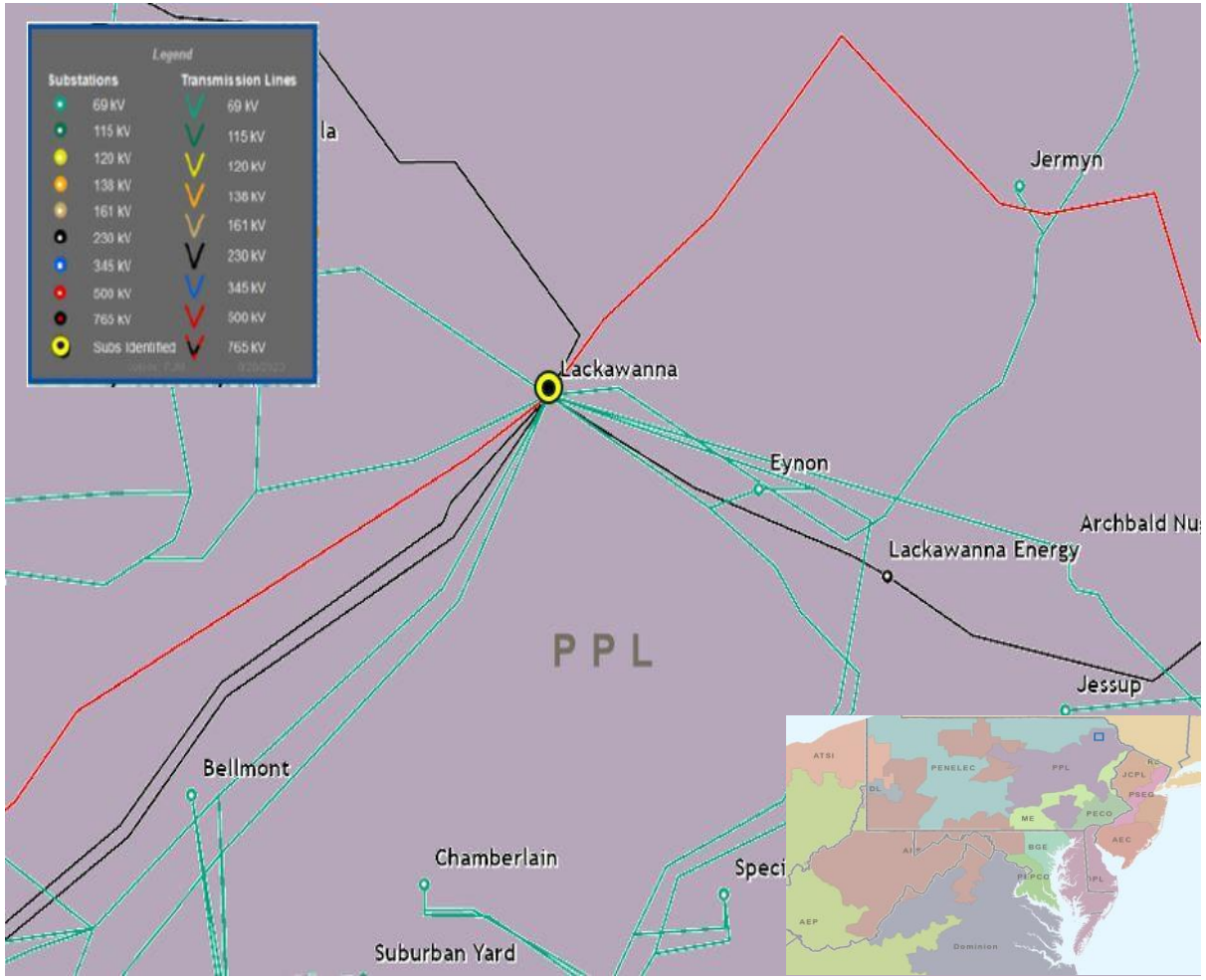
Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

The Lackawanna substation 230/69kV Transformer 2 is about 32 years old and is considered high risk due to its material condition and maintenance history. It has experienced significant maintenance over its operation, including:

- Corrective maintenance to investigate the cause of a trip
- Repairing oil leaks and refilling
- Repairing piping on the conservator
- Investigating and repairing leaking pressure release devices
- Investigating and replacing a failure of the tertiary cable



PPL Transmission Zone M-3 Process
Lackawanna, PA

Need number(s): PPL-2024-0015

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Lackawanna 230-69kV Transformer 2 Replacement: Install a new 170MVA, 230-69kV transformer as an in-kind replacement of the existing 230-69kV Lackawanna Transformer 2.. Estimated Cost: $6.3 M (s3552.1)

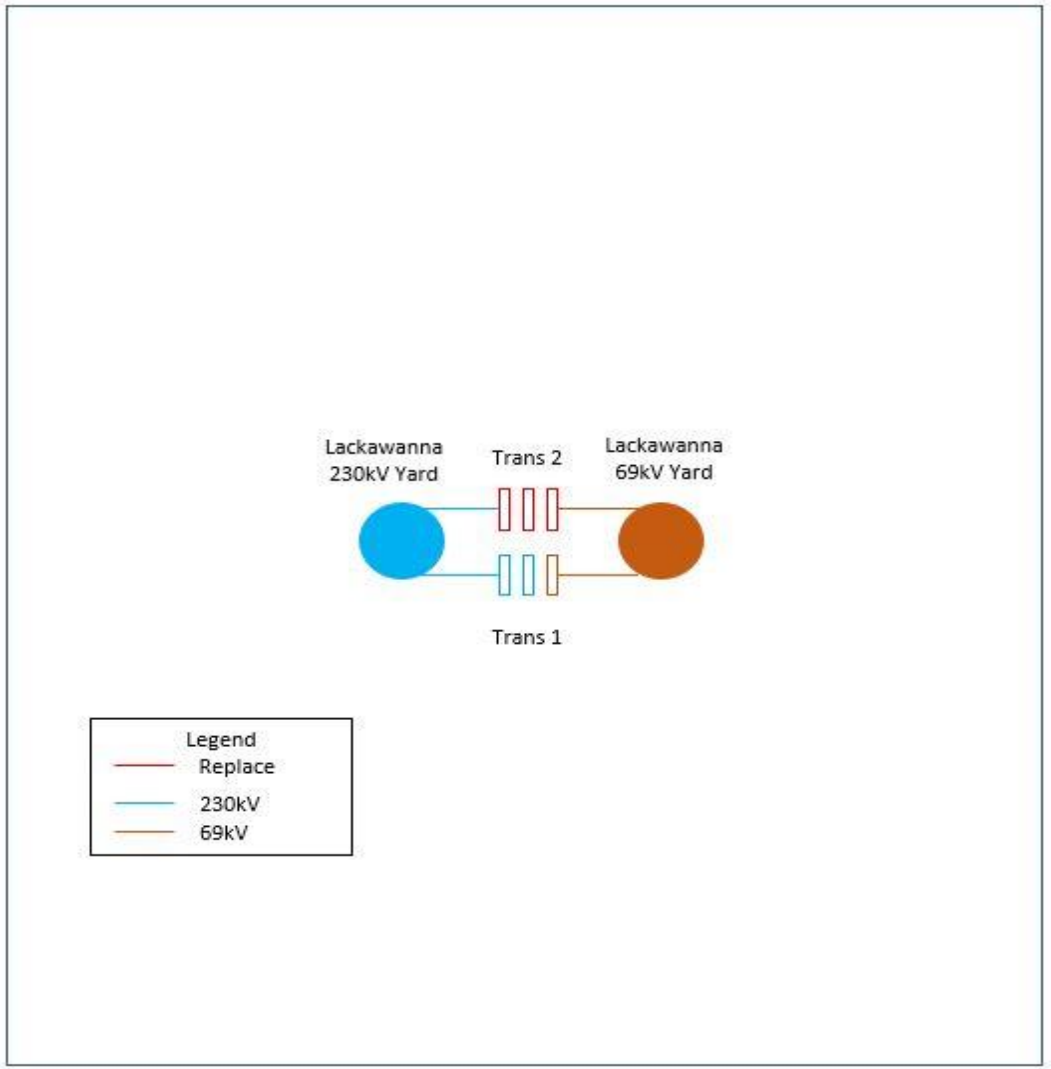
Transmission Cost Estimate: $6.3 M

Alternatives Considered:

No Feasible Alternative.

Projected In-Service: 12/31/2026

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Blooming Groove, PA

Need Number: PPL-2024-0016

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 10/08/2024

Project Driver: Equipment Condition/Performance/Risk

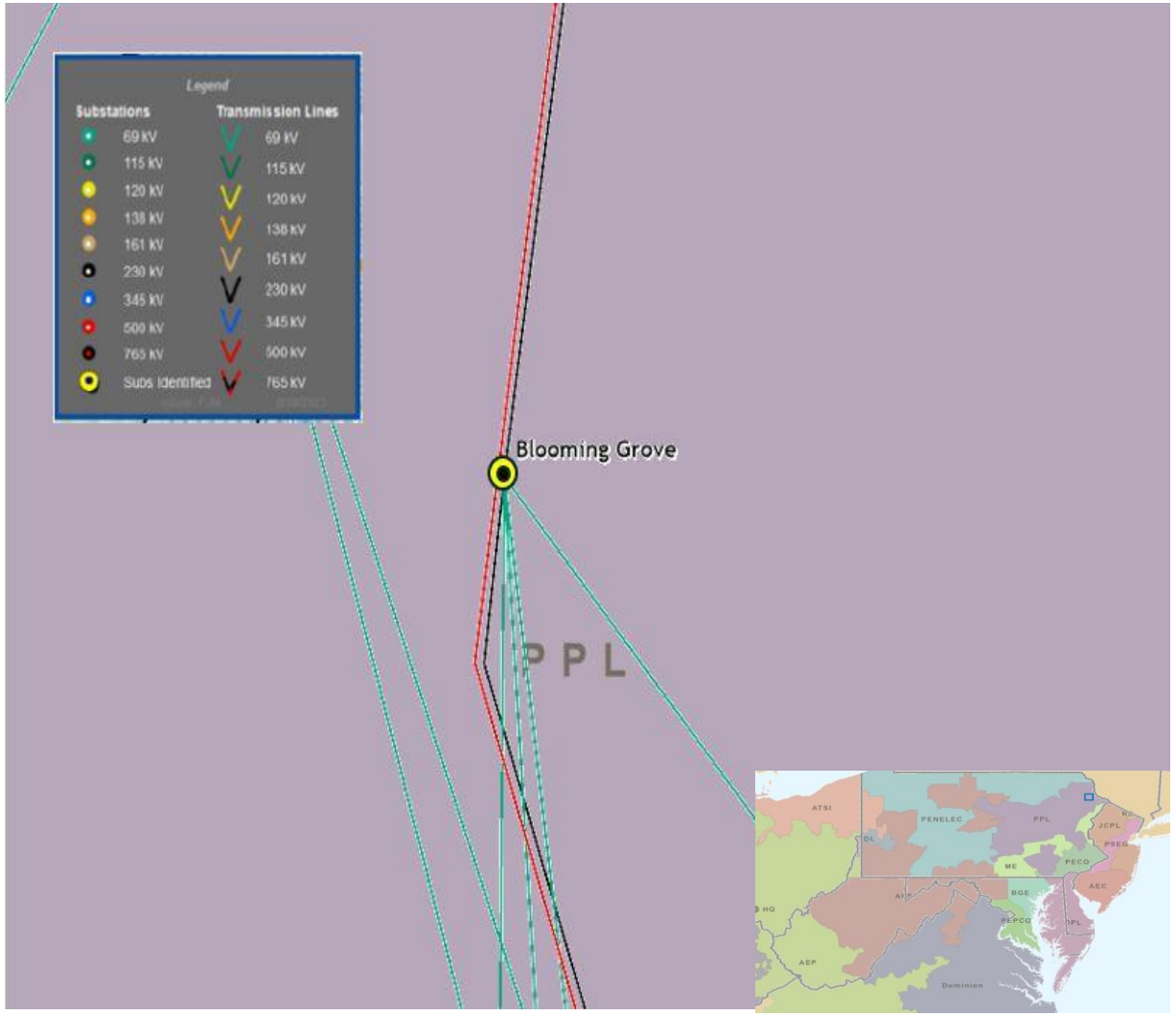
Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

The Blooming Grove substation 230/69kV Transformer 1 is about 42 years old and is considered one of the lowest health units in the transformer fleet. It has experienced significant maintenance over its operation, including:

- Replacing a failed winding temperature gauge
- Replacing diverter switches in the LTC
- Inspecting oil level gauges, connections, and cables for water intrusion
- Repairing/replacing the compressor and motor



PPL Transmission Zone M-3 Process
Blooming Groove, PA

Need number(s): PPL-2024-0016

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Blooming Grove substation 230-69kV Transformer 1: Install a new 170MVA, 230-69kV transformer as an in-kind replacement of the existing 230-69kV Blooming Grove Transformer 1.. Estimated Cost: $6.3 M (s3553.1)

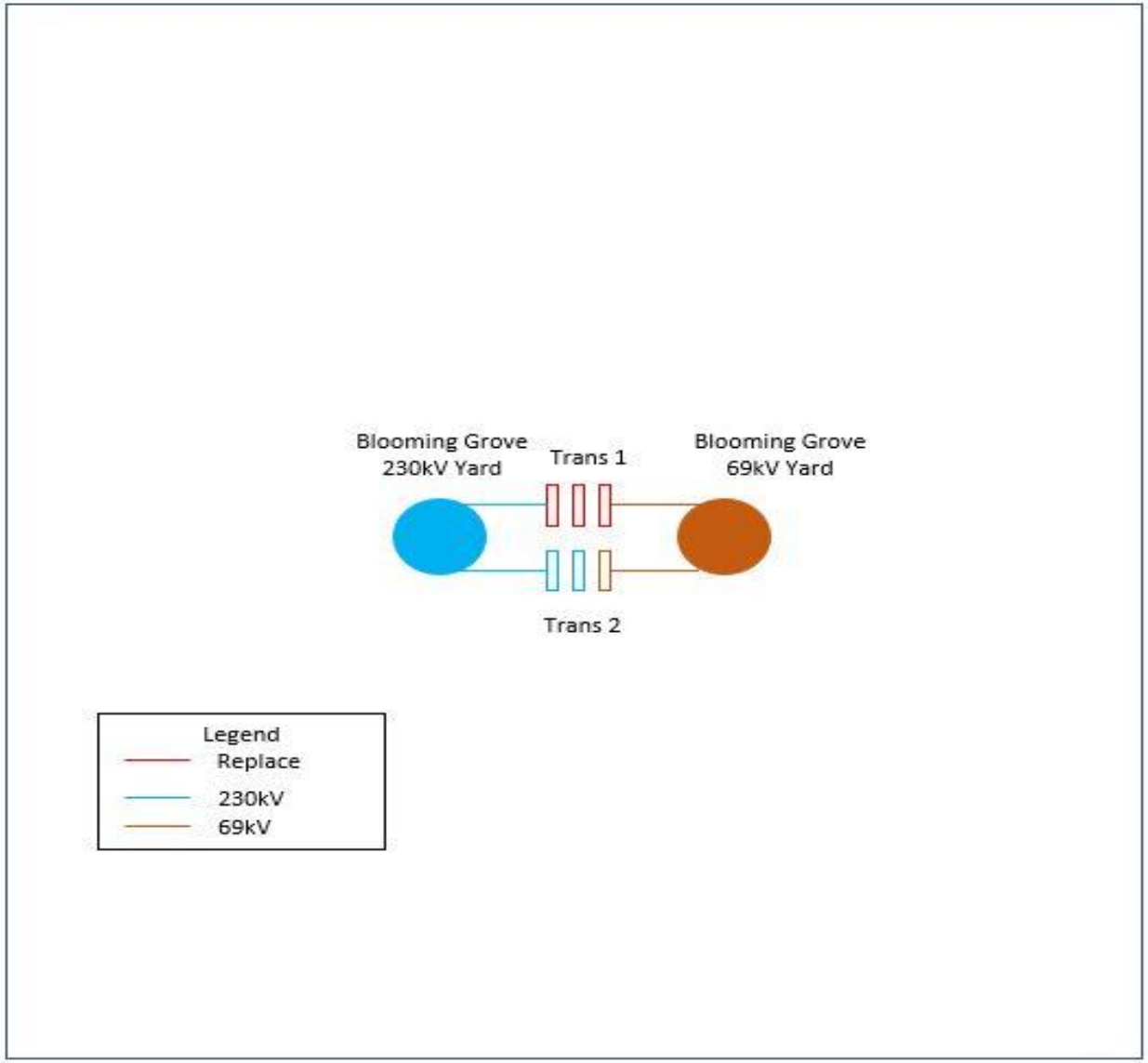
Transmission Cost Estimate: $6.3 M

Alternatives Considered:

No Feasible Alternative.

Projected In-Service: 12/31/2027

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Tresckow, PA

Need Number: PPL-2024-0004

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 08/06/2024

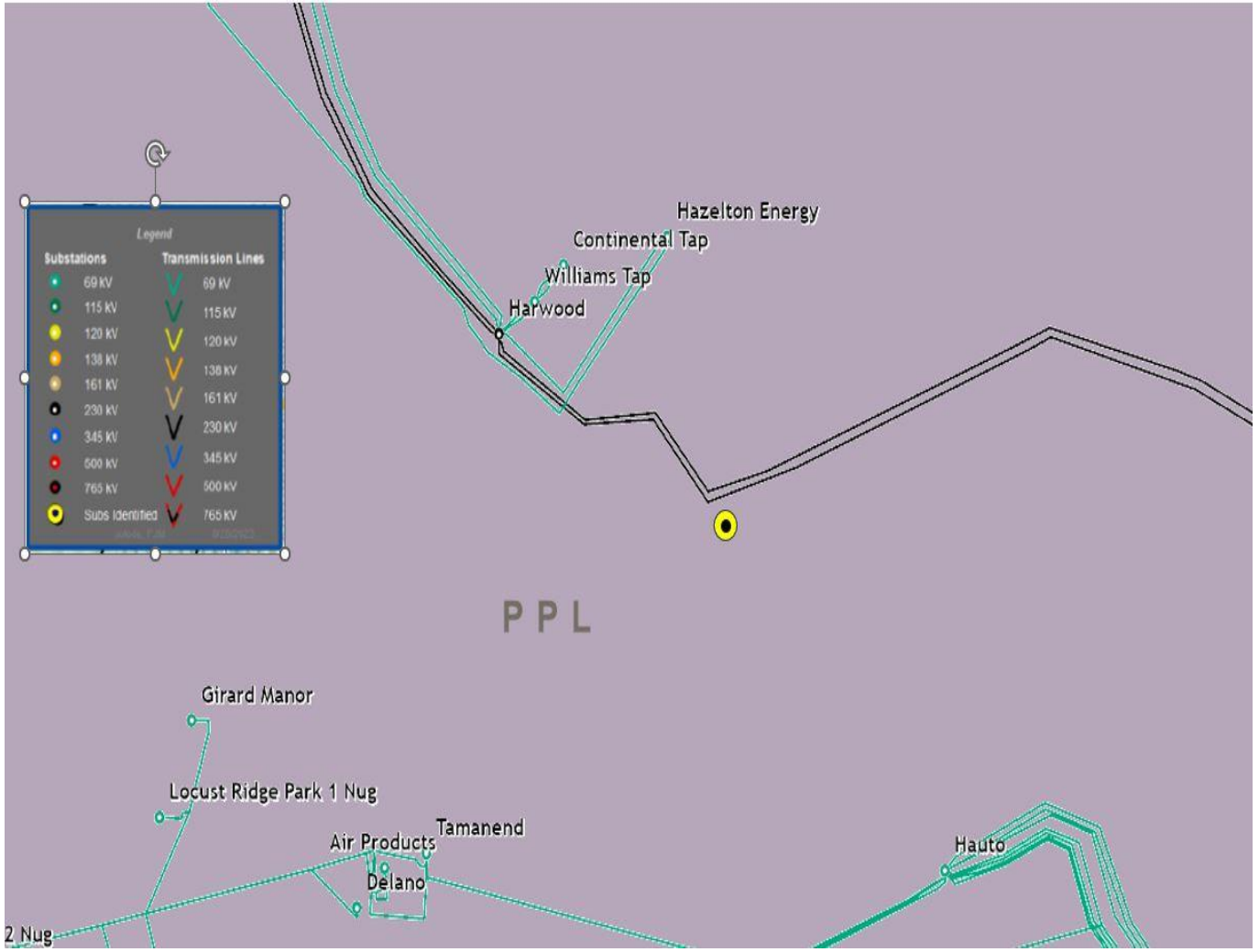
Project Driver: Customer Service

Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

A customer has submitted a request to have their facility served from a 230kV source in Hazleton, PA. The total facility load is approximately 1,000 MW (2030). The requested in service date is 05/2027.



PPL Transmission Zone M-3 Process
Tresckow, PA

Need number(s): PPL-2024-0004

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

HARW-SIEG & HARW-EPAL 230kV Lines: Bifurcate the Harwood - Siegfried 230kV and the Harwood - East Palmerton 230kV lines and terminate at the new Tresckow 230kV switchyard. Extend lines approximately 1 mile into the new Tresckow 230kV switchyard.. Estimated Cost: $8 M (s3555.1)

Tresckow 230kV Switchyard: Install a four bay BAAH 230kV switchyard with a 125MVAR Capacitor bank.. Estimated Cost: $45 M (s3555.2)

Tresckow Customer Taps 230kV Lines: Install three 230kV lead lines for approximately 4 miles from Tresckow 230kV switchyard to the customer facility.. Estimated Cost: $28 M (s3555.3)

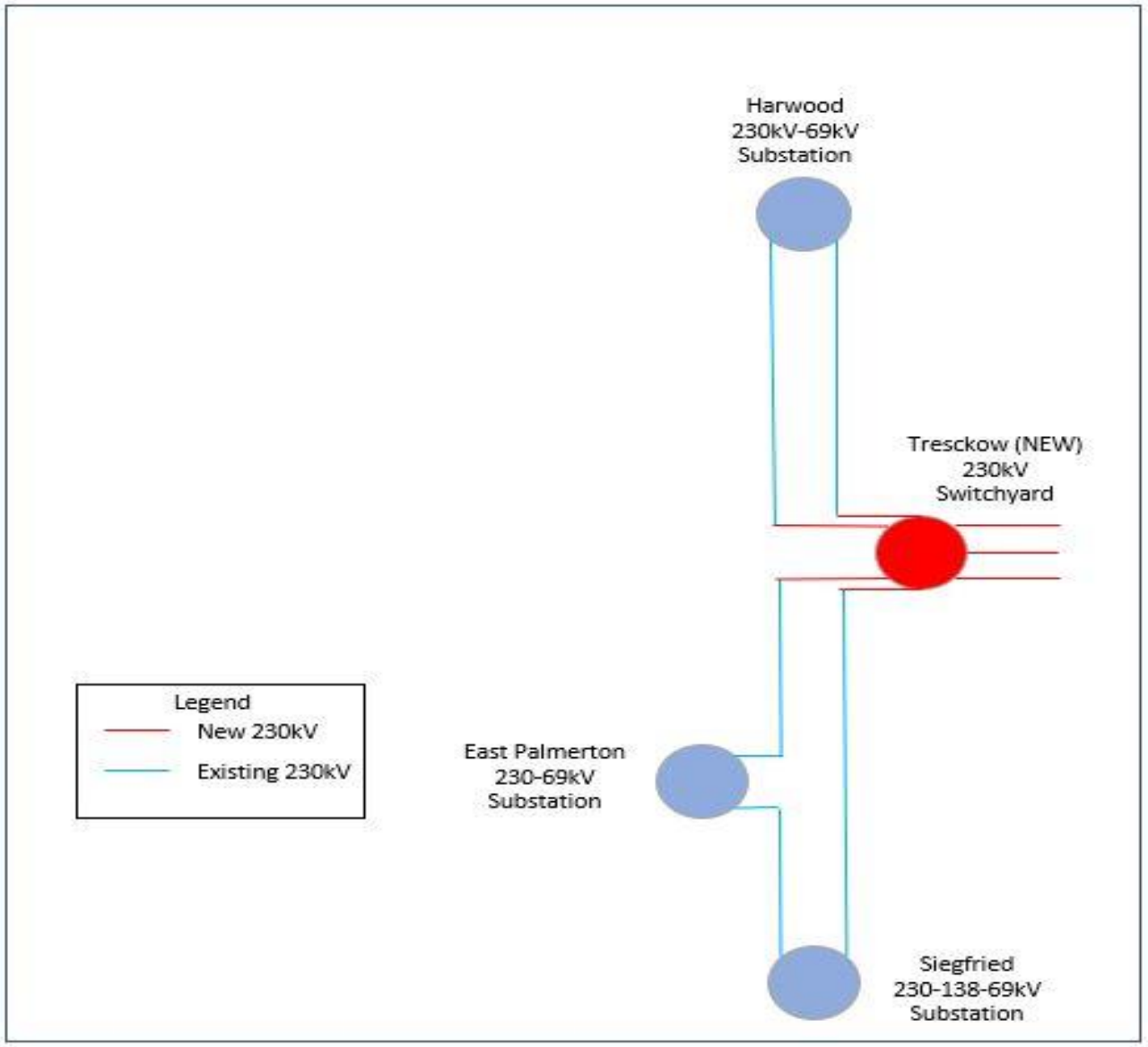
Transmission Cost Estimate: $81 M

Alternatives Considered:

No Feasible Alternatives

Projected In-Service: 05/31/2027

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Hamilton, PA

Need Number: PPL-2024-0006

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 07/18/2024

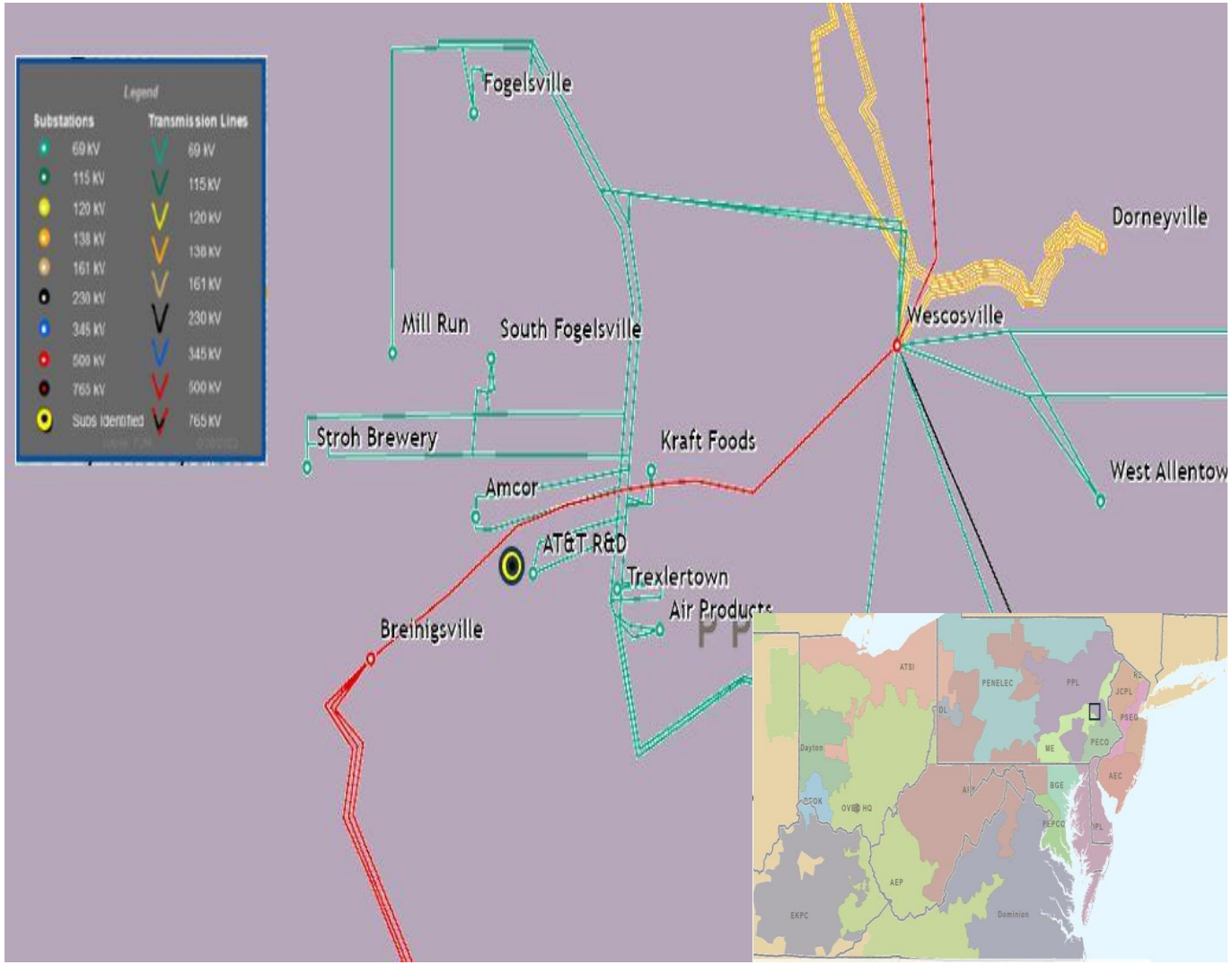
Project Driver: Customer Service

Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

A customer has submitted a request to have their facility served from a double circuit 69kV transmission line in Breinigsville, PA. The requested load is approximately 100 MVA. The requested in service date is 5/14/2026.



PPL Transmission Zone M-3 Process
Hamilton, PA

Need number(s): PPL-2024-0006

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Tek Park 69/138kV taps: Extend a new double circuit 69/138kV tap from the existing Breinigsville - ATTR 69/138kV line to interconnect the new Tek Park 69-13.8kV substation. Build 0.4 miles of new 69/138kV double circuit line using 795 ACSR conductor.. Estimated Cost: $1.5 M (s3556.1)

Breinigsville - Tek Park 69/138kV Lines: Extend a new double circuit 69/138kV tap from the existing Breinigsville 500-138-69kV Substation to the new Tek Park 69/138kV tap. Build 0.75 miles of new 69/138kV double circuit line using 795 ACSR conductor.. Estimated Cost: $4 M (s3556.2)

Breinigsville 69/138kV Line Terminals: Install two new line terminals in the Breinigsville 69/138kV Yard. Install two bays in initial DBDB future BAAH Arrangement.. Estimated Cost: $3.5 M (s3556.3)

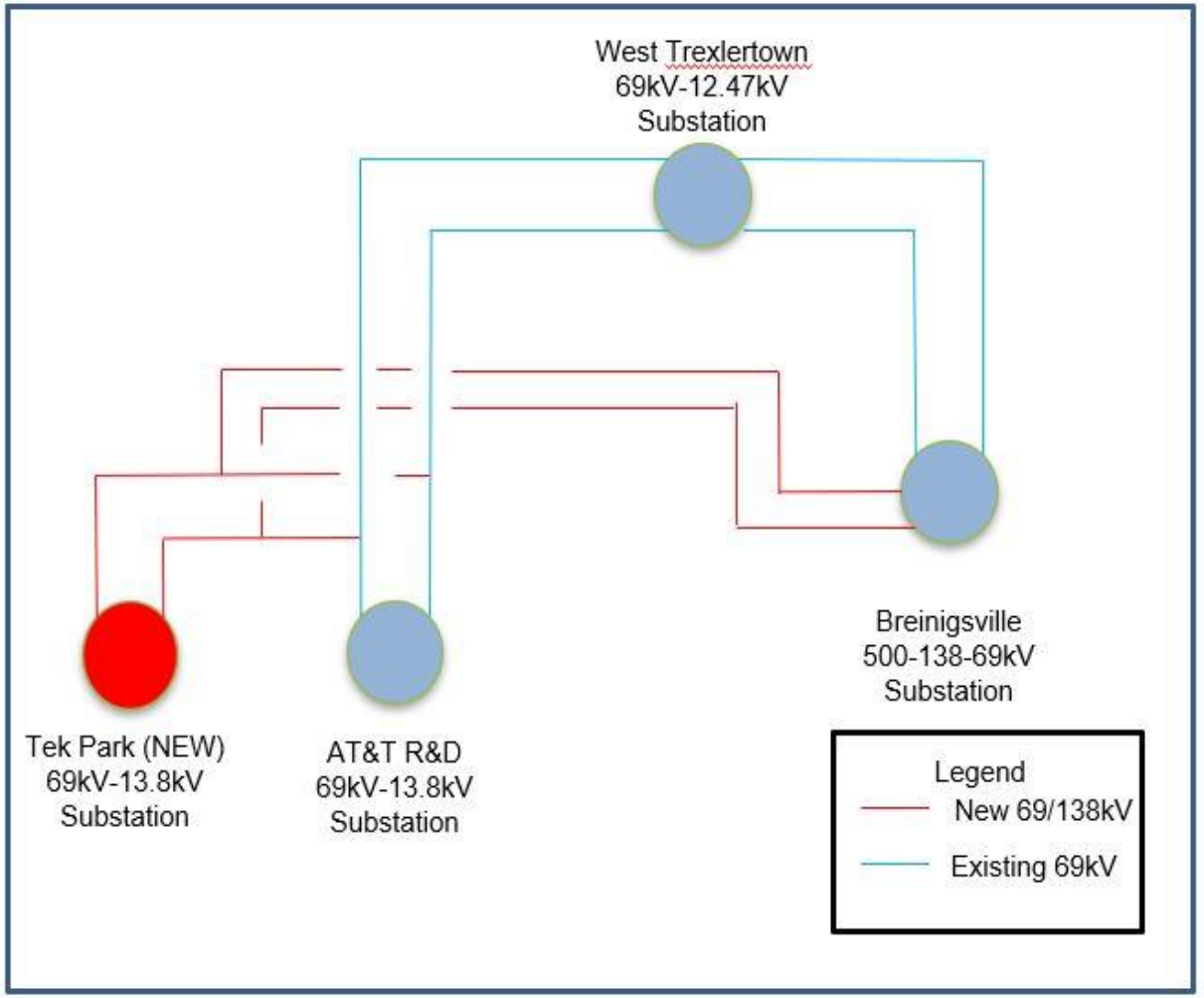
Transmission Cost Estimate: $9 M

Alternatives Considered:

Rebuilding the existing lines was considered but would leave over 125 MWs on radial feed with no transfer capability.

Projected In-Service: 06/01/2027

Project Status: Conceptual



PPL Electric Utilities

PPL Transmission Zone M-3 Process
Summit, PA

Need Number: PPL-2024-0007

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 07/18/2024

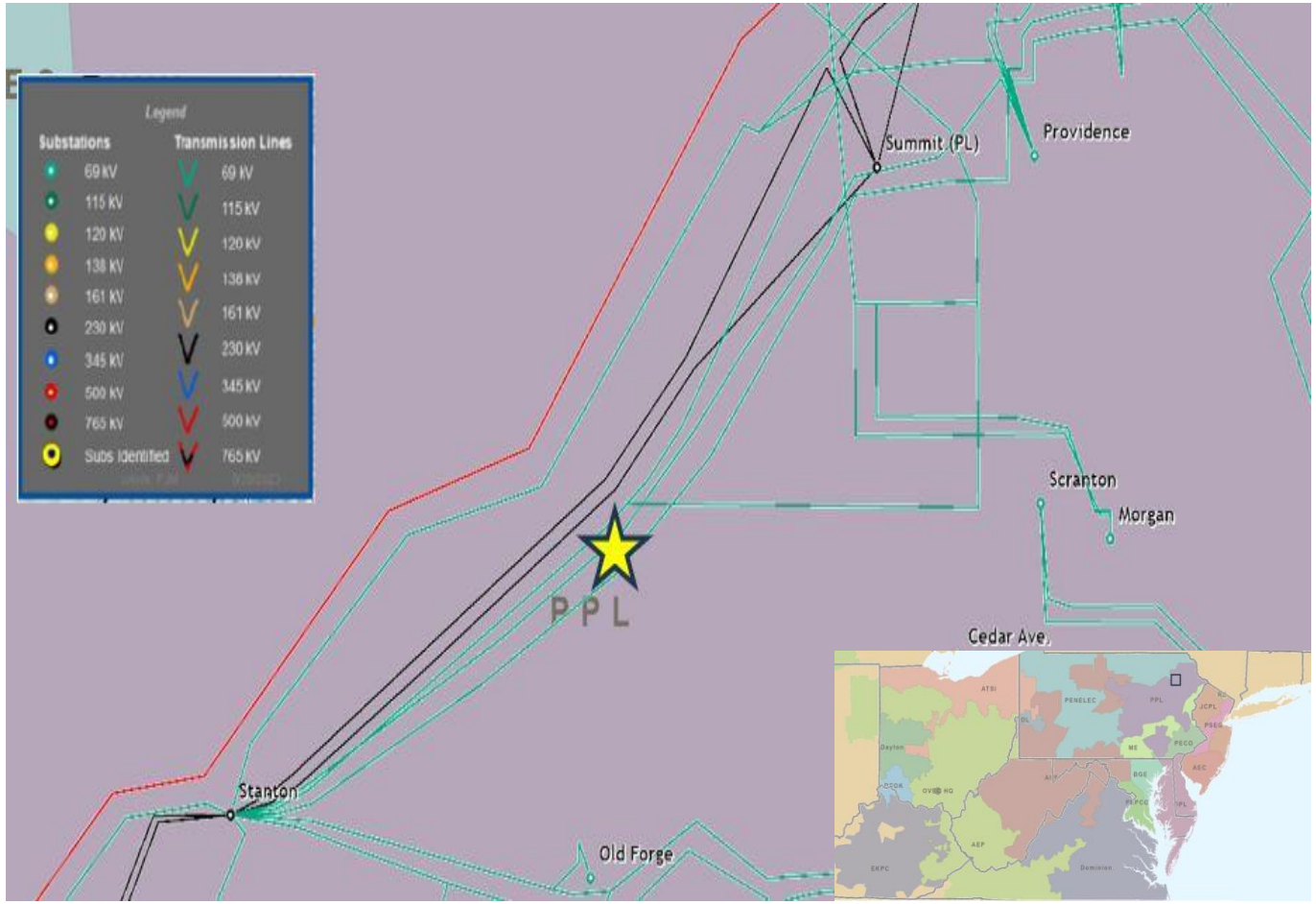
Project Driver: Equipment Condition/Performance/Risk

Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

The Stanton-Summit 69kV 1&2 lines area reliability risk due to poor asset health. The line is in poor condition with the original assets installed in 1926. The line consists of 86 vintage lattice poles, two vintage wood poles, and 12 poles replaced after 2000. The 4/0 stranded CU conductor is original. The line has experienced 4 operations (3 momentary and 1 permanent) since 2016.



PPL Electric Utilities

PPL Transmission Zone M-3 Process
Summit, PA

Need number(s): PPL-2024-0007

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Rebuild the Stanton - Summit #1 & #2 69kV lines.: Rebuild ~7 miles of the double circuit Stanton - Summit #1 & #2 69kV lines to double circuit 69kV with 556 ACSR conductor.. Estimated Cost: $17.5 M (s3557.1)

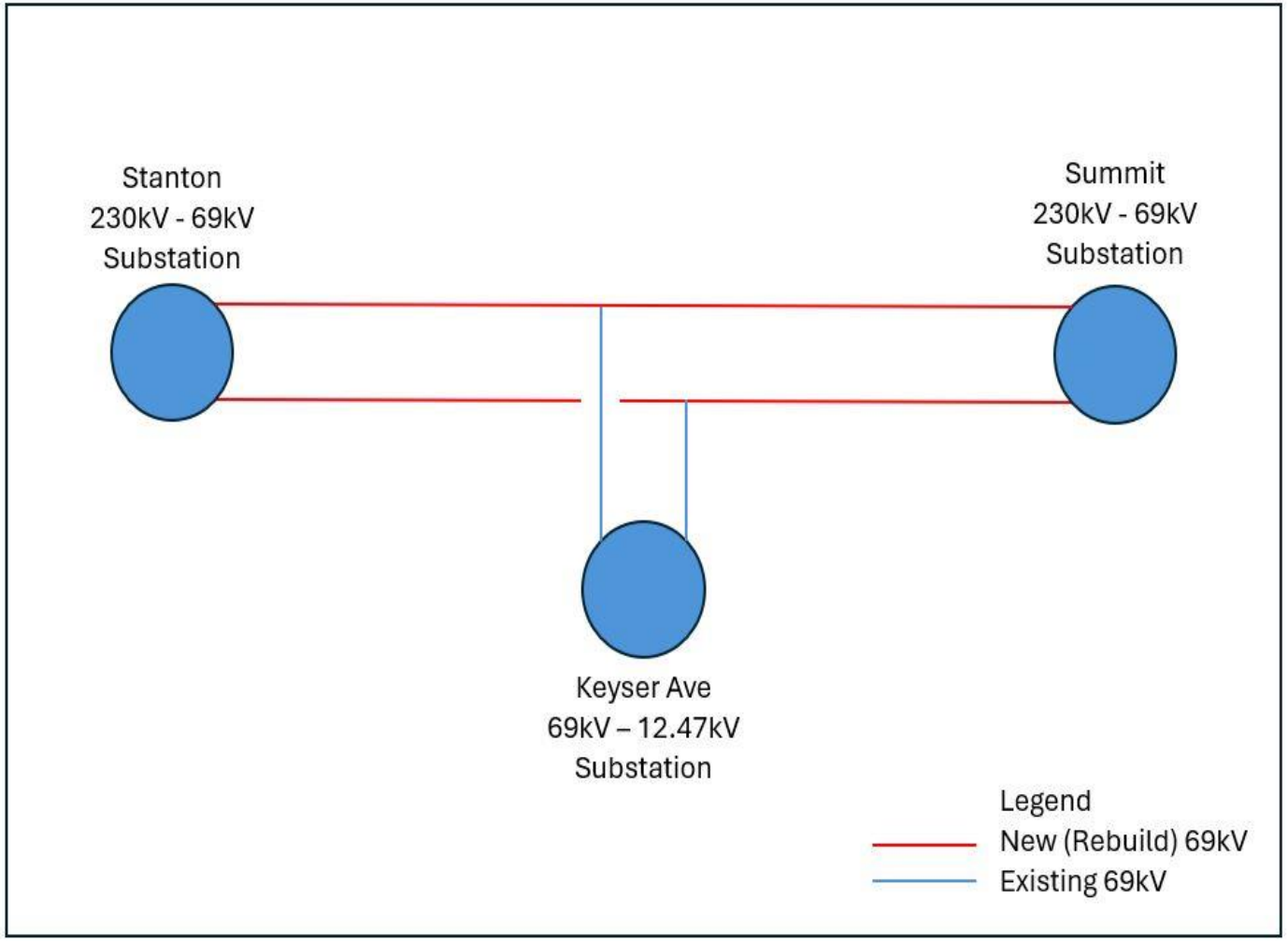
Transmission Cost Estimate: $17.5 M

Alternatives Considered:

Removing the line is infeasible due to resulting reduction in operational flexibility and that the lines serve a distribution substation.

Projected In-Service: 12/01/2027

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Old Forge, PA

Need Number: PPL-2024-0008

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 07/18/2024

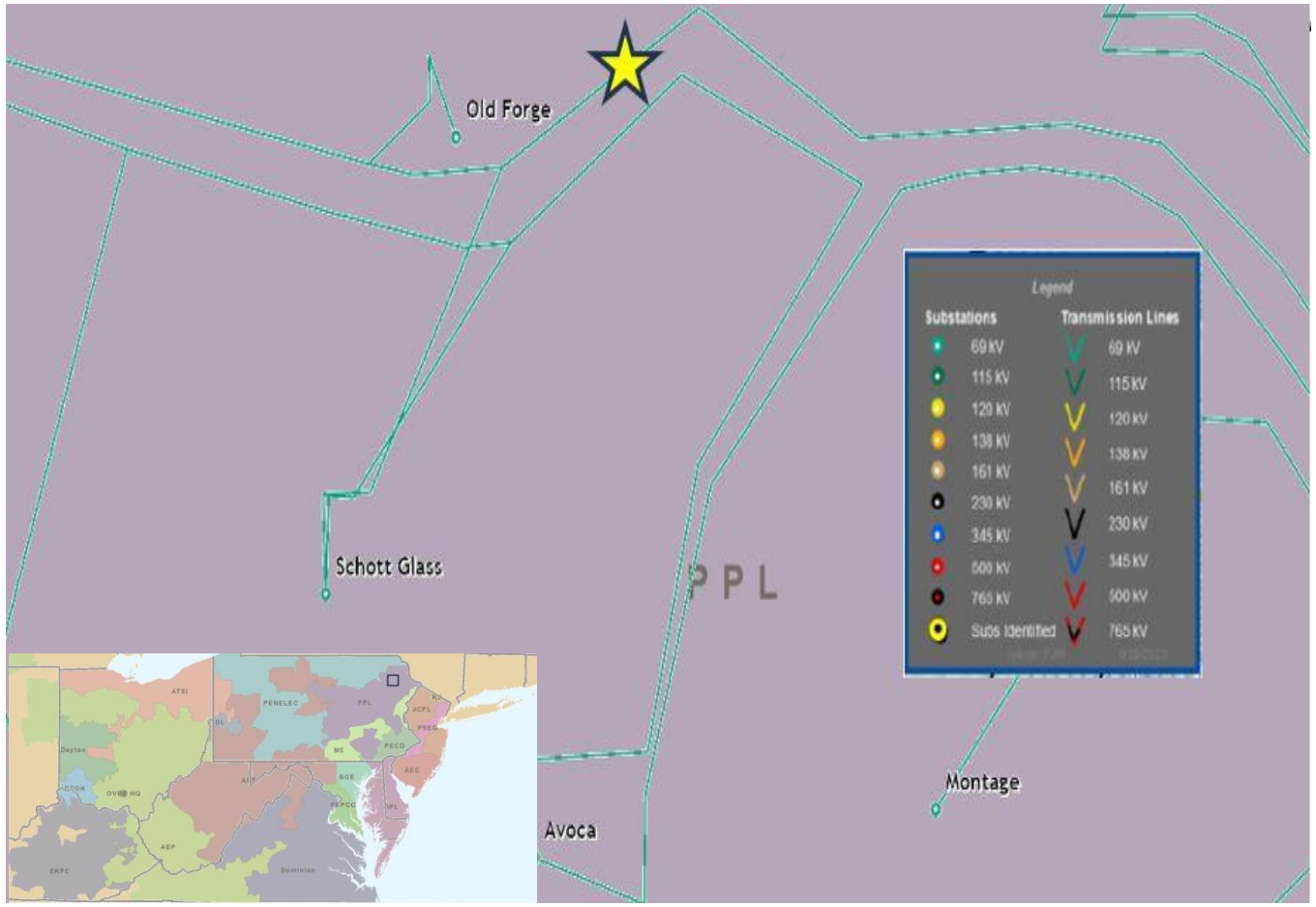
Project Driver: Equipment Condition/Performance/Risk

Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

The Old Forge-Avoca 69kV Tie line is a reliability risk due to poor asset health. The line is in poor condition with the original assets installed in the 1925. The line consists of 38 vintage poles and 18 poles replaced since 2000. The 4/0 CU conductor is original. The line has experienced 1 permanent outage since 2013.



PPL Transmission Zone M-3 Process
Old Forge, PA

Need number(s): PPL-2024-0008

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Old Forge - Avoca 69kV Tie Line Rebuild: Rebuild 2 miles of the existing single circuit Old Forge – Avoca 69kV tie line as single circuit 69kV with 556ACSR conductor.. Estimated Cost: $5.5 M (s3558.1)

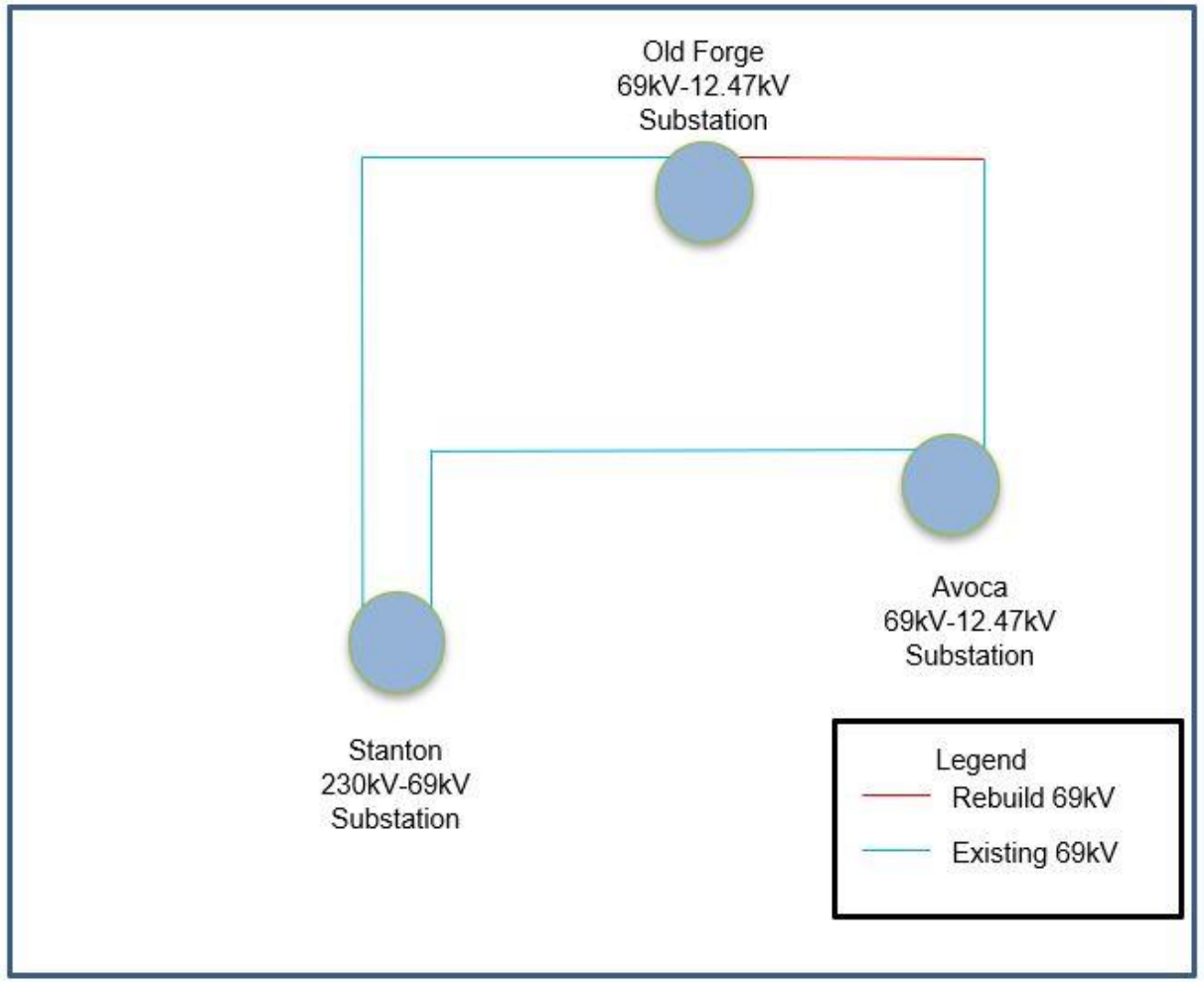
Transmission Cost Estimate: $5.5 M

Alternatives Considered:

Removing the line is infeasible due to resulting reduction in operational flexibility.

Projected In-Service: 12/01/2027

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Exeter, PA

Need Number: PPL-2024-0009

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 07/18/2024

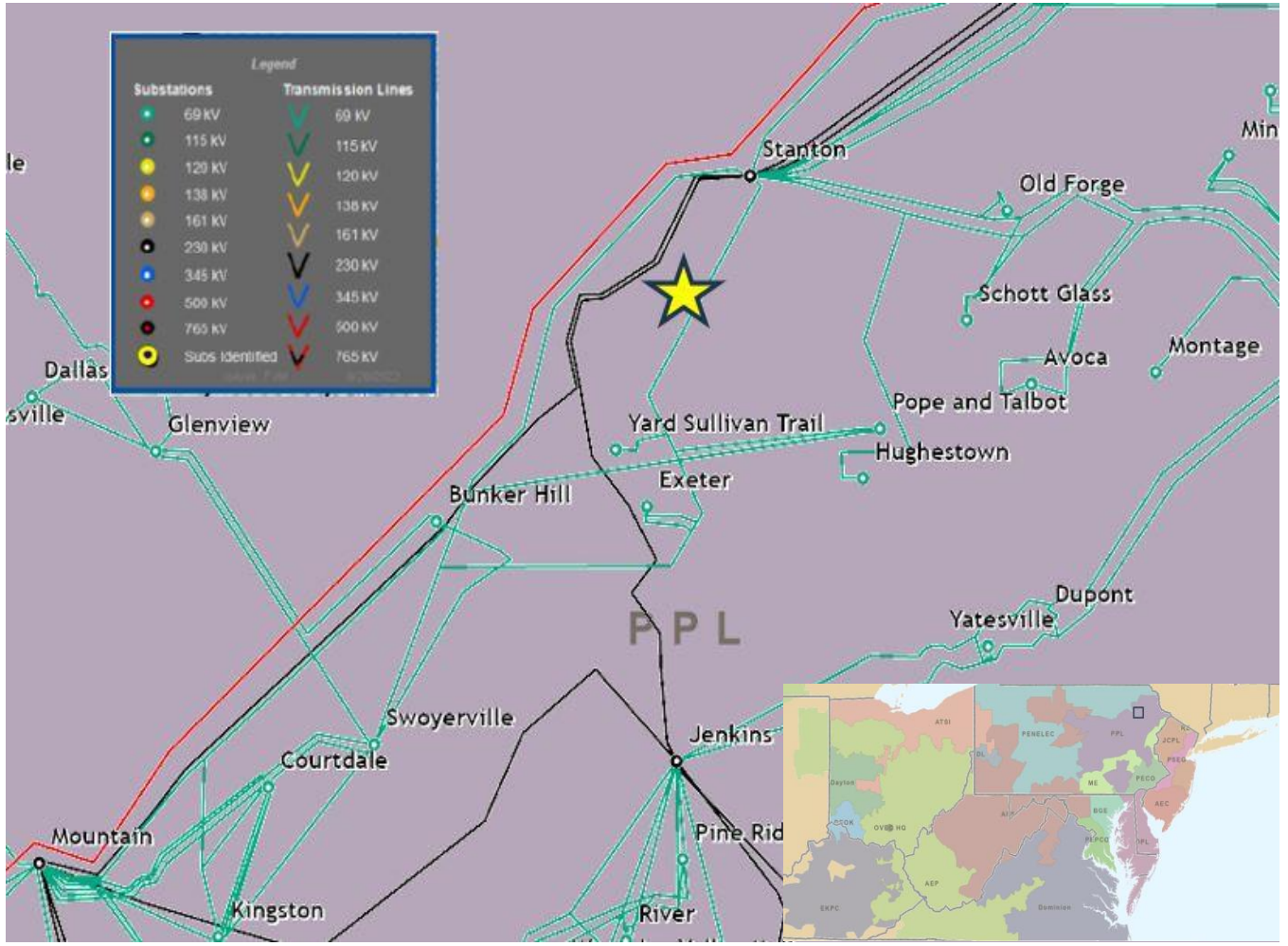
Project Driver: Equipment Condition/Performance/Risk

Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

The Stanton-Swoyerville/Exeter 69kV tap is a reliability risk due to poor asset health. The line is in poor condition with the original assets installed in 1943. The line consists of 98 vintage wood poles, 2 vintage lattice towers, 5 vintage steel embedded poles, and 85 new poles replaced after 2000. The 4/0 CU conductor is original. The line has experienced 3 permanent operations since 2018.



PPL Transmission Zone M-3 Process
Exeter, PA

Need number(s): PPL-2024-0009

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Stanton-Swoyersville/Exeter 69kV Rebuild: Rebuild ~6 miles of the double circuit Stanton-Swoyersville/Exeter 69kV lines to double circuit 69kV. Rebuild ~1 mile of single circuit 69kV taps. All rebuilt sections to be 556 ACSR conductor.. Estimated Cost: $17.5 M (s3559.1)

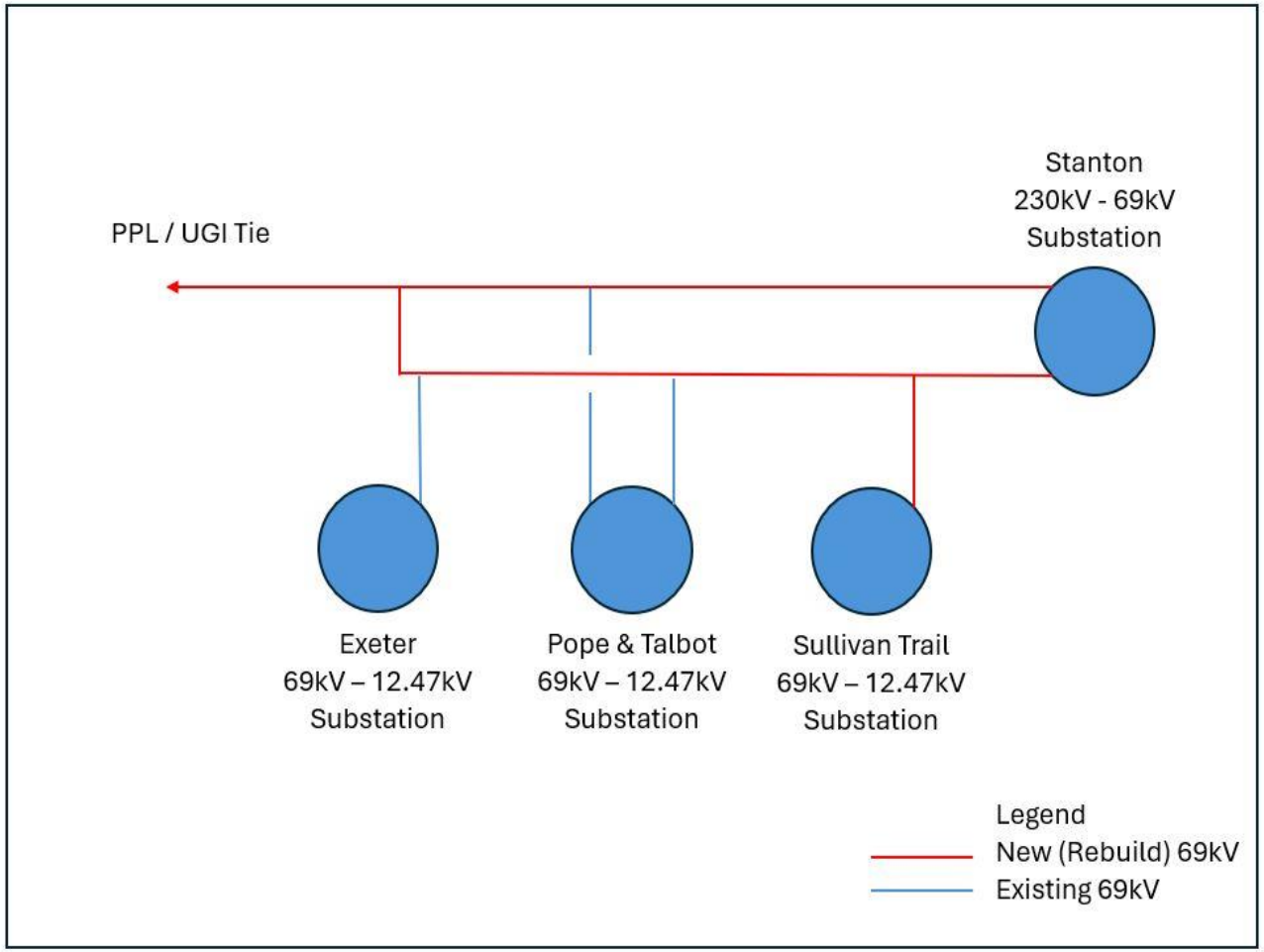
Transmission Cost Estimate: $17.5 M

Alternatives Considered:

Removal of the lines is infeasible due to distribution substations being connected to the lines.

Projected In-Service: 12/01/2027

Project Status: Conceptual



PPL Transmission Zone M-3 Process
Donnelley Gravure, PA

Need Number: PPL-2024-0010

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Previously Presented: Need Meeting 09/10/2024

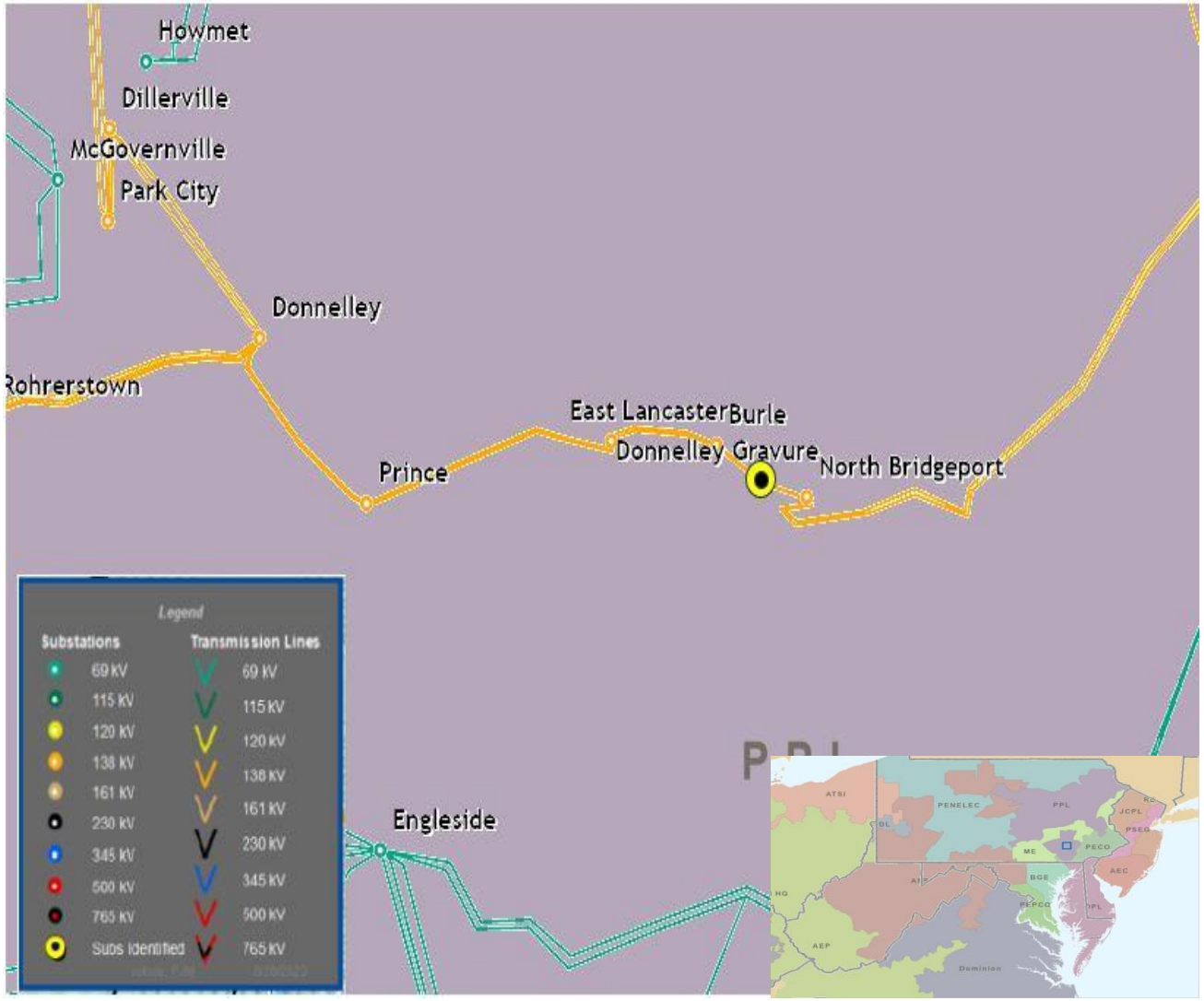
Project Driver: Customer Service

Specific Assumption References:

PPL 2024 Annual Assumptions

Problem Statement:

An existing 138kV customer in Lancaster, PA has submitted a request to increase their facility load. The total facility load will be approximately 350 MW (2028).



PPL Transmission Zone M-3 Process
Donnelley Gravure, PA

Need number(s): PPL-2024-0010

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/18/2025

Proposed Solution:

Pitney 138kV Switchyard: Construct a new five bay BAAH 138kV switchyard near the customer's facility.. Estimated Cost: $34 M (s3547.1)

South Akron - Prince #1 & #2 138kV lines: Bifurcate the South Akron - Prince #1 & #2 138kV and terminate at the new Pitney 138kV switchyard. Extend the 138kV lines approximately 0.2 miles into the new Pitney 138kV switchyard.. Estimated Cost: $3 M (s3547.2)

138kV Customer Tap Lines: Extend three 138kV circuits for approximately 0.1 miles from the Pitney 138kV switchyard to the customer's facility.. Estimated Cost: $3.5 M (s3547.3)

Lampeter 230-138kV Substation: Install a new 230-138kV Substation. Install a two bay 230kV BAAH yard, two 230-138kV 330MVA transformers, and a two bay BAAH 138kV yard.. Estimated Cost: $47.3 M (s3547.4)

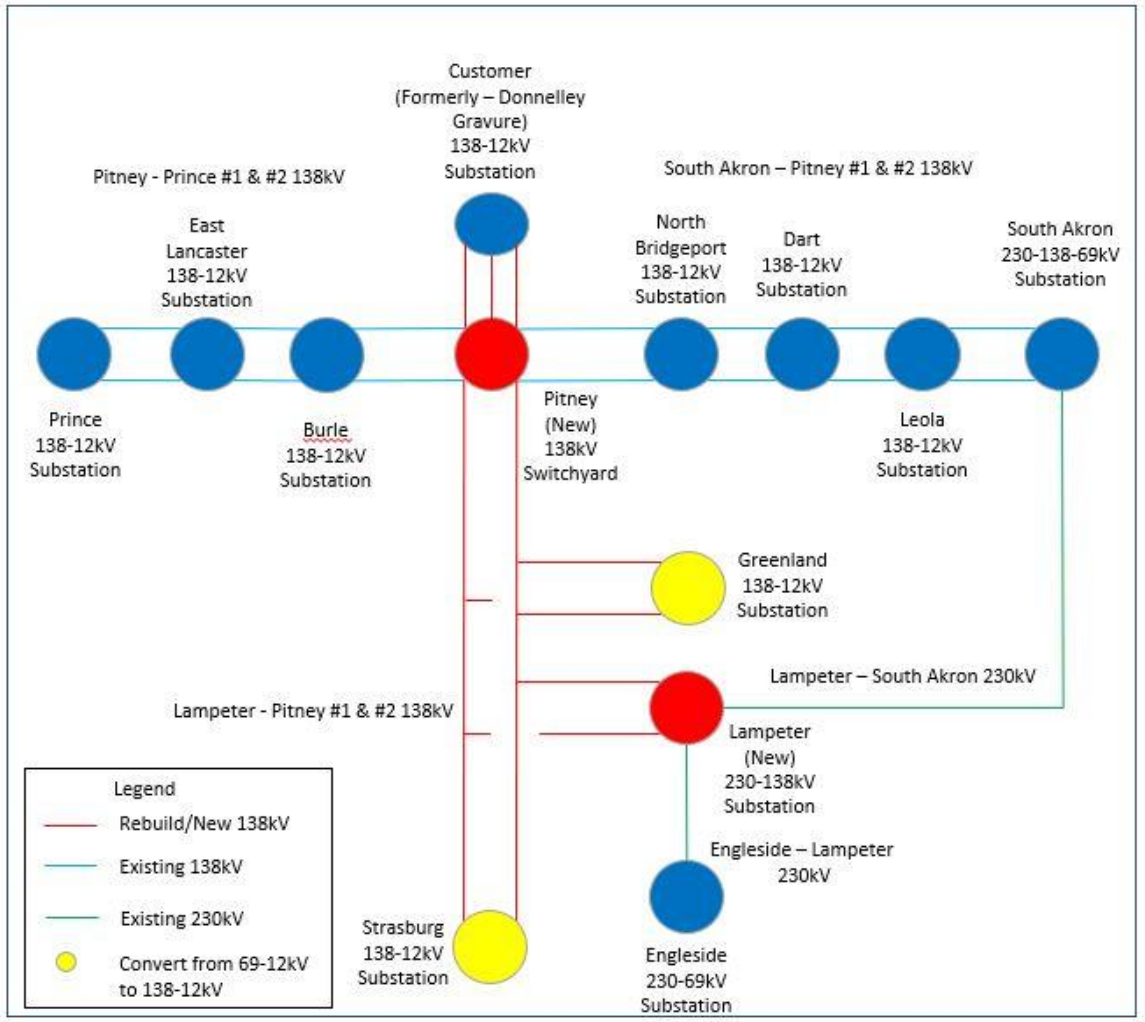
Millwood - South Akron 230kV Line: Bifurcate the Millwood - South Akron 230kV line and terminate at the new Lampeter 230-138kV Substation.. Estimated Cost: $4 M (s3547.5)

Lampeter - Pitney #1 & #2 138kV Lines: Rebuild 3.1 miles the Strasburg #1 #2 69kV taps to double circuit 138kV operation from outside Lampeter to Strasburg substation. Extend two 138 kV circuits from the Lampeter 138kV yard and tie into the rebuilt Strasburg 138kV lines. Rebuild 3.3 miles of the Engleside – Greenland #1 & #2 69kV line to double circuit 138kV operation from Strasburg Tap to the Greenland sub. Extend a new double circuit 138kV line for ~1.5 miles from the Engleside – Greenland #1 & #2 138kV lines to Pitney 138kV switchyard. Remove a 3.6 mile section of the Engleside – Greenland #1 & #2 69kV line that will no longer be utilized.. Estimated Cost: $26 M (s3547.6)

Transmission Cost Estimate: $117.8 M

Alternatives Considered:

No feasible alternatives



Projected In-Service: 06/01/2028

Project Status: Conceptual

PPL Transmission Zone M-3 Process
New Buffalo, PA

Need Number: PPL-2024-0017

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/20/2025

Previously Presented: Need Meeting 11/06/2024

Project Driver: Customer Service

Specific Assumption References:

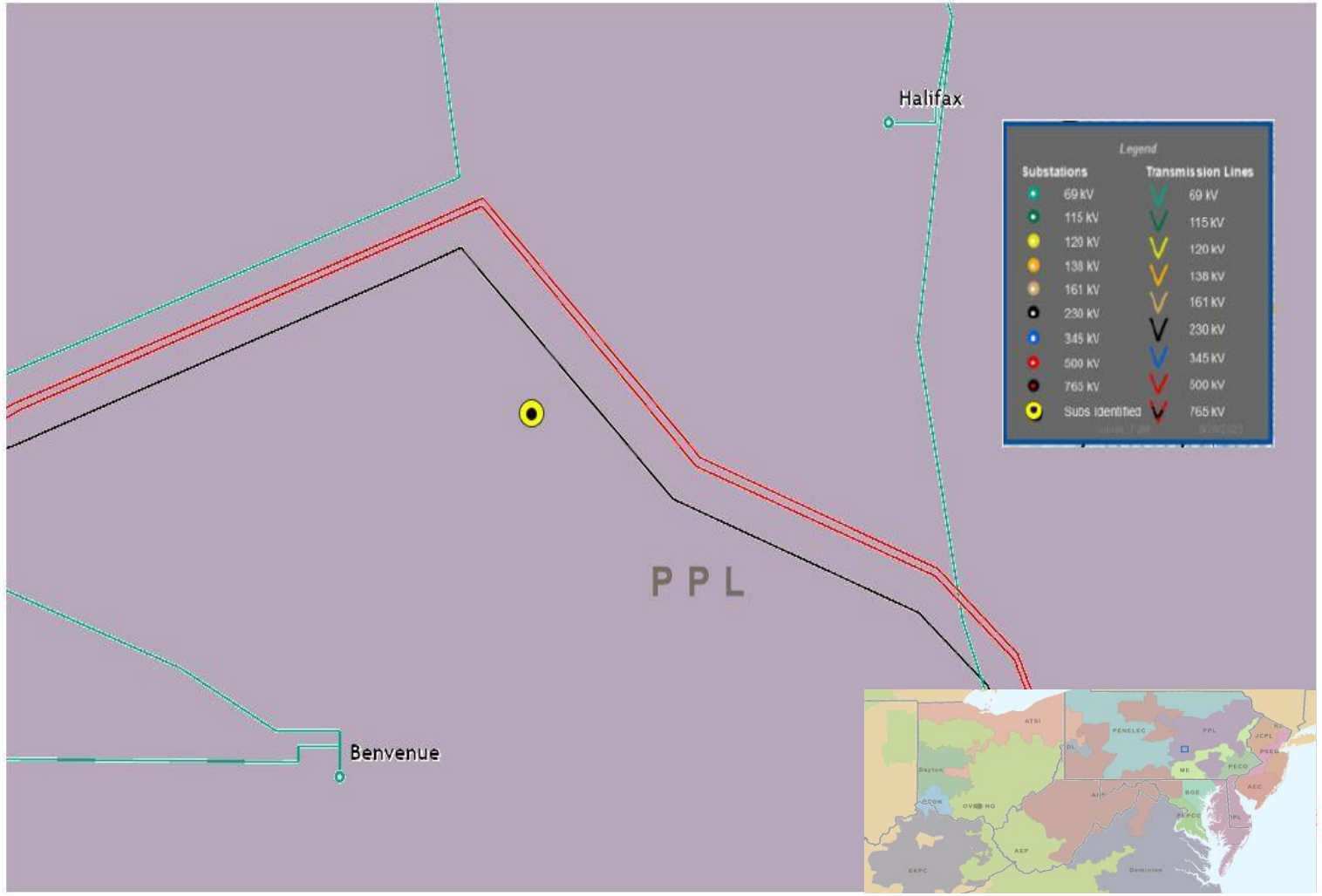
PPL 2024 Annual Assumptions

Problem Statement:

A customer has submitted a request to have their facility served from a 138kV source in New Buffalo, PA. The total facility load is approximately 1,000 MW (2031). The requested in service date is 05/2027.

Initial In-Service 2027 Load: 200MW

Projected 2028 Load: 400 MW



PPL Transmission Zone M-3 Process
New Buffalo, PA

Need number(s): PPL-2024-0017

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 03/20/2025

Proposed Solution:

New Buffalo 500-138kV Substation: Install a new 500-138kV substation with a four bay BAAH 500kV yard, four 500-138kV XFMRs, six bay BAAH 138kV yard, and one 138kV capacitor bank.. Estimated Cost: $148 M (s3571.1)

Juniata - Alburtis 500kV Bifurcation: Bifurcate the Juniata - Alburtis 500kV line and terminate into the New Buffalo substation. Extend lines approximately 0.6 miles.. Estimated Cost: $8 M (s3571.2)

Rebuild JUNI-NEBU 500kV line: Rebuild the existing JUNI-ALBU 500kV line to double circuit for 9.6 miles from Juniata substation to New Buffalo substation.. Estimated Cost: $83 M (s3571.3)

Customer 138kV Taps: Extend six 138kV lines to the customer facility.. Estimated Cost: $3 M (s3571.4)

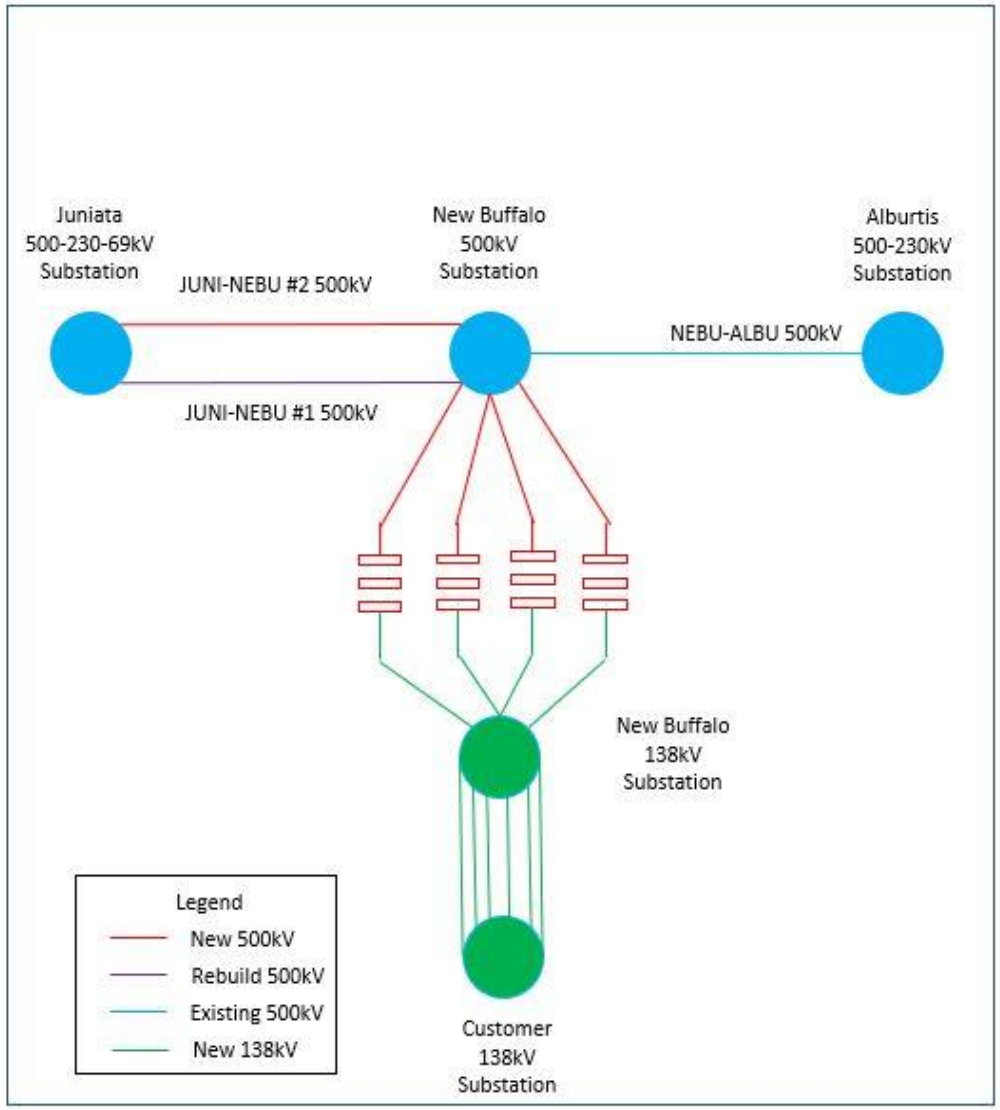
Transmission Cost Estimate: $242 M

Alternatives Considered:

1.500kV & 230kV Option: Install five bay 230kV BAAH yard (NEBU) with four 230-138kV XFMRs, six bay 138kV BAAH yard, and one 138kV capacitors. Install a three bay 500kV BAAH yard with two 500-230kV XFMRs. Break JUNI-DAUP 230kV line and rebuild the JUNI-NEBU 230kV section to double circuit and install new terminal at JUNI 230kV yard. Estimated cost: $274M.

Projected In-Service: 05/30/2028

Project Status: Conceptual



Revision History

03/18/2025 – V1 – s3547 through s3559

03/20/2025 – V2 – s3571