Subregional RTEP Committee – Mid-Atlantic
PPL Supplemental Projects

March 16, 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

Need Number: PPL-2023-0004

Meeting Date: 03/16/2023

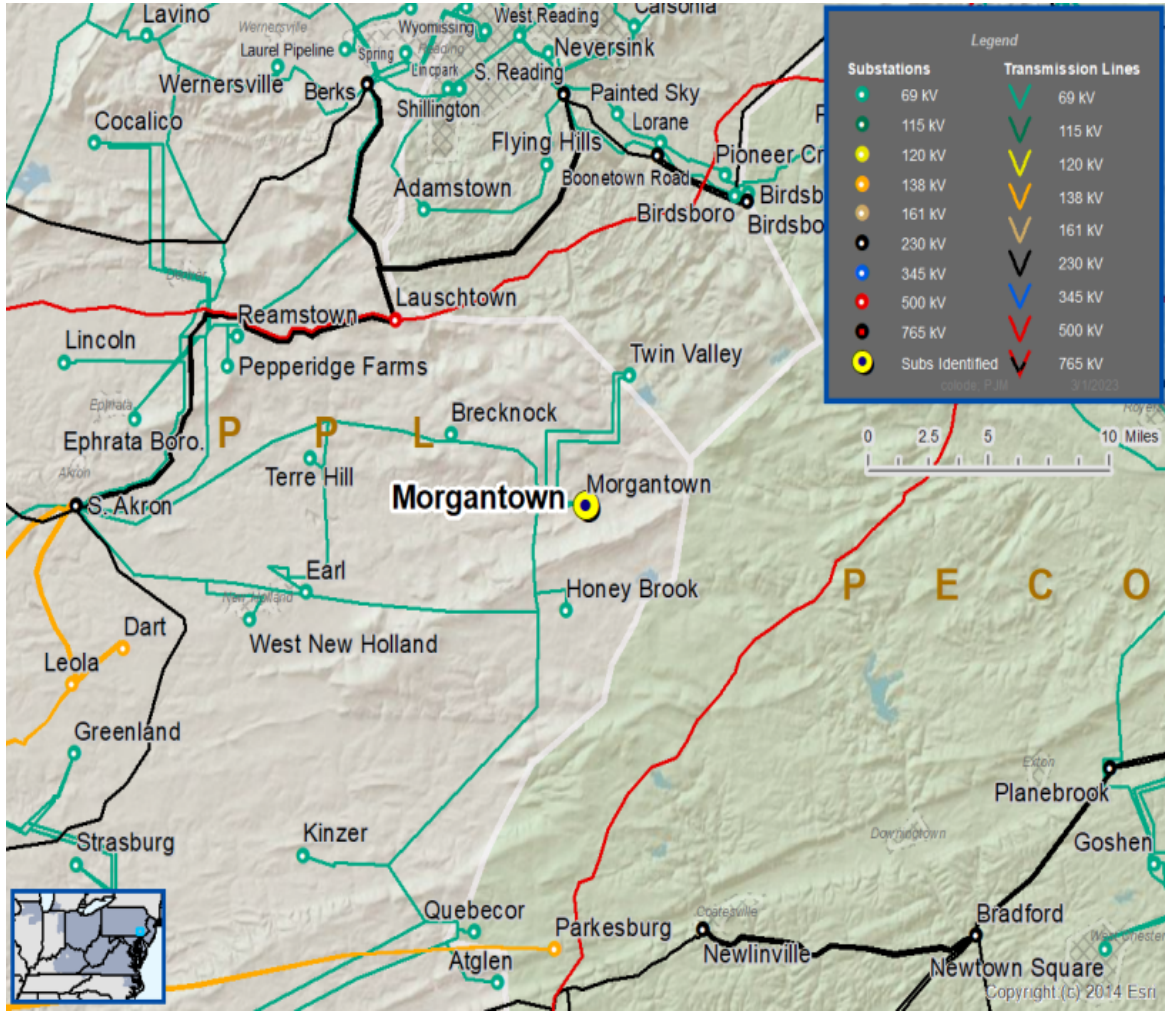
Process Stage: Need

Supplemental Project Driver:
Customer Service

Problem Statement:

- A customer has submitted a request to have their facility served from a 69kV transmission line in Morgantown, PA. The load is approximately 10 MVA.

Specific Assumption References:
[PPL 2023 Annual Assumptions]



PPL Transmission Zone: Supplemental

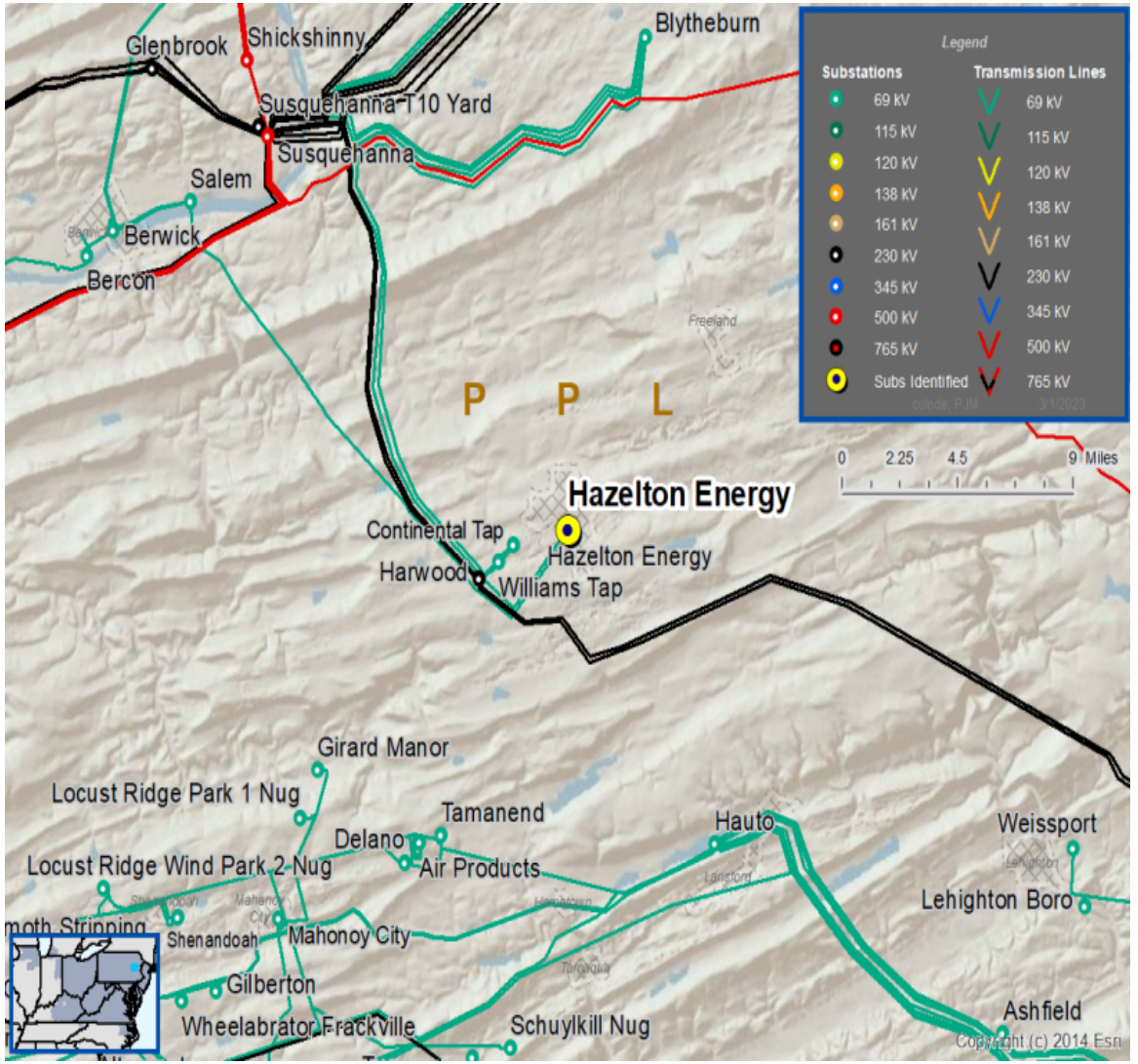
Need Number: PPL-2023-0005
Meeting Date: 03/16/2023
Process Stage: Need
Supplemental Project Driver: Customer Service

Problem Statement:

- PPL Distribution has submitted a request for double circuit 69kV service for a new 69-12kV substation near Hazelton, PA. There have been multiple requests for distribution service from new customers with a total expected load addition of 30-40 MWs. The distribution system in the area does not have sufficient capacity to serve the load.

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-2022-0001

Meeting Date: 03/16/2023

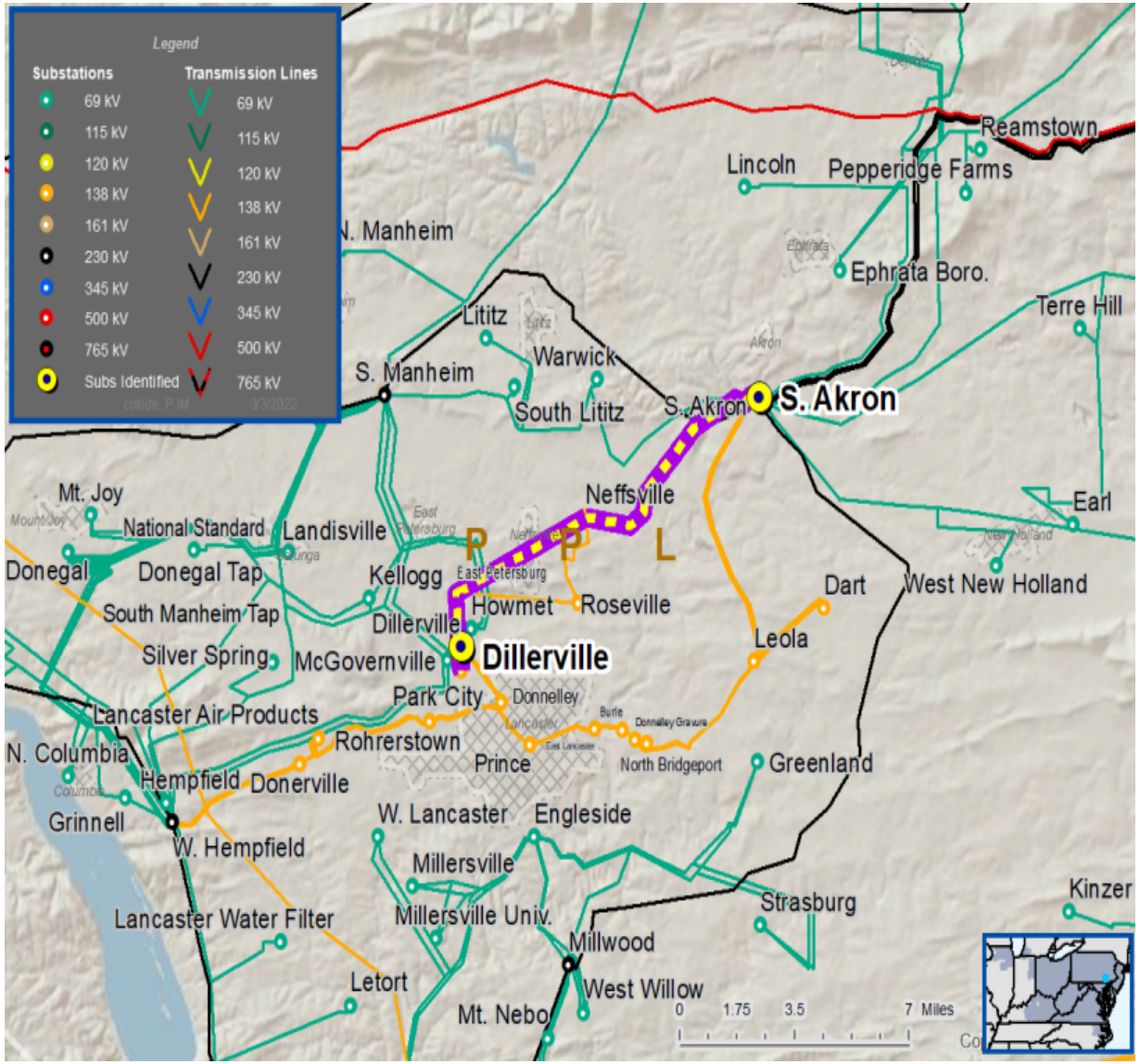
Process Stage: Solution

Need Slide Presented: 3/17/2022

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

Problem Statement:

The South Akron-Dillerville 1&2 138kV lines are a reliability risk due to frequent operations and poor asset health. The lines have experienced a combined 17 operations since 2014. The lines are in poor condition with the majority of the original assets installed in 1948. This is a 12.5 mile line, installed with 556.5 kcmil ACSR conductor and a mix of steel monopoles and lattice towers.



Specific Assumption References:

[PPL 2022 Annual Assumptions]

Need Number: PPL-2022-0001

Proposed Solution:

- Rebuild 11.3 miles of the 12.5 miles of the South Akron – Dillerville #1 & #2 138kV lines with steel poles and 556 ACSR conductor. 1.2 miles of the line was rebuilt in 2013. If possible, any existing recently installed steel monopoles will be incorporated into the design.

Alternatives Considered:

1. No feasible alternatives

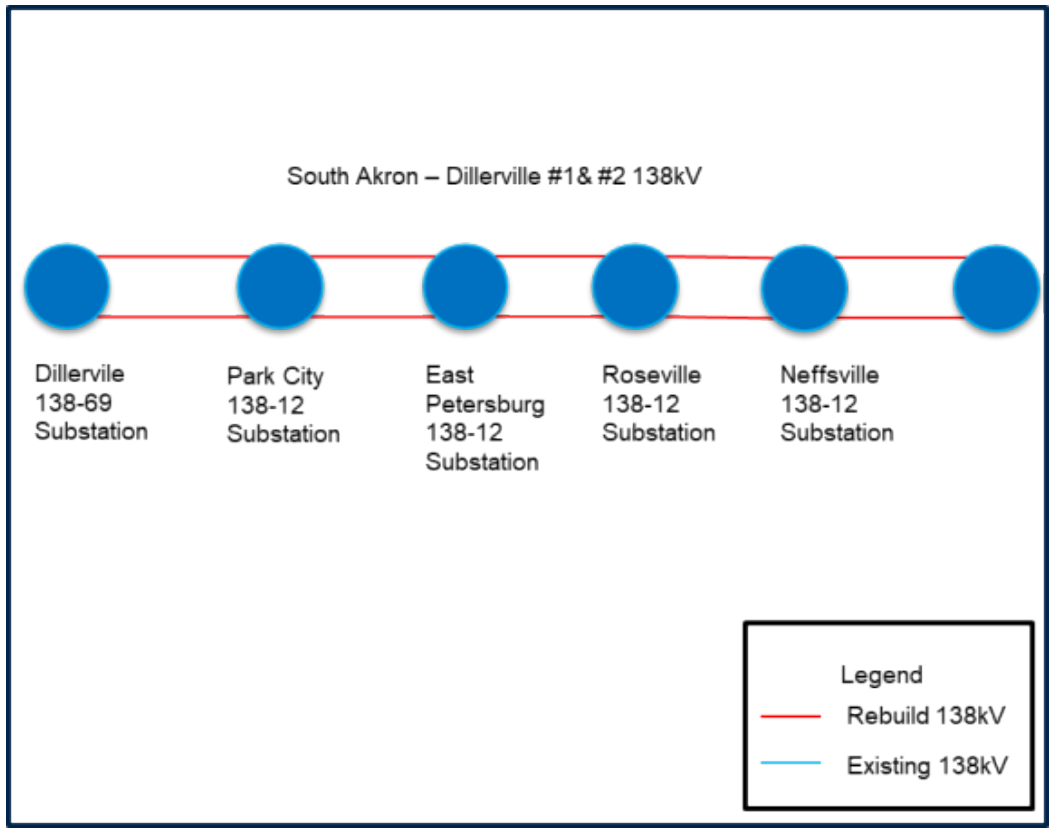
Estimated Project Cost: $31.5M

Projected In-Service: 4/30/2025

Project Status: Conceptual

Model: 2025

Specific Assumption References:
PPL 2022 Annual Assumptions



PPL Transmission Zone: Supplemental

Need Number: PPL-2022-0002

Meeting Date: 03/16/2023

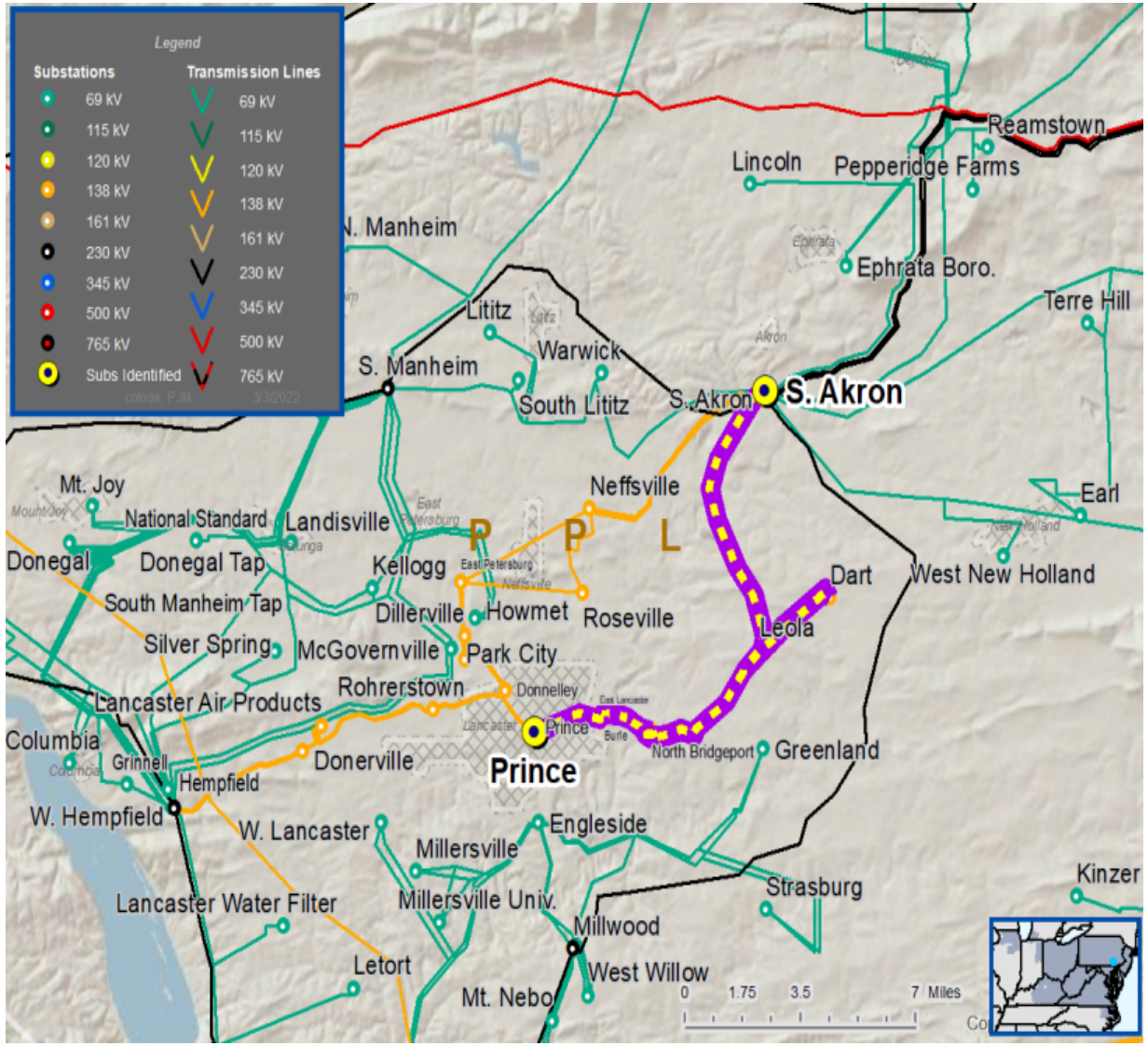
Process Stage: Solution

Need Slide Presented: 3/17/2022

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

Problem Statement:

The South Akron-Prince 1&2 138kV lines are a reliability risk due to frequent operations and poor asset health. The lines have experienced a combined 16 operations since 2014. The lines are in poor condition with the majority of the original assets installed in 1950. This is an 11-mile line, installed with 556.5 and 795 kcmil ACSR and a mix of steel monopoles and lattice towers.



Specific Assumption References:

[PPL 2022 Annual Assumptions]

PPL Transmission Zone: Supplemental

Need Number: PPL-2022-0002

Proposed Solution:

- Rebuild 11 miles of the South Akron – Prince #1 & #2 138kV lines with steel poles and 556 ACSR conductor. If possible, any existing recently installed steel monopoles will be incorporated into the design.

Alternatives Considered:

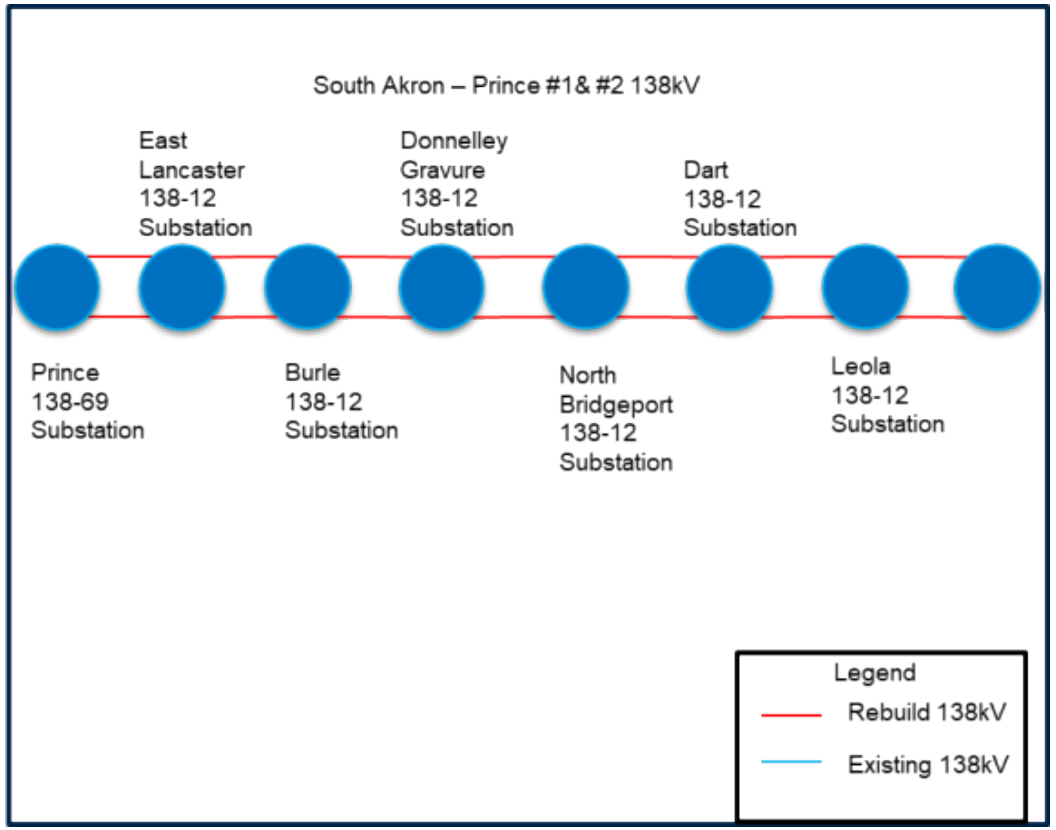
No feasible alternatives

Estimated Project Cost: $36M

Projected In-Service: 12/30/2025

Project Status: Conceptual

Model: 2026



Specific Assumption References:
PPL 2022 Annual Assumptions

PPL Transmission Zone: Supplemental

Need Number: PPL-2022-0007

Meeting Date: 03/16/2023

Process Stage: Solution

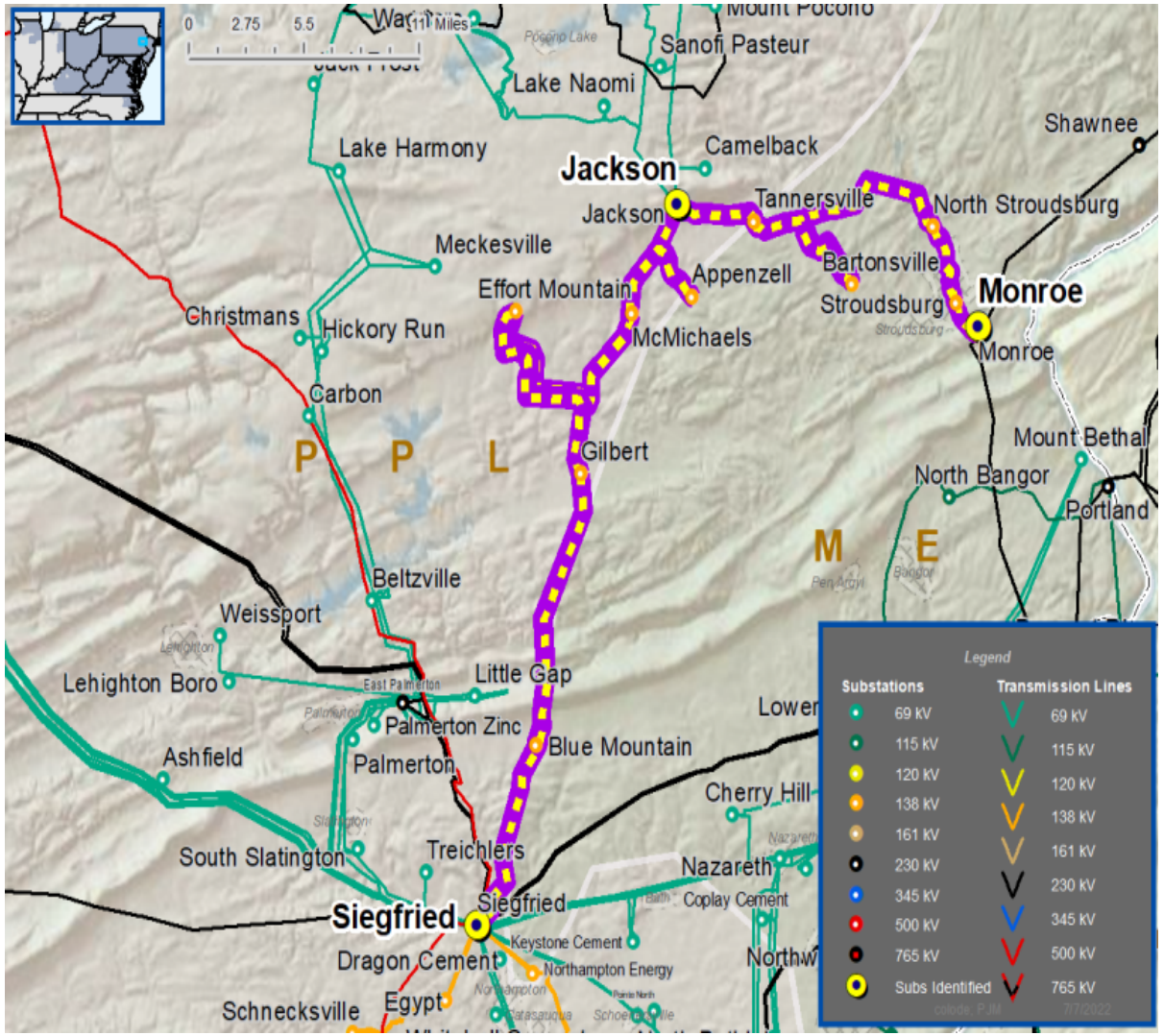
Need Slide Presented: 07/21/2022

Supplemental Project Driver: Operational Flexibility and Efficiency

Problem Statement:

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

Line Name	Momentary	Permanent
MONR-JKSN 1	11	
MONR-JKSN 2	6	
SIEG-JKSN 1	13	2
SIEG-JKSN 2	16	1



Specific Assumption References:

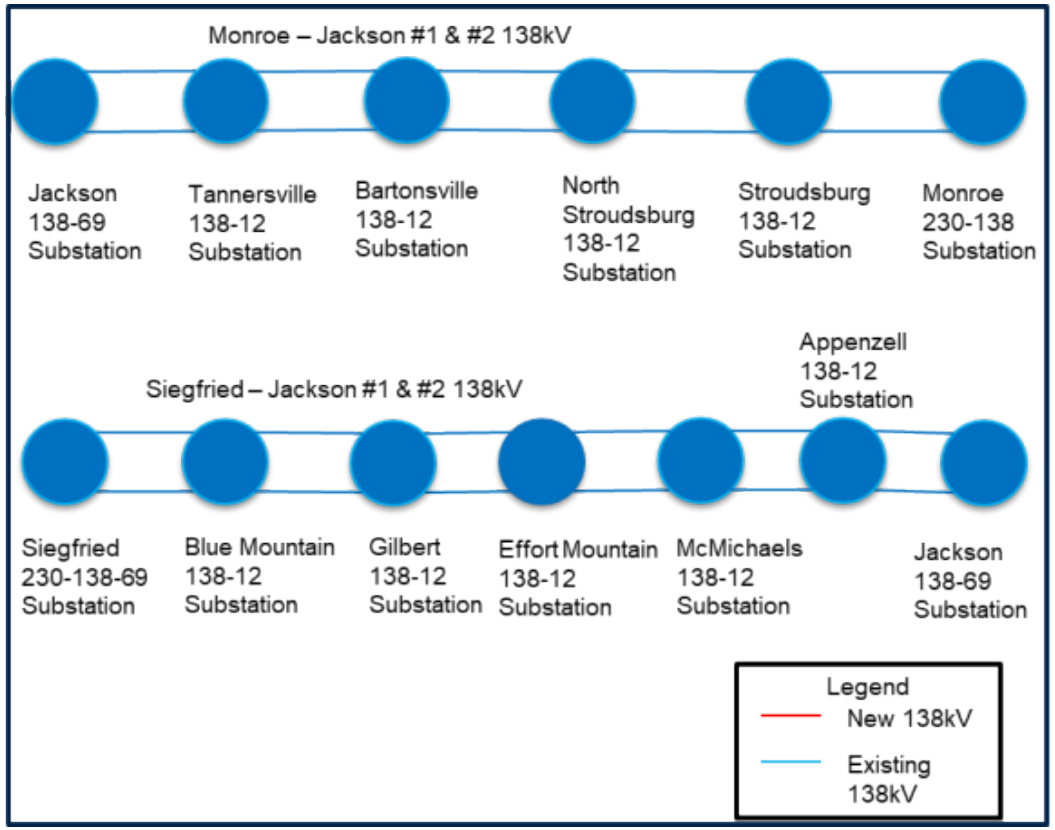
[PPL 2022 Annual Assumptions]

PPL Transmission Zone: Supplemental

- **Need Number: PPL-2022-0007**
- **Proposed Solution:**
- Install in-line breakers on the Monroe – Jackson #1 & #2 138kV lines at the existing North Stroudsburg substation. Install in-line breakers on the Siegfried – Jackson #1 & #2 138kV lines at the existing Gilbert substation.
- **Alternatives Considered:**

1. No feasible alternatives

- **Estimated Project Cost:** $8M
- **Projected In-Service:** 12/31/2024
- **Project Status:** Conceptual
- **Model:** 2024



Specific Assumption References:
PPL 2022 Annual Assumptions

PPL Transmission Zone: Supplemental

Need Number: PPL-2023-0002

Meeting Date: 03/16/2023

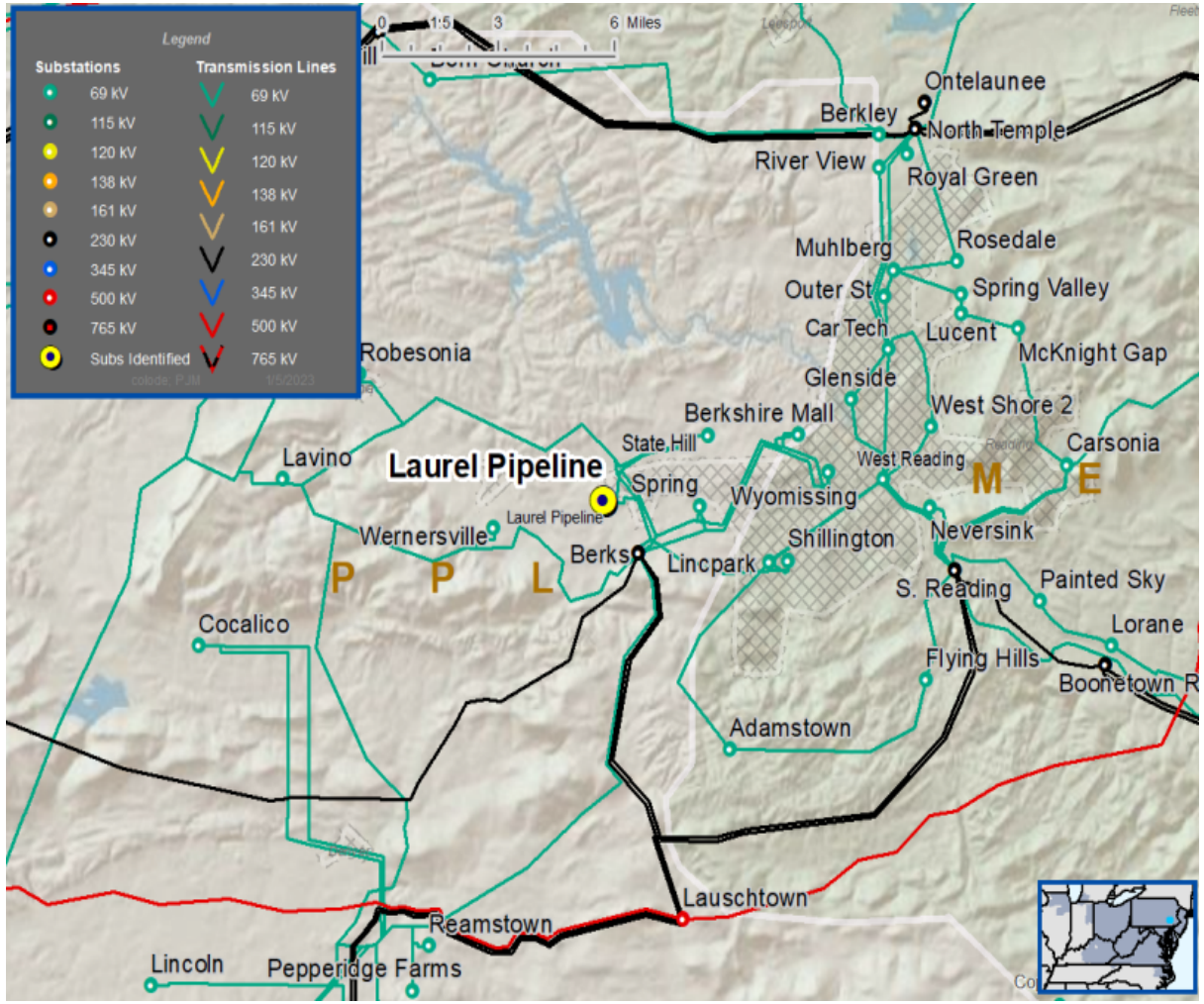
Process Stage: Solution

Need Slide Presented: 01/17/2023

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:

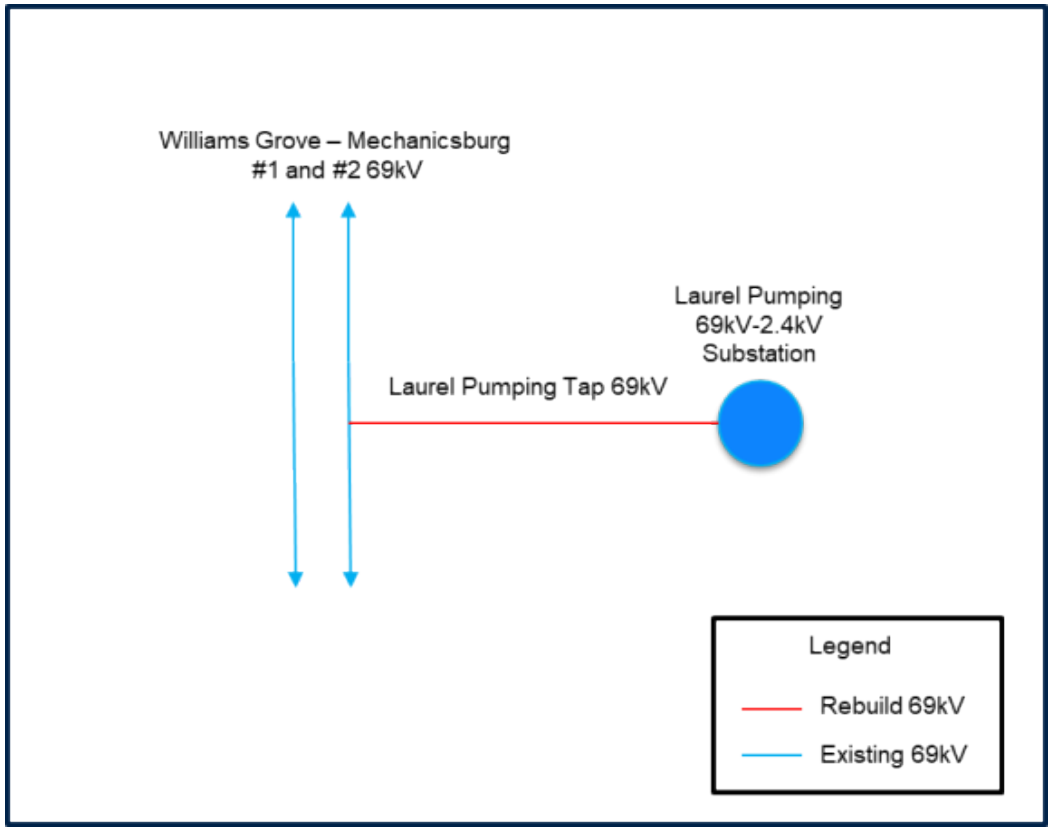
[PPL 2022 Annual Assumptions]

Need Number: PPL-2023-0002

- **Proposed Solution:**
- Rebuild the 0.66 miles of the Laurel Pumping 69kV Tap with steel poles and 556 ACSR conductor.
- **Alternatives Considered:**

1. No feasible alternatives

- **Estimated Project Cost:** $1.1M
- **Projected In-Service:** 12/31/2023
- **Project Status:** Conceptual
- **Model:** 2023



Specific Assumption References:
PPL 2022 Annual Assumptions

PPL Transmission Zone: Supplemental

Need Number: PPL-2023-0003

Meeting Date: 03/16/2023

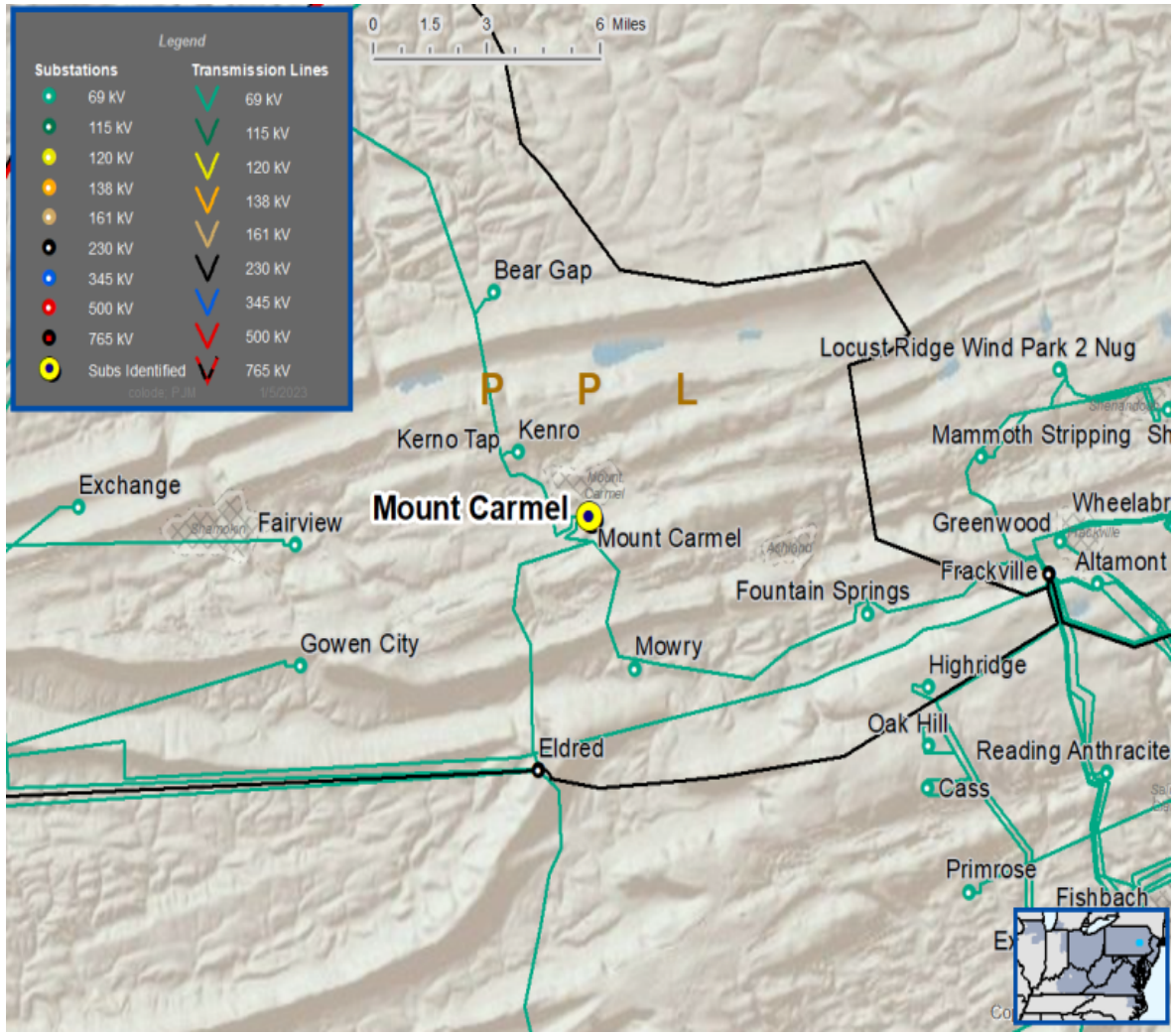
Process Stage: Solution

Need Slide Presented: 01/17/2023

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.



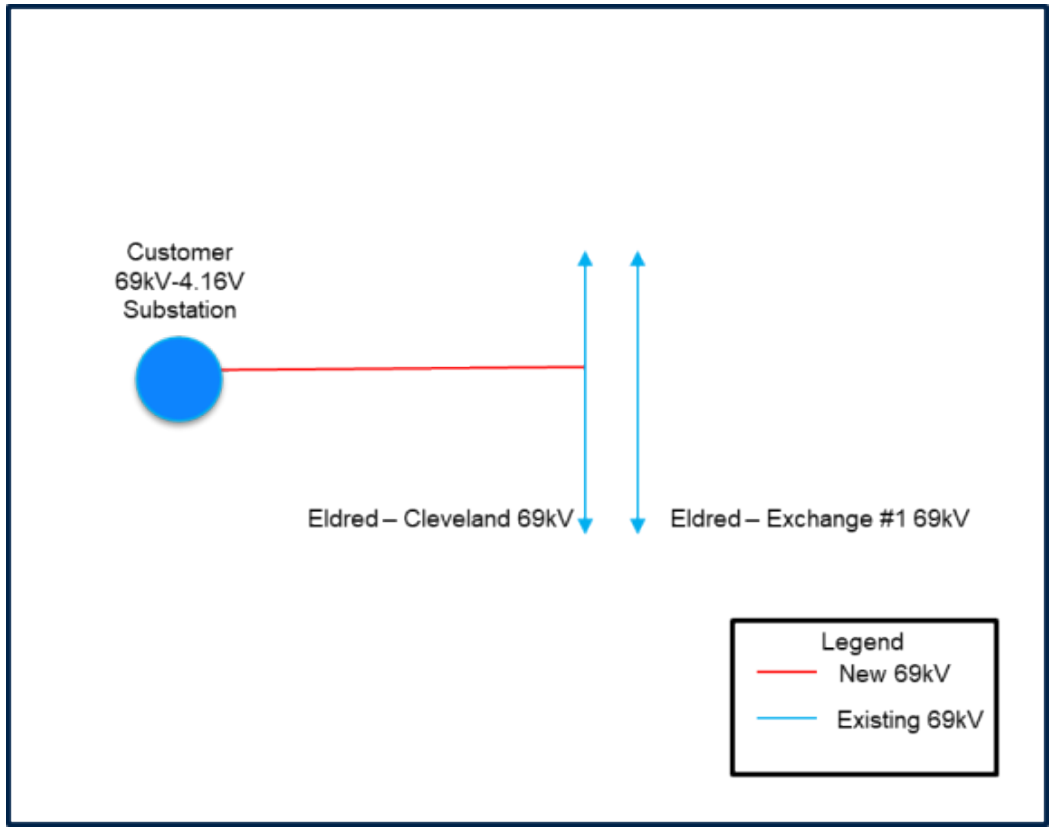
Specific Assumption References:
[PPL 2022 Annual Assumptions]

Need Number: PPL-2023-0003

- **Proposed Solution:**
- Extend a new single circuit 69kV tap from the existing Eldred – Cleveland 69kV line to interconnect a new customer owned 69-4.16kV substation. Build 0.1 miles of new 69kV single circuit line using 556 ACSR conductor.
- **Alternatives Considered:**

1. No feasible alternatives

- **Estimated Project Cost:** $0.6M
- **Projected In-Service:** 6/30/2024
- **Project Status:** Conceptual
- **Model:** 2024



Specific Assumption References:
PPL 2022 Annual Assumptions

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

3/6/2023 – V1 – Original version posted to pjm.com
3/20/2023 – V2 – Solution Slides updated for PPL-2022-0001 & PPL-2022-0002