

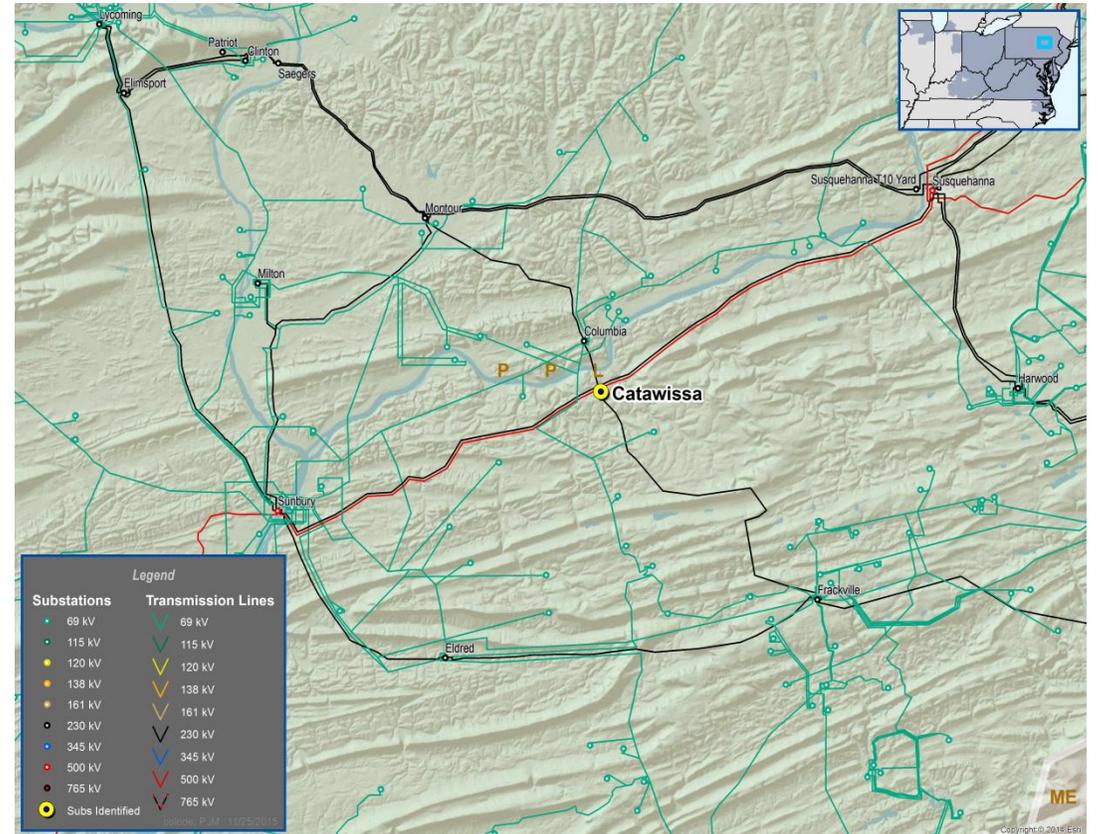
# Submission of PPL Supplemental Projects for Inclusion in the Local Plan

The following three slides are, Local Plan for  
S1106 project scope change  
Original project was presented Pre M3 process

Submission of Supplemental Project for  
inclusion in the Local Plan 3/24/2020

# S1106 Project Scope Change

- The project was presented pre M3 process in January, 2016
- Project S1106 (Catawissa substation) was identified to address stability issue in the Montour area. Three phase fault with normal clearing on double circuit Montour-Susquehanna 230 kV line will cause generator instability and tripping of multiple power plants (~2400 MW).
- The project was a new substation which taps the Sunbury – Susquehanna 500kV on the high side and Sunbury – Susquehanna & Columbia – Frackville 230 kV circuits on the low side



# PPL Transmission Zone M-3 Process

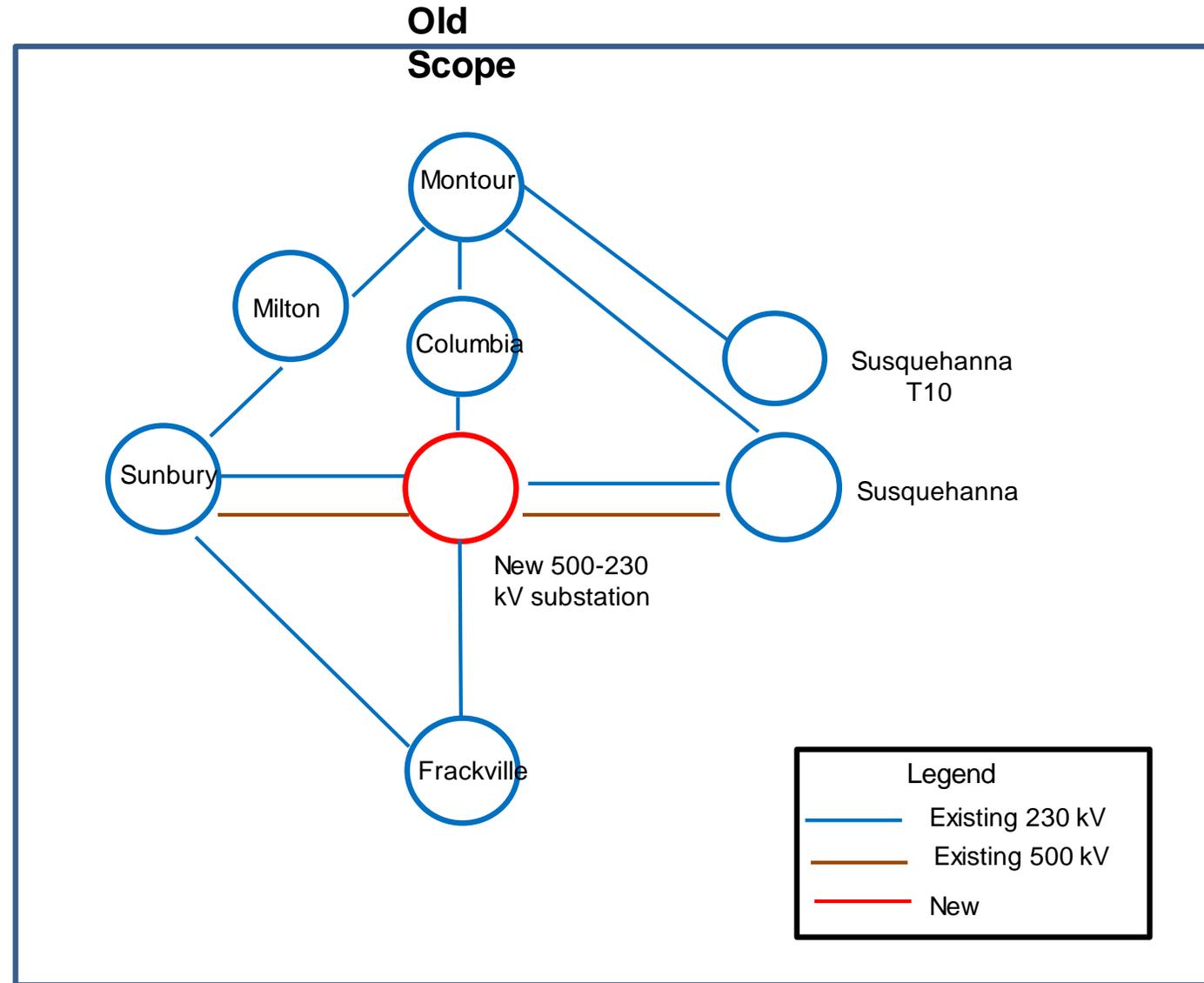
## Existing Solution:

Build a new 500-230 kV substation and associated transmission work by tapping Sunbury-Susquehanna 500 and 230 kV lines and Columbia-Frackville 230 kV line.

**Estimated Project Cost:** \$95M

**Projected In-Service:** 07/31/2022

**Model:** 2020



# PPL Transmission Zone M-3 Process

## Updated Potential Solution:

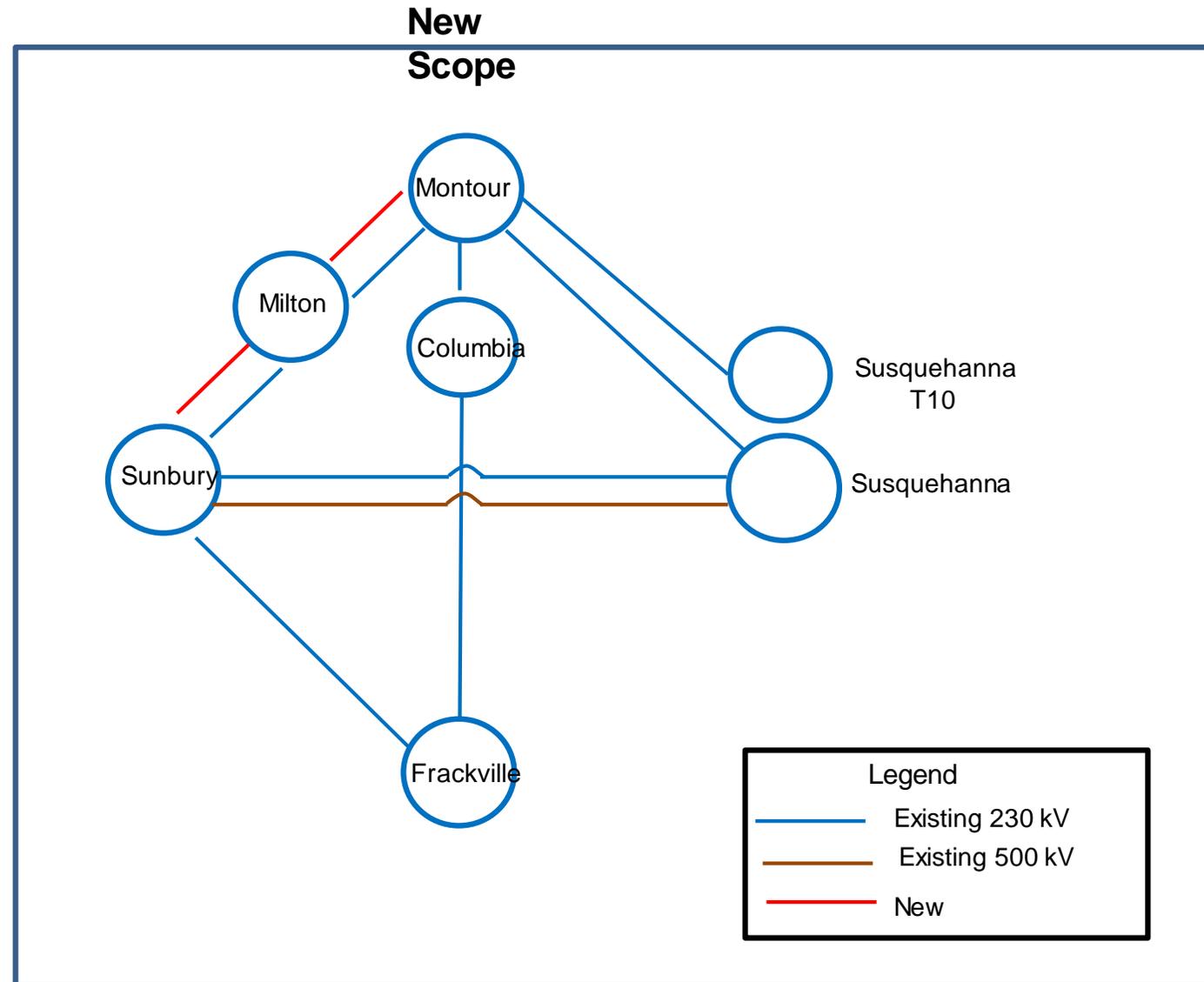
- Establish ~22 miles of second circuit on existing 230 kV lines between Montour, Milton and Sunbury substations.
  - Rebuild ~12 miles of Montour-Milton 230 kV line to double circuit.
  - Change the operating voltage of ~10 miles of 69 kV line between MILT and SUNB 230 kV substations.
- Perform line terminal work at Montour, Milton and Sunbury 230 kV substations to terminate the new circuit.

**Estimated Project Cost:** \$63M

**Projected In-Service:** 07/31/2023

**Project Status:** Conceptual

**Model:** 2020



# PPL Transmission Zone M-3 Process

## Ringtown 69kV Tap

**Need Number:** PPL-2019-0015

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 6/2/2020

**Previously Presented:**

Needs Meeting February 22, 2019

Solution Meeting November 18, 2019

**Project Driver:**

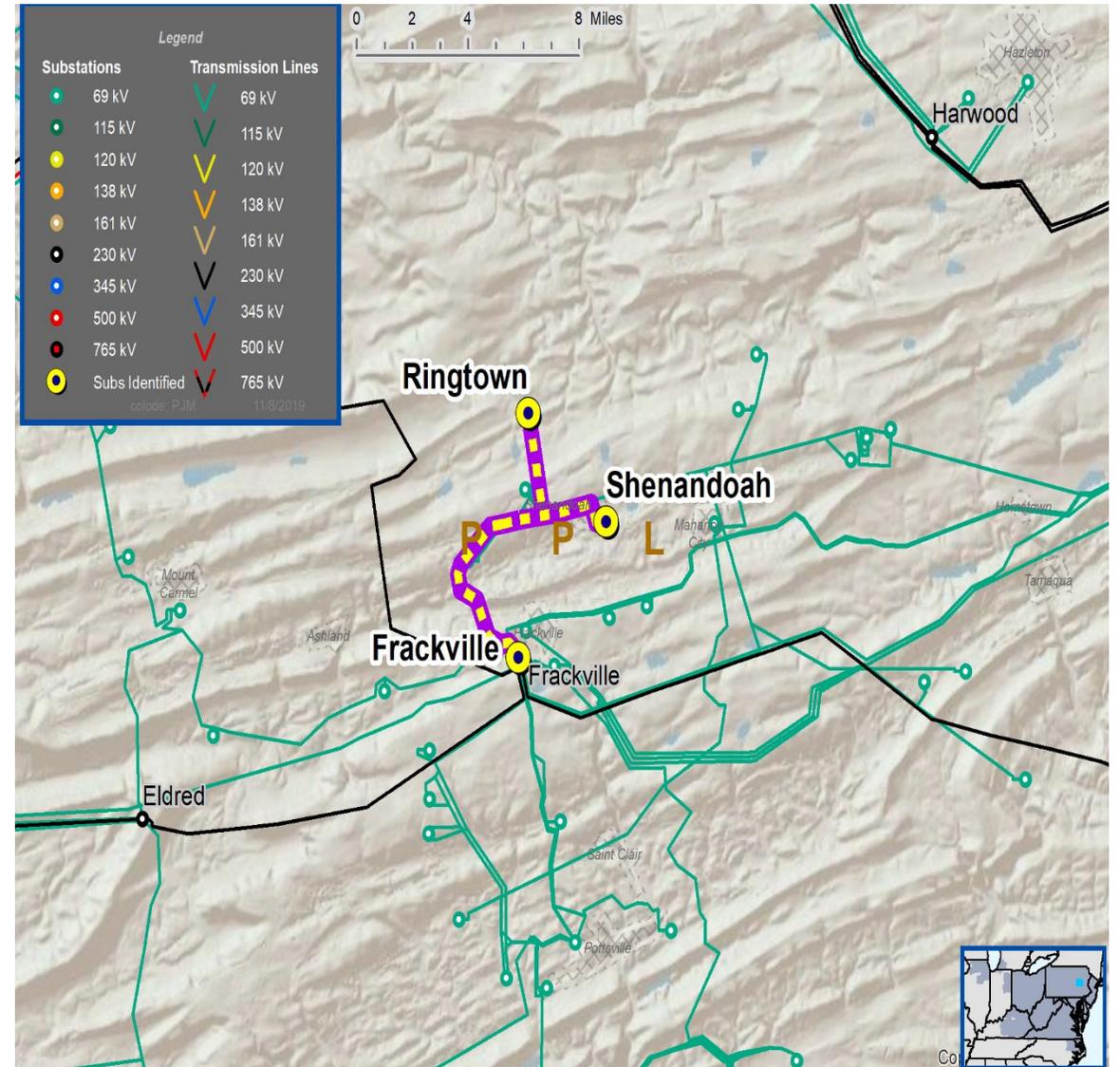
Customer Service

**Specific Assumption Reference:**

[PPL 2019 Annual Assumptions](#)

**Problem Statement:**

A PPL Distribution 12kV circuit is prone to long outages due to its inaccessible terrain. This radial tap serves over 1,000 customers that have been subject to numerous outages since 2013.



# PPL Transmission Zone M-3 Process Ringtown 69kV Tap

**Need Number:** PPL-2019-0015

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 6/2/2020

**Selected Solution:**

Install new 69-12kV Ringtown substation and interconnect the distribution substation with a 69kV tap from the existing Frackville – Shenandoah 69kV line.

- Build 0.1 miles of new 69kV single circuit initial future double circuit line with steel poles and 556 ACSR conductor.

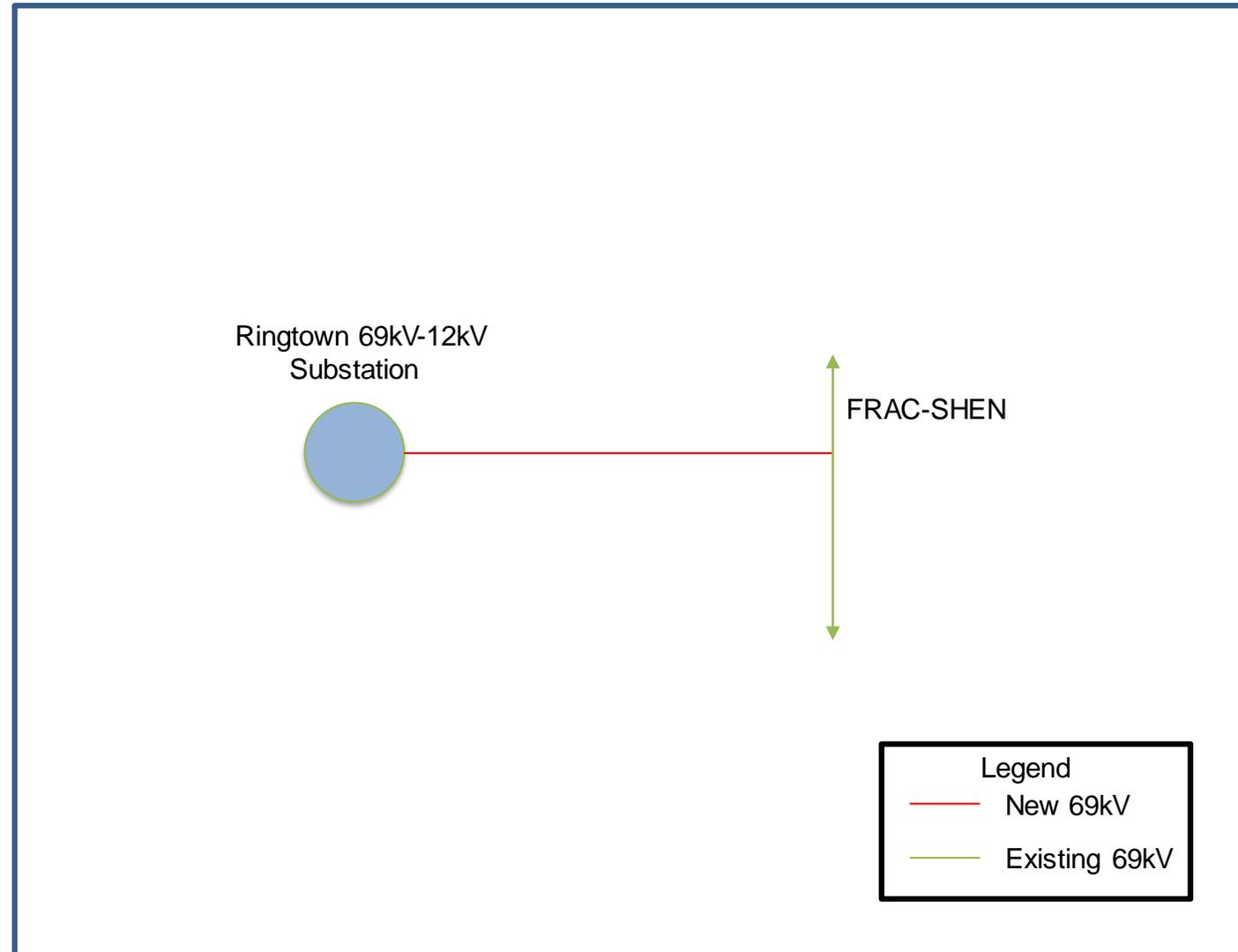
**Estimated Cost:** \$0.9M

**Projected In-Service:** 11/30/2021

**Supplemental Project ID:** s2168

**Project Status:** Planning

**Model:** 2022 Case



# PPL Transmission Zone M-3 Process Theta 69kV Tap

**Need Number:** PPL-2019-0018

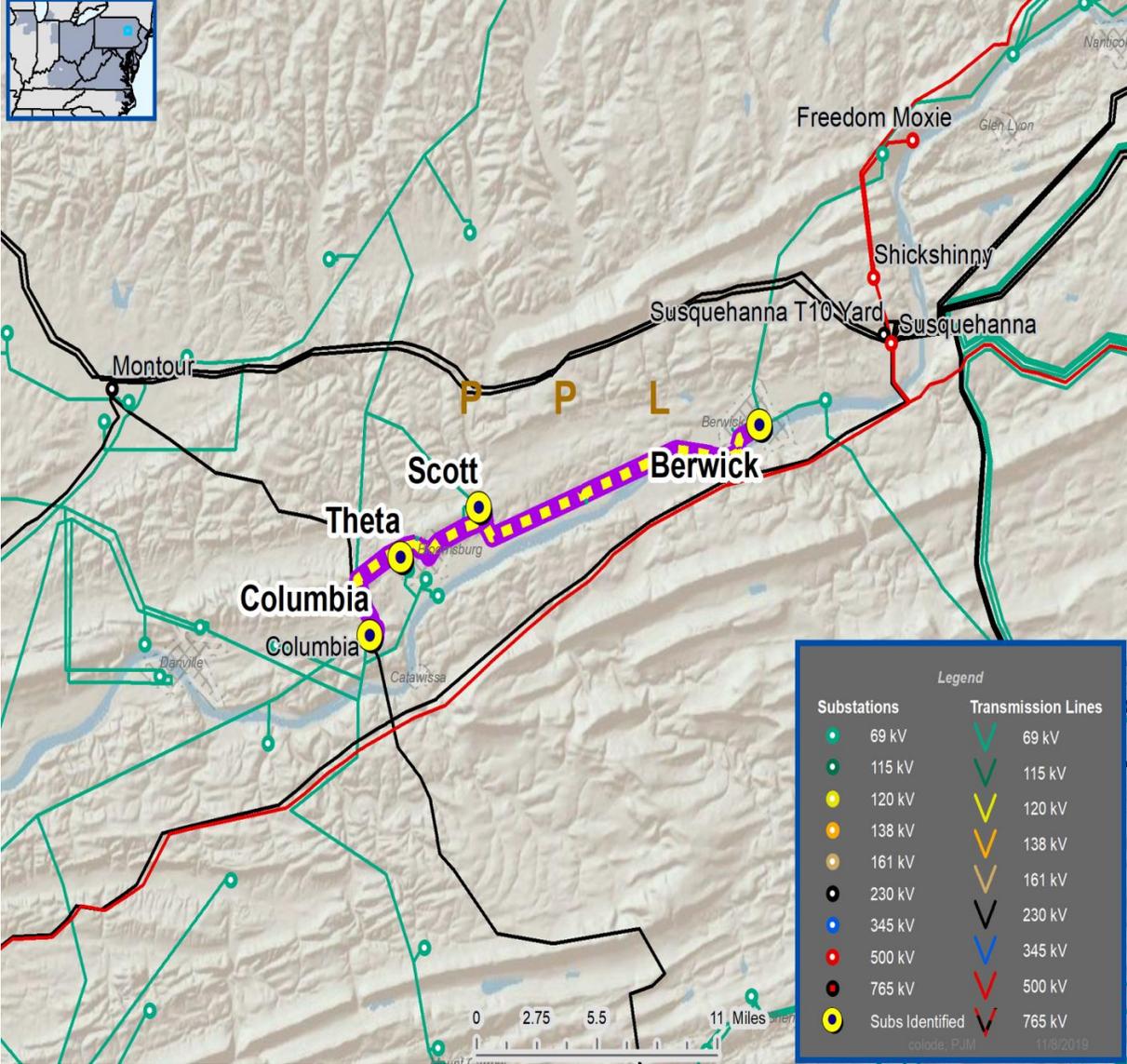
**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 6/2/2020

**Previously Presented:**  
Needs Meeting February 22, 2019  
Solution Meeting November 18, 2019

**Project Driver:**  
Customer Service

**Specific Assumption Reference:**  
[PPL 2019 Annual Assumptions](#)

**Problem Statement:**  
PPL Distribution has submitted a request for a 69 kV transmission source to their new Theta 69/12kV substation to improve reliability in the area.



# PPL Transmission Zone M-3 Process Theta 69kV Tap

**Need Number:** PPL-2019-0018

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 6/2/2020

**Selected Solution:**

Install new 69-12kV Theta substation and interconnect the distribution substation with a double circuit 69kV tap from the existing Columbia – Scott and Columbia – Berwick 69kV lines.

- Build 0.2 miles of new 69kV double circuit line with steel poles and 556 ACSR conductor.

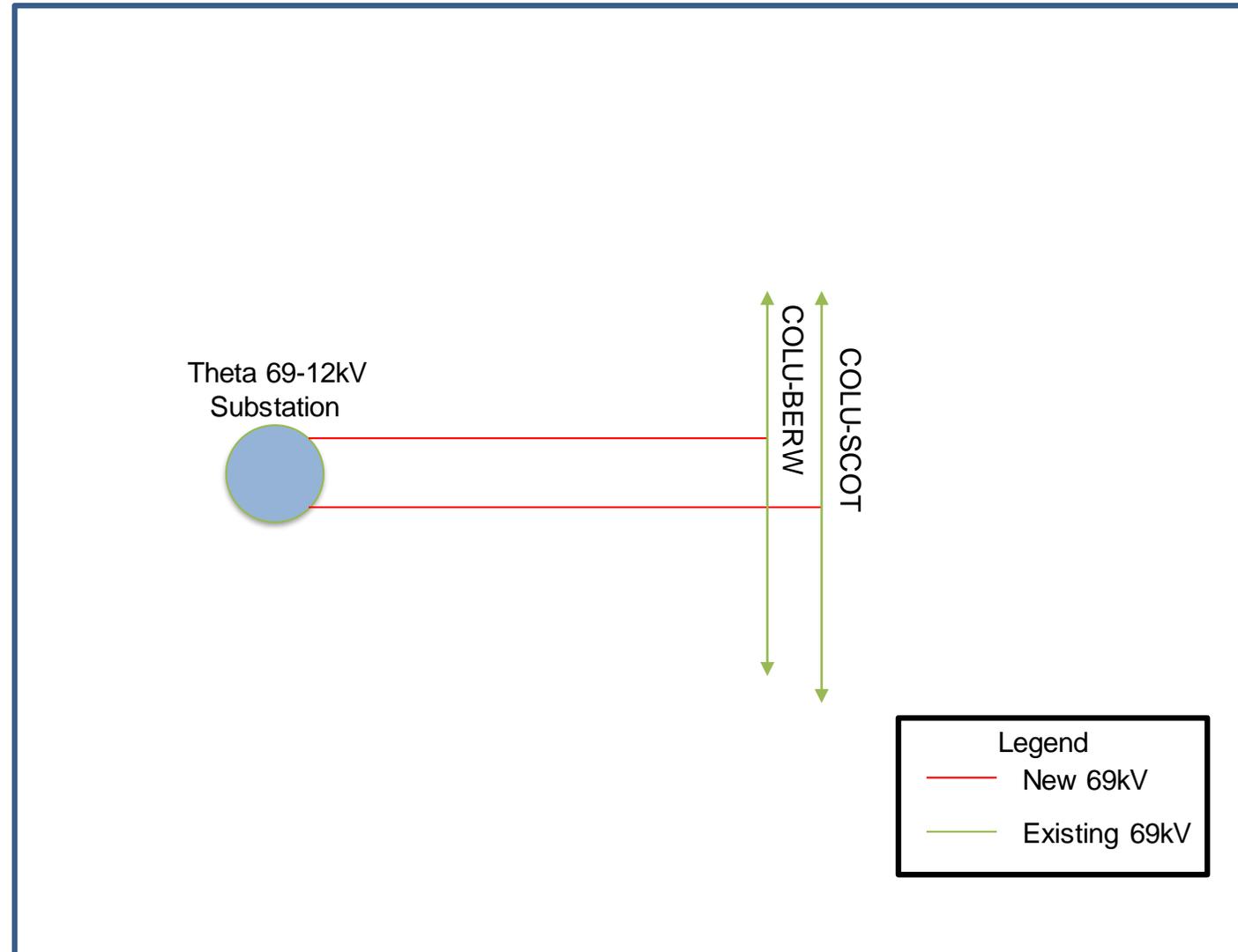
**Estimated Cost:** \$1.4M

**Projected In-Service:** 11/30/2022

**Supplemental Project ID:** s2169

**Project Status:** Planning

**Model:** 2023 Case



# PPL Transmission Zone M-3 Process West Allentown, PA

**Need Number:** PPL-2019-0019

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 6/2/2020

**Previously Presented:**

Needs Meeting December 16, 2019  
Solution Meeting February 11, 2020

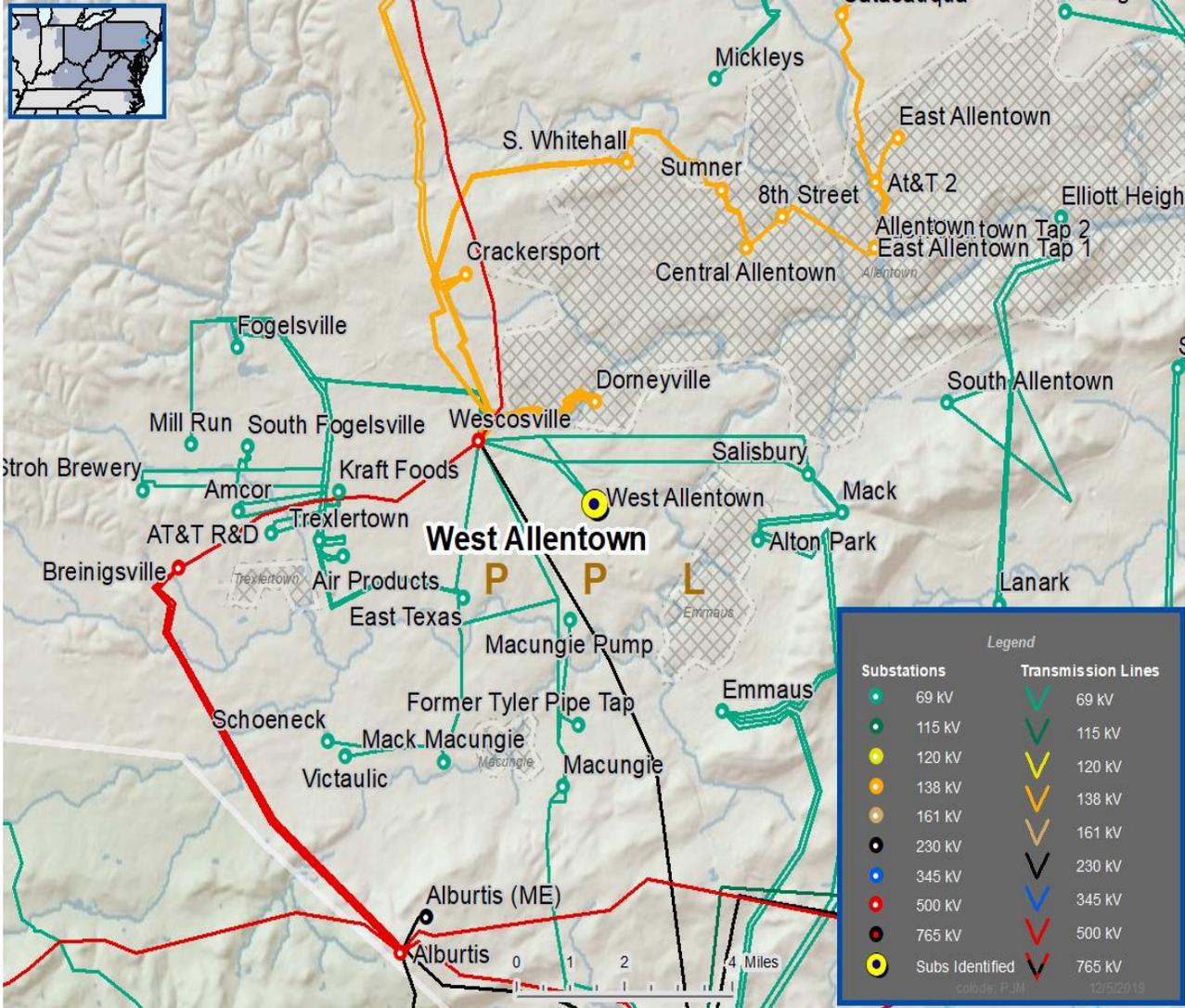
**Project Driver:** Customer Service

**Specific Assumption Reference:**

[PPL 2019 Annual Assumptions](#)

**Problem Statement:**

New customer has submitted a request to have their facility served from a 69kV transmission line. The load is approximately 25 MVA.



# PPL Transmission Zone M-3 Process Customer 69kV Tap

**Need Number:** PPL-2019-0019

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 6/2/2020

**Selected Solution:**

Extend a new single 69kV tap from the existing Wescosville-Breinigsville 1 69kV line to interconnect a new customer 69-13.8kV substation.

- Build 0.1 miles of new 69kV single circuit line using 556 ACSR conductor.

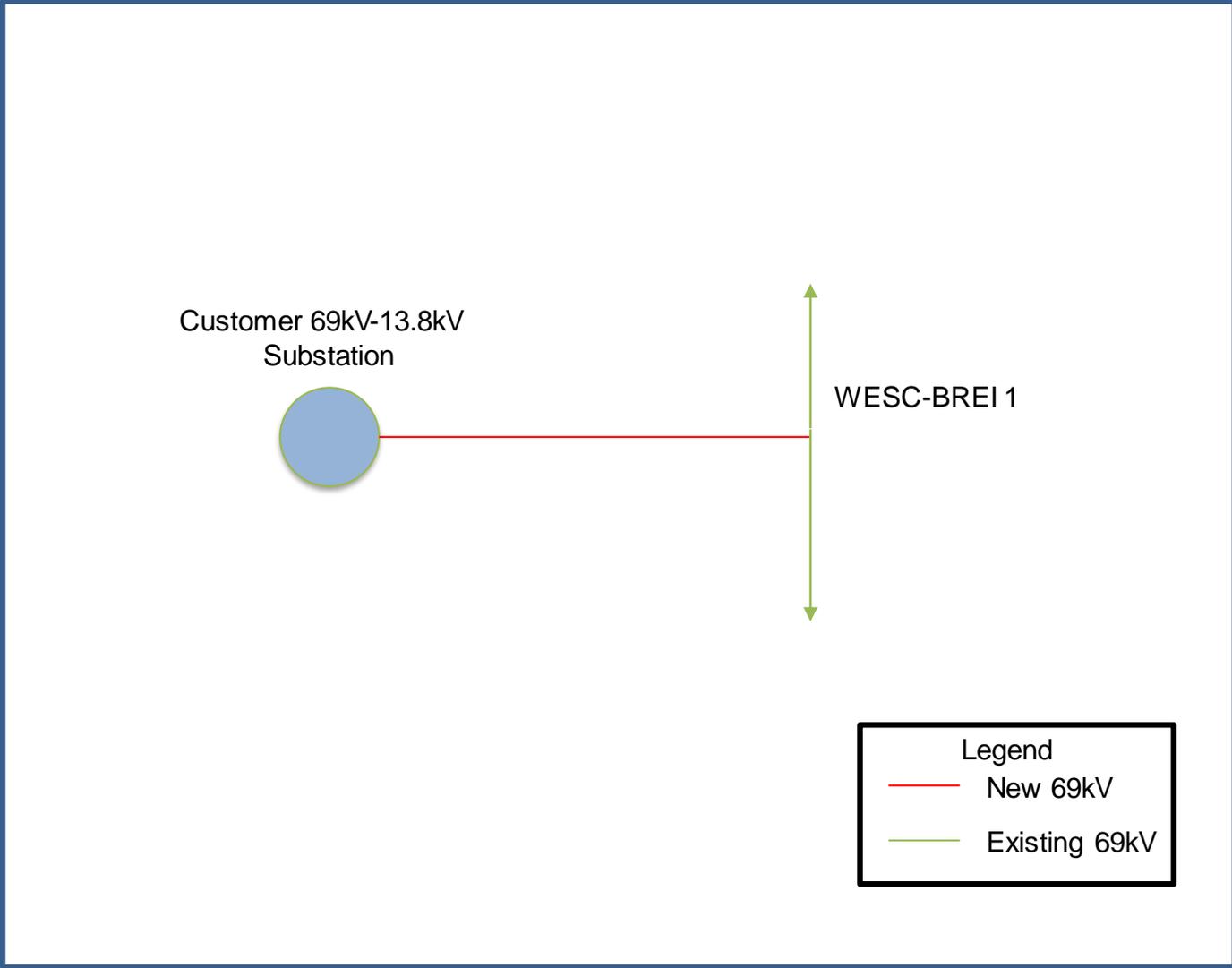
**Estimated Cost:** \$0.9M

**Projected In-Service:** 11/30/2020

**Supplemental Project ID:** s2202

**Project Status:** Planning

**Model:** 2020



# PPL Transmission Zone M-3 Process West Allentown, PA

**Need Number:** PPL-2019-0020

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 6/2/2020

**Previously Presented:**

Needs Meeting December 16, 2019  
Solution Meeting February 11, 2020

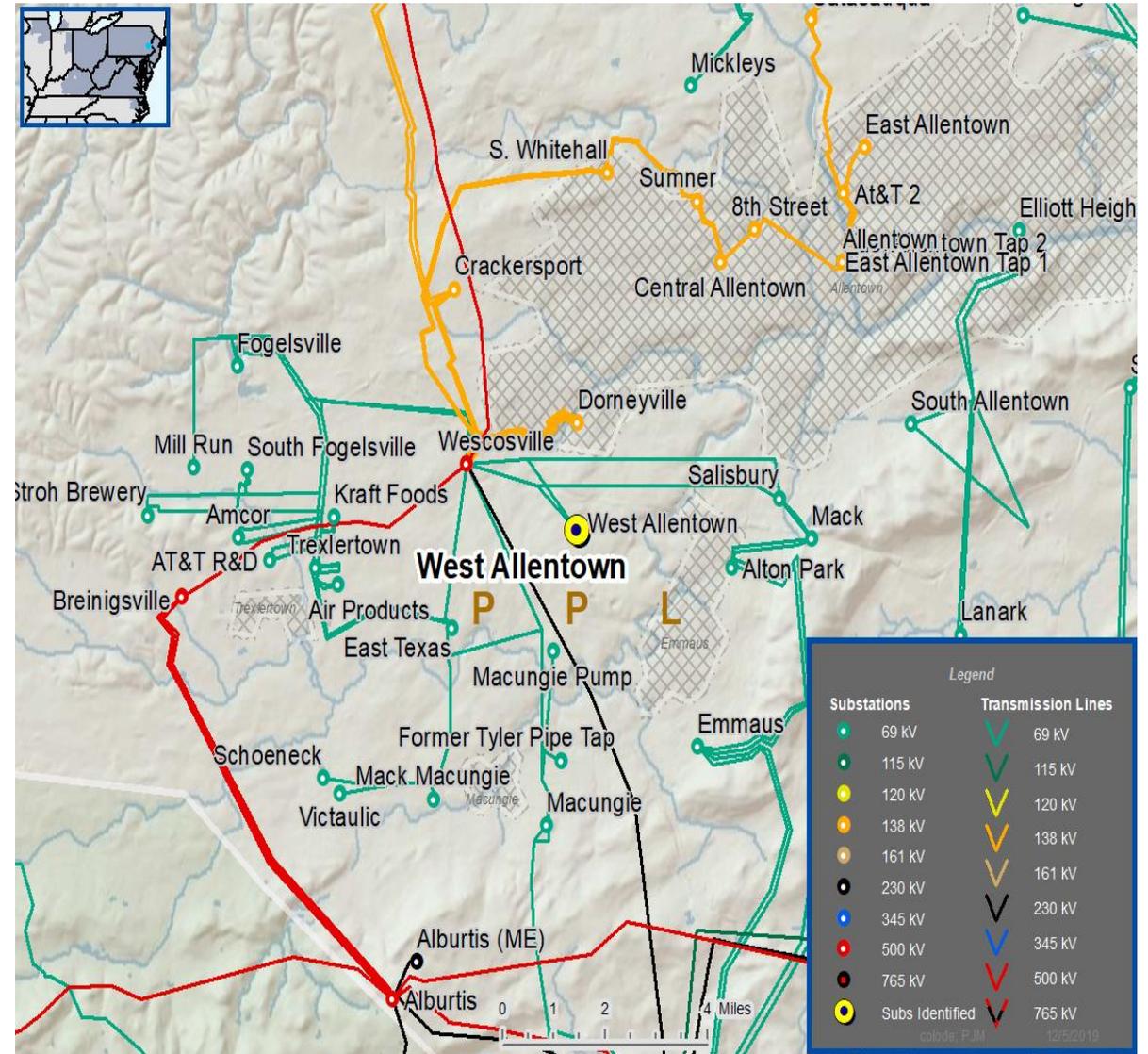
**Project Driver:** Customer Service

**Specific Assumption Reference:**

[PPL 2019 Annual Assumptions](#)

**Problem Statement:**

New customer has submitted a request to have their facility served from a 69kV transmission line. The load is approximately 12 MVA.



# PPL Transmission Zone M-3 Process Customer 69kV Tap

**Need Number:** PPL-2019-0020

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 6/2/2020

**Selected Solution:**

Extend a new single 69kV tap from the existing Wescosville-Breinigsville 2 69kV line to interconnect a new customer 69-4.16kV substation.

- Build 0.2 miles of new 69kV single circuit line using 556 ACSR conductor.

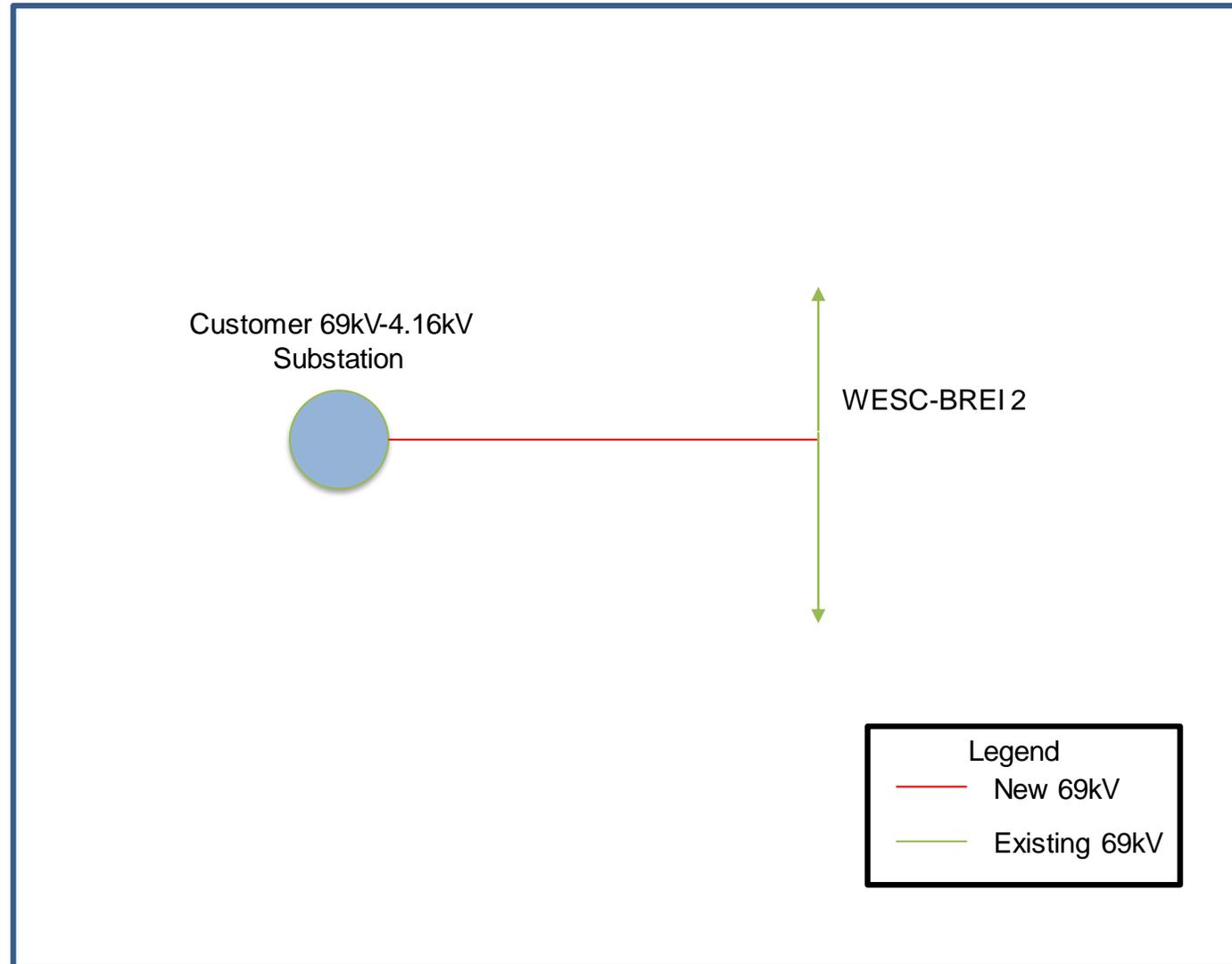
**Estimated Cost:** \$1.2M

**Projected In-Service:** 6/30/2021

**Supplemental Project ID:** s2203

**Project Status:** Planning

**Model:** 2021





# PPL Transmission Zone M-3 Process Customer 69kV Tap

**Need Number:** PPL-2019-0021

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 6/2/2020

**Selected Solution:**

Extend a new single 69kV tap from the existing Hummelstown-Harrisburg 1 69kV line to interconnect a new customer 69-12kV substation.

- Build 0.3 miles of new 69kV single circuit line using 556 ACSR conductor.

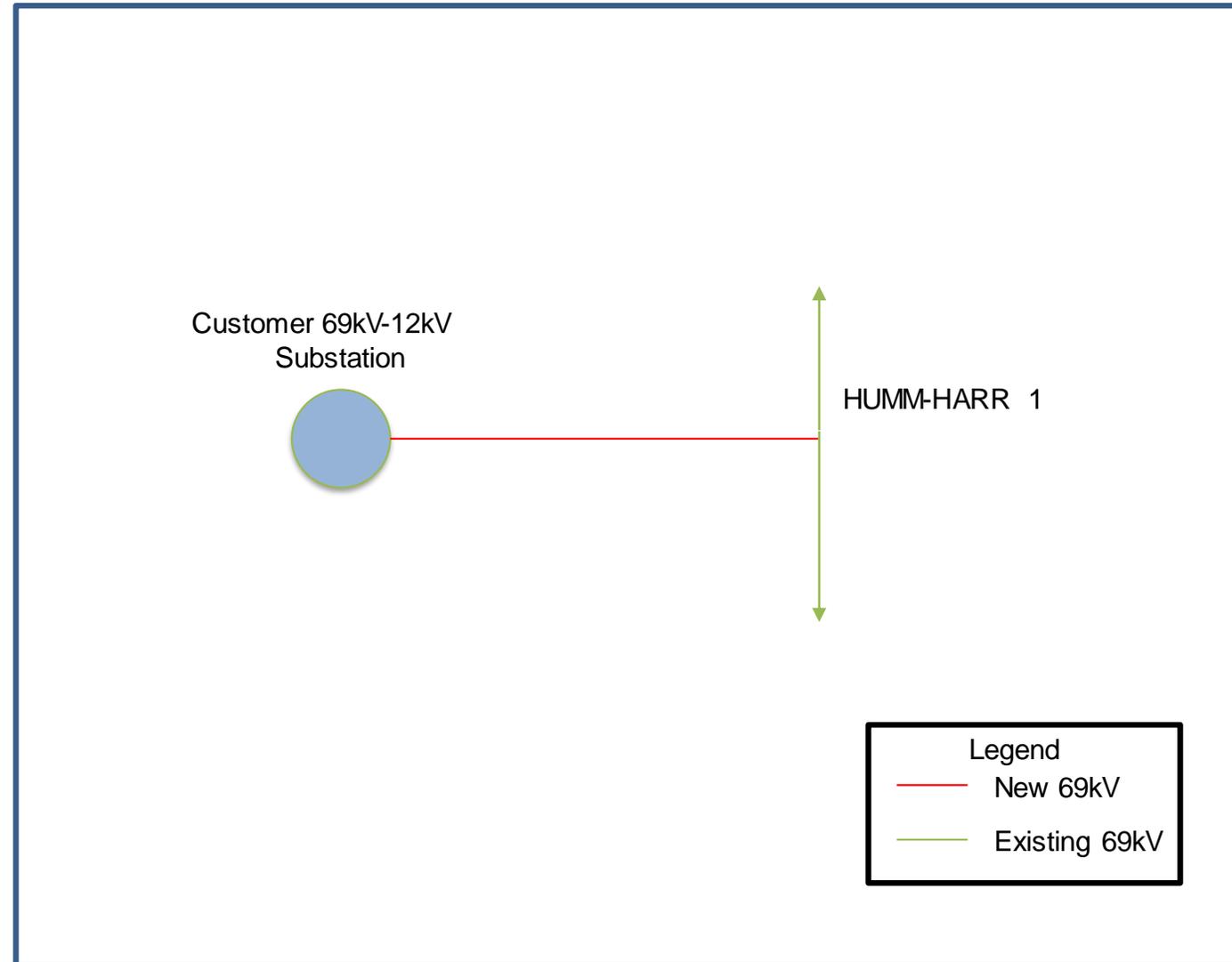
**Estimated Cost:** \$2.3M

**Projected In-Service:** 2/28/2021

**Supplemental Project ID:** s2204

**Project Status:** Planning

**Model:** 2021



# Revision History

3/24/2020 – V1 – Local Plan for s1106 posted to pjm.com

6/2/2020 – V2 – added local plan for s2168, s2169, s2202, s2203, s2204