

Subregional RTEP Committee – Mid-Atlantic PPL Supplemental Projects

January 17, 2023

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

PPL Transmission Zone: Supplemental

Need Number: PPL-2023-0001

Meeting Date: 01/17/2023

Process Stage: Need

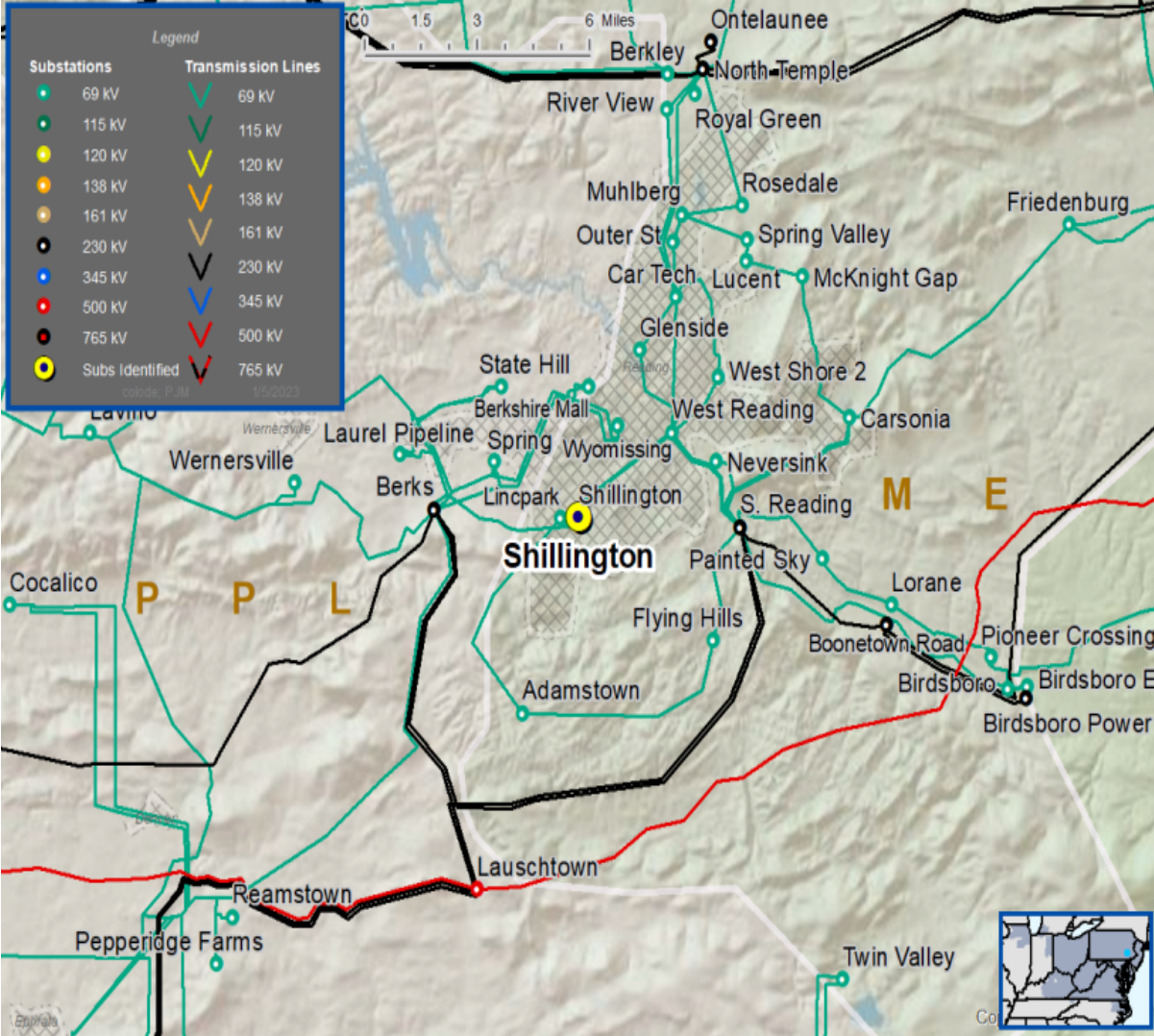
Supplemental Project Driver: Equipment Material Condition, Performance and Risk;

Problem Statement:

The Shillington 69kV Tap is a reliability risk due to poor asset health. The line is in poor condition with the original assets installed in 1941 (1.4 miles) and 1973 (0.3 miles). PPL owns 1.7 miles of this line, installed with 2/0 CU (1.4 miles) and 556.5 kcmil ACSR (0.3 miles) conductor. The structures are mostly wood poles with several steel poles and towers interspersed.

Specific Assumption References:

[PPL 2023 Annual Assumptions](#)



PPL Transmission Zone: Supplemental

Need Number: PPL-2023-0002

Meeting Date: 01/17/2023

Process Stage: Need

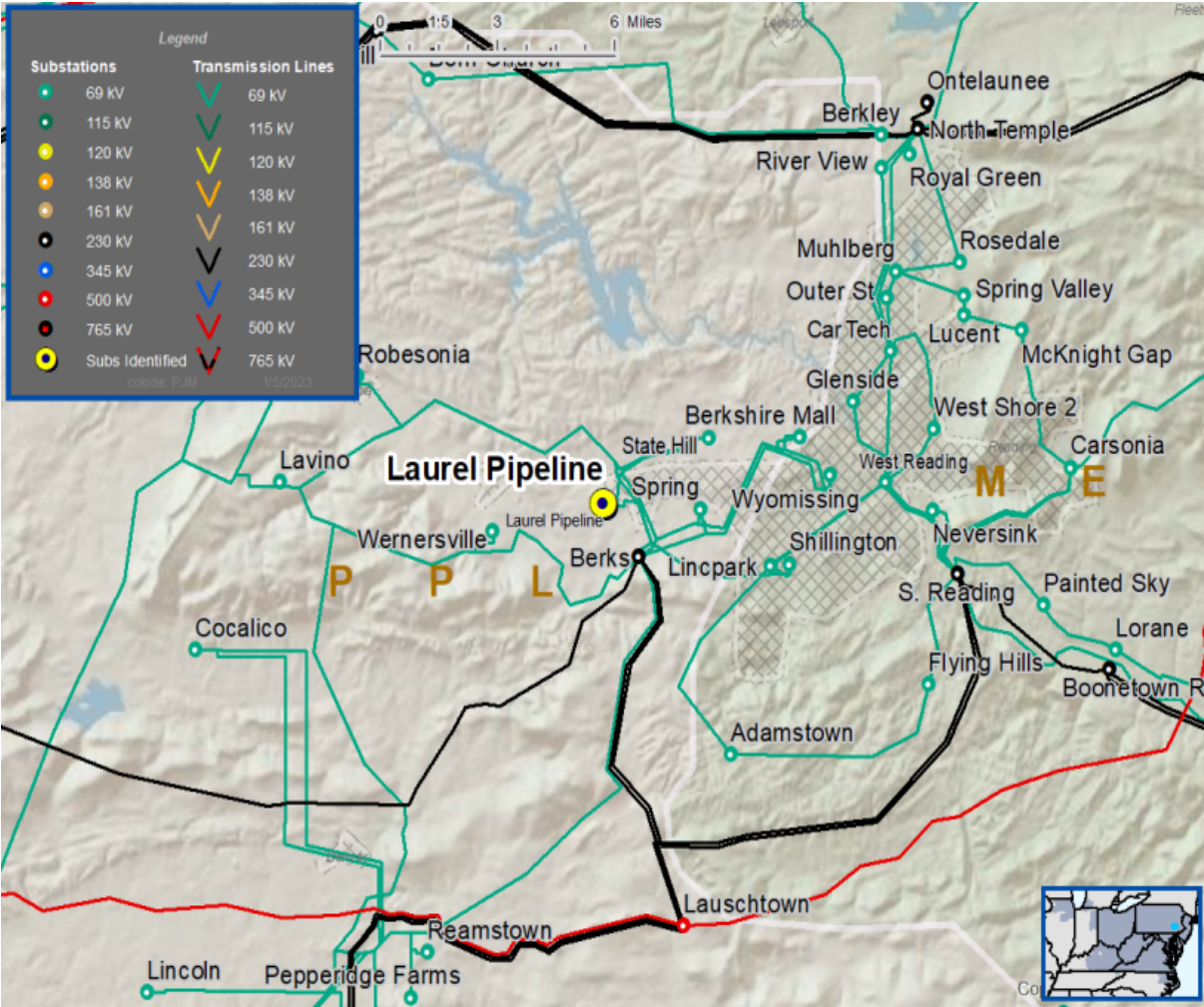
Supplemental Project Driver: Equipment Material Condition, Performance and Risk;

Problem Statement:

The Laurel Pumping 69kV Tap is a reliability risk due to poor asset health. The line is in poor condition with the original assets installed in 1959. This 0.66 mile line was installed with #62 Anaconda Composite Cu conductor. The structures are mostly wood poles with several steel poles interspersed.

Specific Assumption References:

[PPL 2023 Annual Assumptions](#)



Need Number: PPL-2023-0003

Meeting Date: 01/17/2023

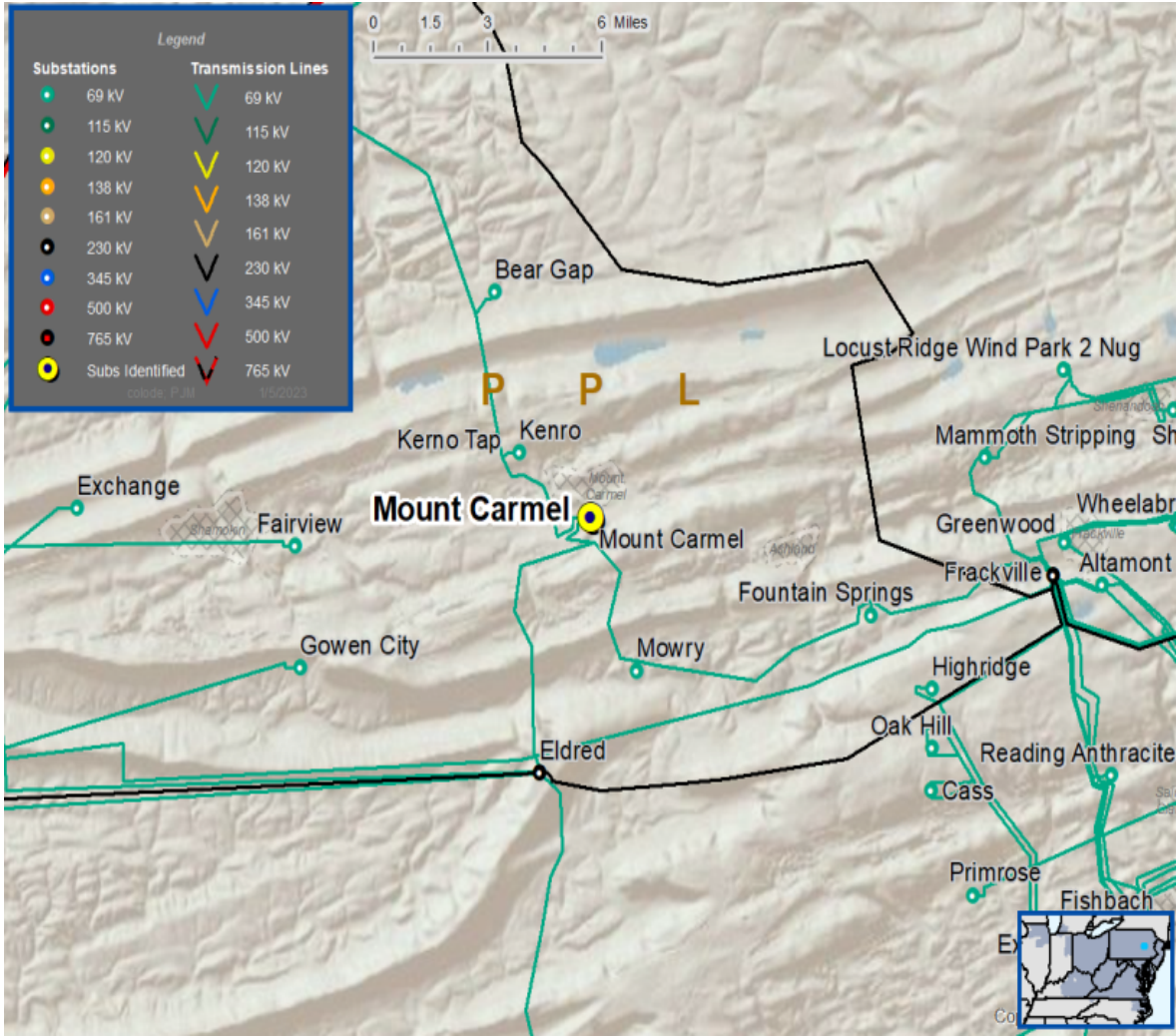
Process Stage: Need

**Supplemental Project Driver:
Customer Service**

Problem Statement:

- A customer has submitted a request to have their facility served from a 69kV transmission line in Mt Carmel, PA. The load is approximately 4 MVA.

Specific Assumption References:
[PPL 2023 Annual Assumptions](#)



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

PPL Transmission Zone: Supplemental

Need Number: PPL-2022-0006

Meeting Date: 01/17/2022

Process Stage: Solution

Previously Presented: 07/21/2022

Supplemental Project Driver: Operational Flexibility and Efficiency

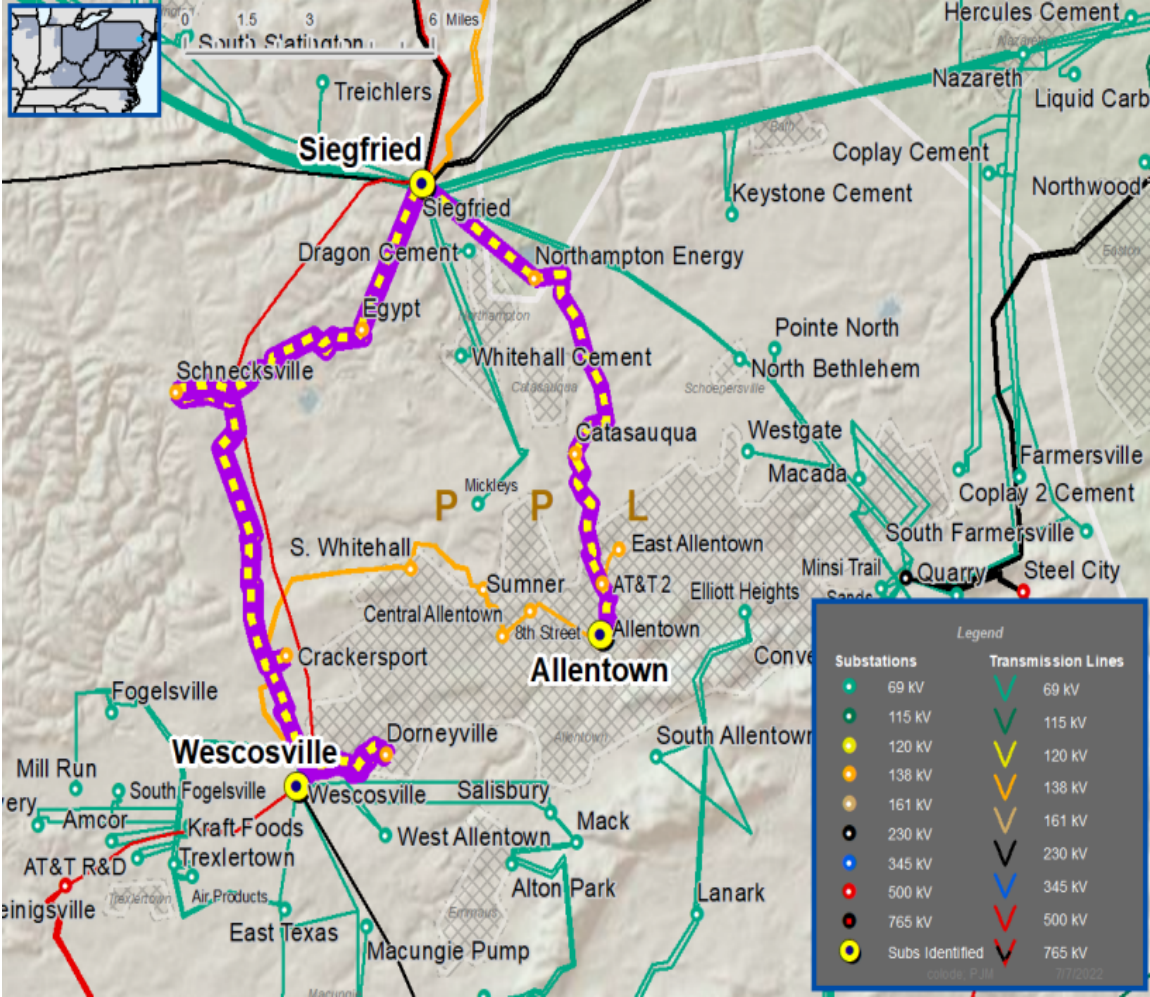
Problem Statement:

PPL EU has experienced poor performance on the 138kV network lines in PPL’s Lehigh Region. Outage performance since 2013:

Line Name	Momentary	Permanent
SIEG-WESC 1	10	
SIEG-WESC 2	9	1
WESC-ALLE 1	3	1
WESC-ALLE 2	5	3

Specific Assumption References:

[PPL 2022 Annual Assumptions](#)



PPL Transmission Zone M-3 Process

Customer 69kV Tap

Need Number: PPL-2022-0006

Proposed Solution:

Install in-line breakers on the Wescosville – Allentown #1 & #2 138kV lines at the existing Sumner substation. Acquire new site and install in-line breaker yard on the Siegfried – Wescosville #1 & #2 138kV.

Alternatives Considered:

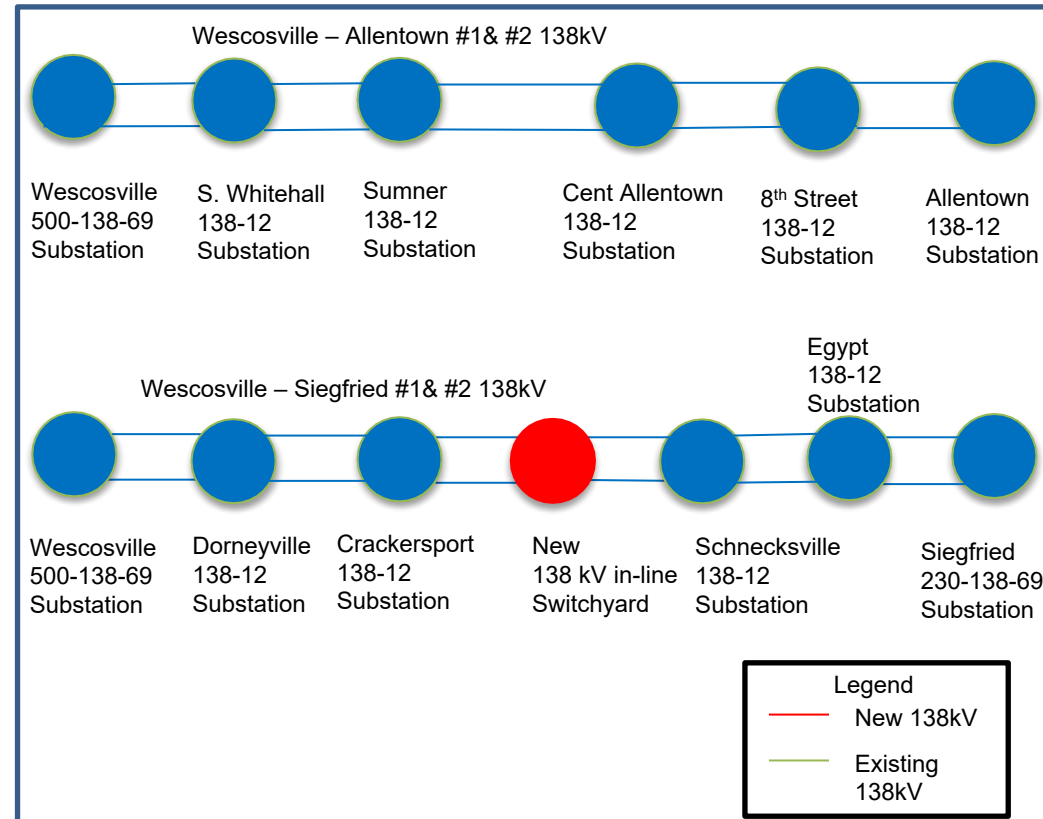
1. No feasible alternatives

Estimated Project Cost: \$8M

Projected In-Service: 12/31/2024

Project Status: Conceptual

Model: 2024



PPL Transmission Zone: Supplemental

Need Number: PPL-2022-0009

Meeting Date: 01/17/2023

Process Stage: Solution

Previously Presented: 11/17/2022

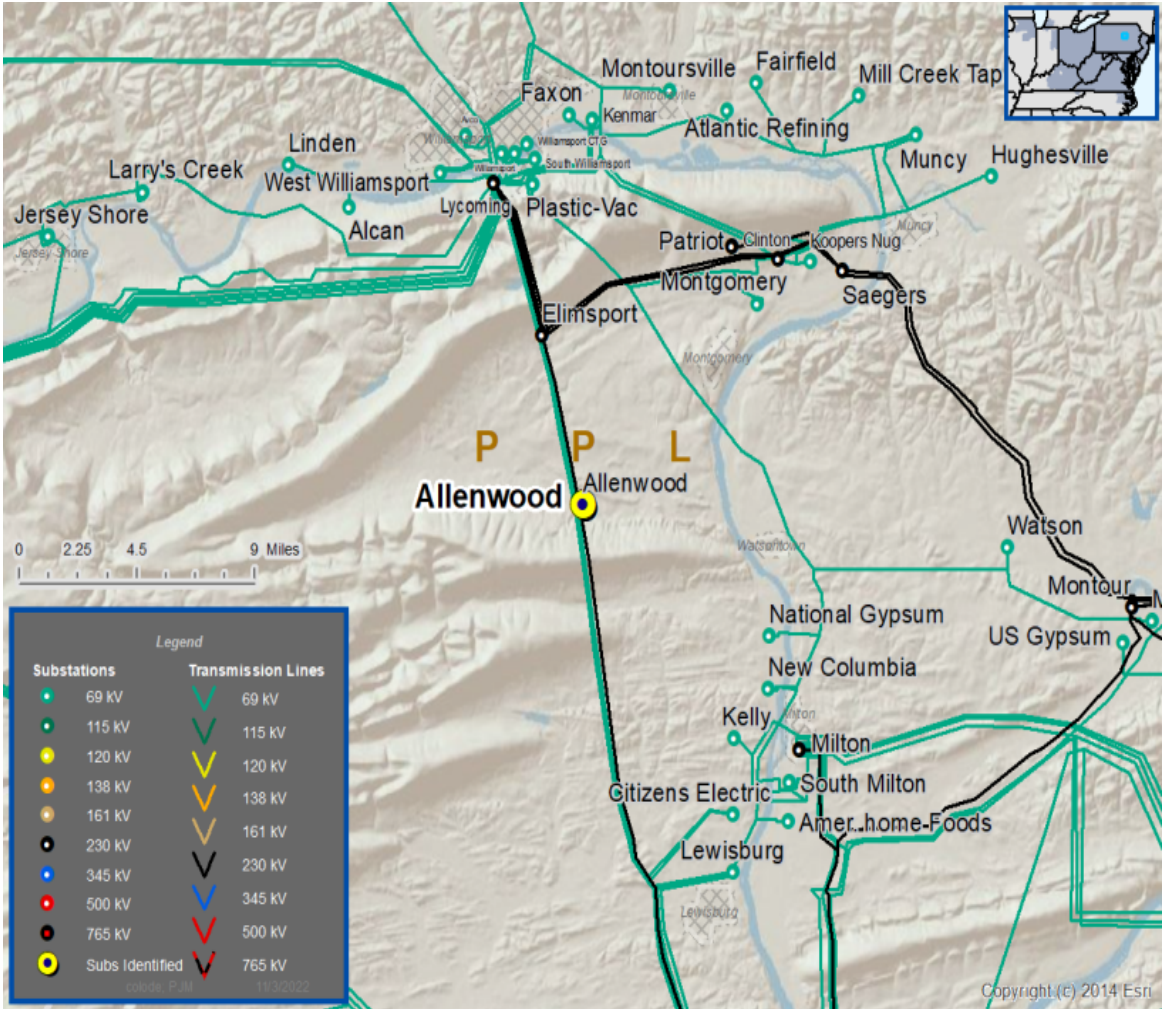
Supplemental Project Driver: Customer Service

Problem Statement:

- PPL Distribution has submitted a request for double circuit 69kV service for a new 69-12kV substation near Allenwood, PA. There have been multiple requests for distribution service from new customers with a total expected load addition of 18-30 MWs. The distribution system in the area does not have sufficient capacity to serve the load.

Specific Assumption References:

[PPL 2022 Annual Assumptions](#)



Need Number: PPL-2022-0009

Proposed Solution:

Extend a new double circuit 69kV tap from the existing Clinton – Milton #1 & #2 69kV lines to interconnect a new Great Stream 69-12.47kV substation. Build 0.1 miles of new 69kV double circuit line using 556 ACSR conductor.

Alternatives Considered:

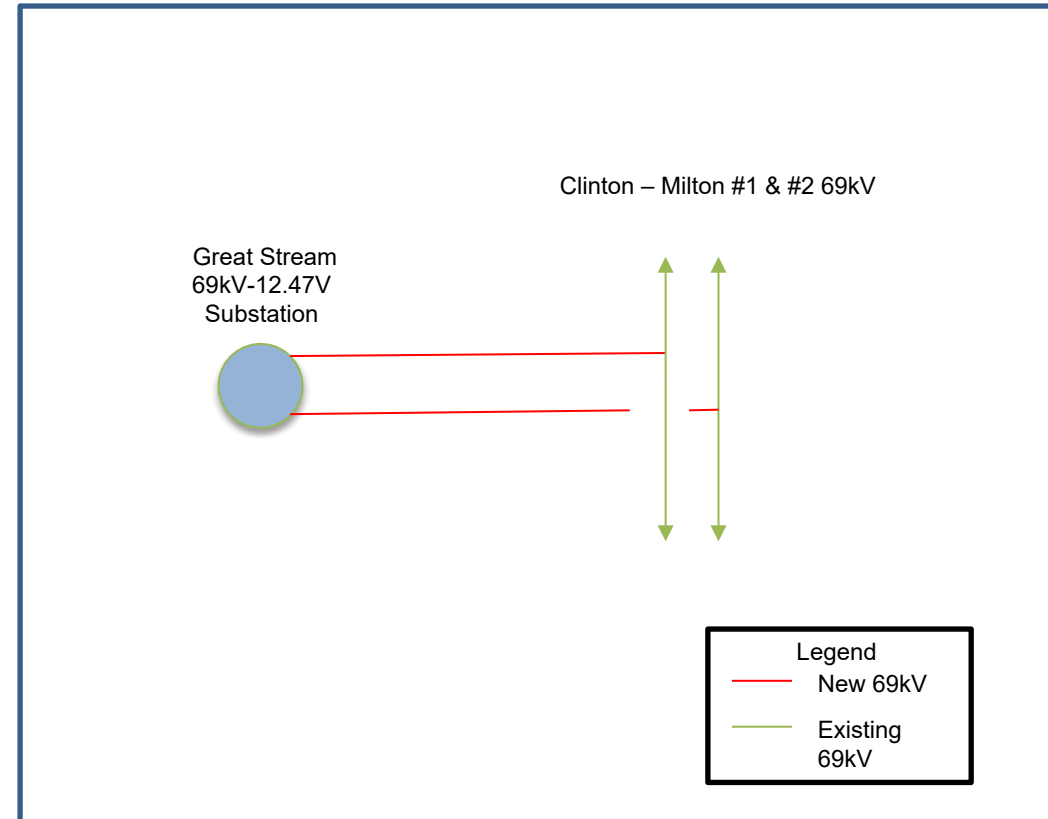
1. No feasible alternatives

Estimated Project Cost: \$1.5M

Projected In-Service: 5/1/2024

Project Status: Conceptual

Model: 2024



S0945.2 project Update

PPL Transmission Zone: Supplemental

Supplemental Number: S0945.2

Meeting Date: 01/17/2023

Need Presented: 2015

Process Stage: Solution

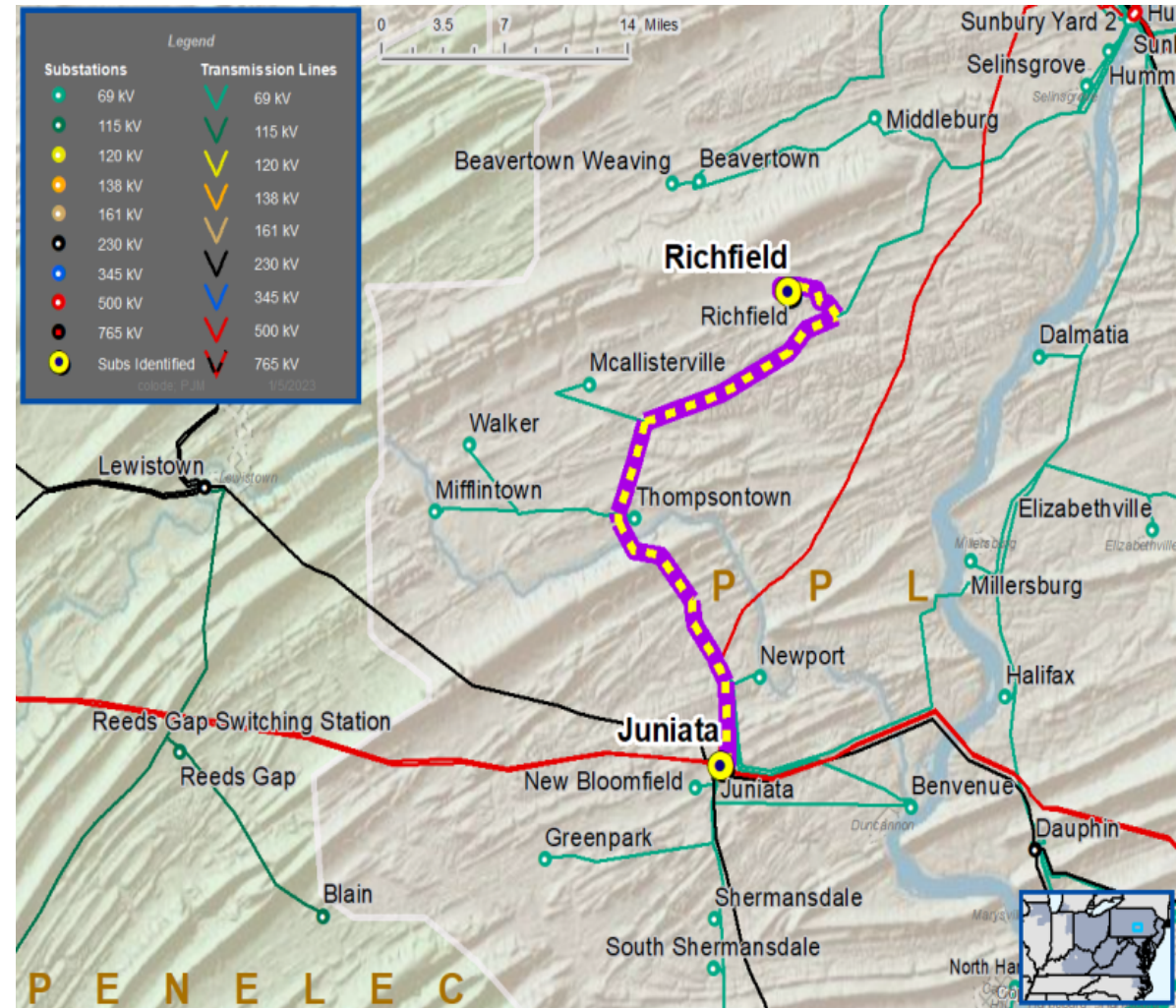
Supplemental Project Driver: Equipment Material Condition, Performance and Risk; Operational Flexibility

Problem Statement:

- The Juniata – Richfield 69kV line is approximately 33 miles long from Juniata to the tie point to the Sunbury – Middleburg 69kV line. Of the 33 miles, 25 are H-frame wood pole structures constructed in 1971 with 556 ACSR conductor. The wood poles, existing fiber, and conductor are reaching end of life.
- The Juniata – Richfield serves multiple distribution subs with limited tie capability. High risk for stranded load on the Walker and Mifflintown tap.
- The existing fiber has reached end of life and has experienced multiple temperature induced outages.

Specific Assumption References:

[PPL 2023 Annual Assumptions](#)



Need Number: S0945.2

Originally Presented Solution:

Install fiber from Juniata to Newport (3.3 miles). Extend double circuit 69kV on existing built for double circuit structures and add fiber from Newport to Thompsontown (9.3 Miles). Rebuild Walker and Mifflintown tap to double circuit 69kV (8.5 miles). Rebuild from Thompsontown to Sunbury – Middleburg tie to double circuit 69kV (21 miles). Rebuild McAlisterville tap to double circuit 69kV (3.0 miles). Extend double circuit 69kV on existing built for double circuit structures on the Richfield tap (2.3 miles)

Alternatives Considered:

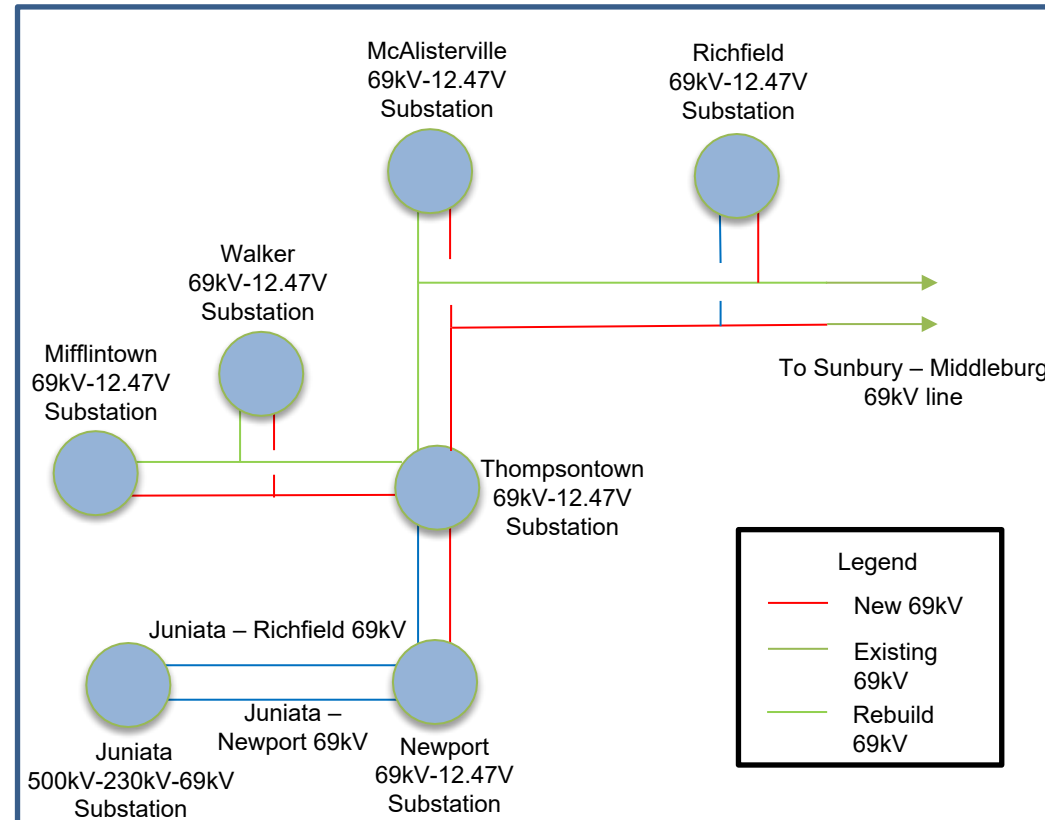
1. No feasible alternatives

Estimated Project Cost: \$42.6M

Projected In-Service: 5/1/2023

Project Status: Development

Model: 2023



Need Number: S0945.2

Proposed Solution:

Install fiber from Juniata to Newport (3.3 miles). Extend double circuit 69kV on existing built for double circuit structures and add fiber from Newport to Thompsontown (9.3 Miles). Replace wood poles and install fiber on Walker tap (5 miles). Replace wood poles, install second circuit, and add fiber on the Mifflintown tap (3.5 miles). Rebuild from Thompsontown to Sunbury – Middleburg tie to single circuit future double circuit 69kV (21 miles). Replace wood poles and add fiber to the McAlisterville tap (3.0 miles). Acquire new greenfield ROW for approximately 6 miles to create a tie between McAlisterville and Walker substations.

Alternatives Considered:

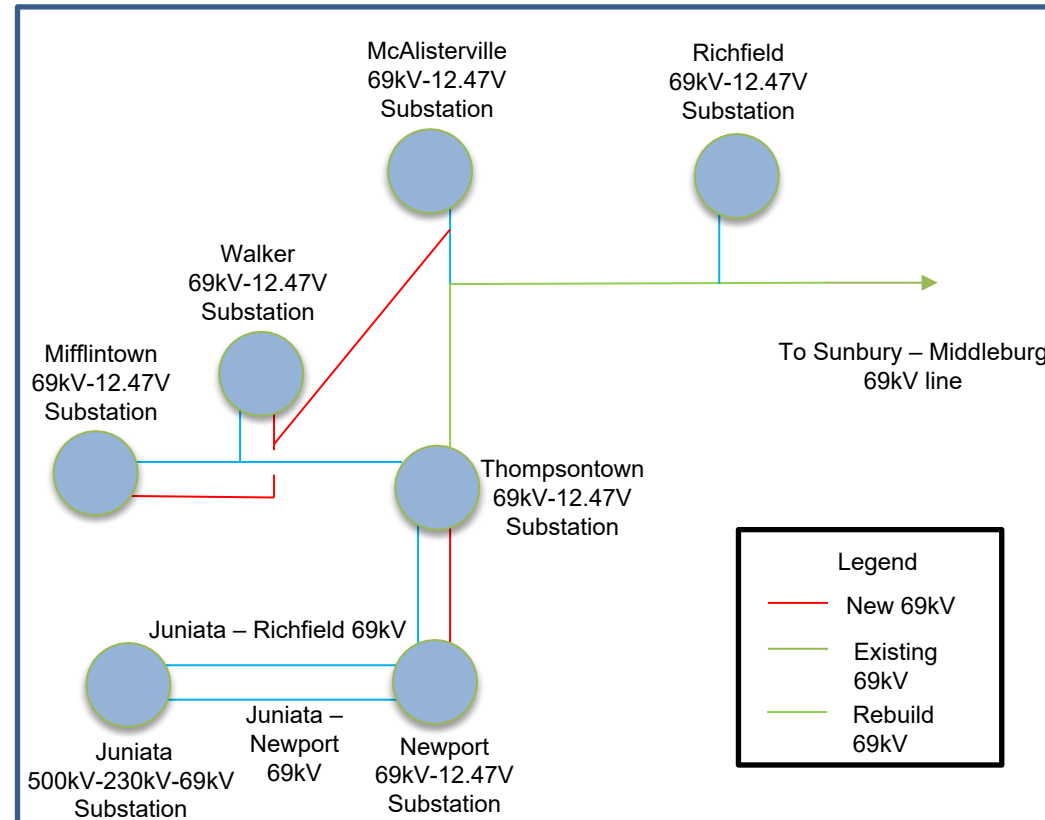
1. No feasible alternatives

Estimated Project Cost: \$59.6M

Projected In-Service: 5/1/2023

Project Status: Development

Model: 2023



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

1/6/2023 – V1 – Original version posted to pjm.com