TEAC Committee
PPL Supplemental Projects

November 4, 2025

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
Orefield, PA

Need Number: PPL-2025-0006

Process Stage: Solution Meeting TEAC - 11/04/2025

Previously Presented: Need Meeting 05/06/2025

Project Driver: Customer Service

Specific Assumption References:

PPL 2025 Annual Assumptions

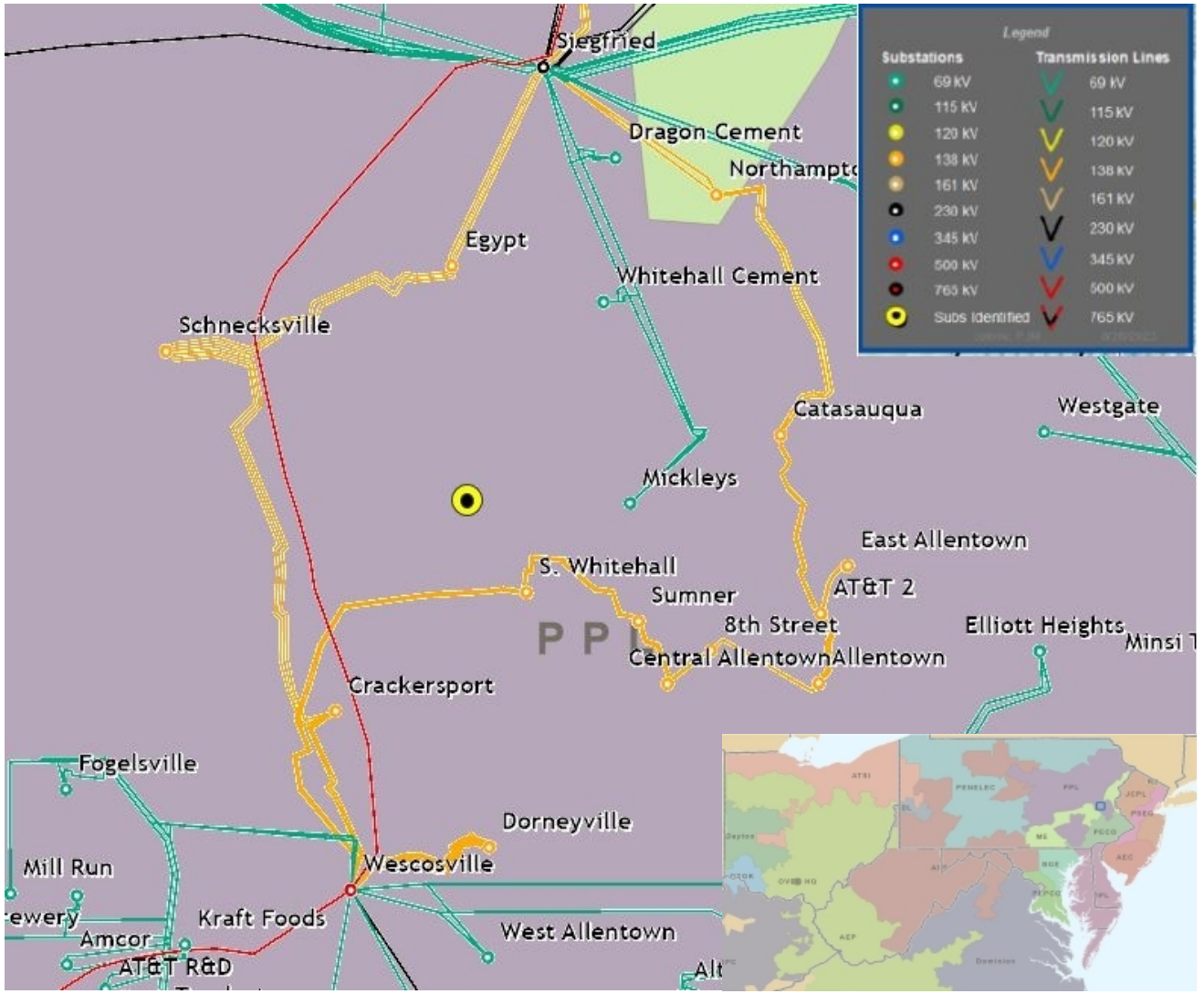
Problem Statement:

A customer has submitted a request to have their facility served from a 138kV source in Allentown, PA. The total facility load is approximately 1000 MW (2031). The requested in-service date is 10/2026.

Initial In-Service 2026 Load: 75 MW

Projected 2028 Load: 450 MW

Projected 2030 Load: 920 MW



Need number(s): PPL-2025-0006

Process Stage: Solution Meeting TEAC - 11/04/2025

Proposed Solution:

Orefield 500-138kV Substation: Install a new three bay BAAH 500kV yard with two 500-138kV Transformers and one 144MVAR Capacitor Bank. Estimated Cost: $71 M

Orefield 138kV Yard: Install an eight bay BAAH 138kV yard with two 44MVAR capacitor banks. Estimated Cost: $40 M

Susquehanna - Wescosville 500kV line: Bifurcate the Susquehanna - Wescosville 500kV line and terminate at the new Orefield 500-138kV substation. Extend lines approximately 1.2 miles on separate pole lines to the Orefield 500kV yard. Estimated Cost: $17.2 M

Siegfried - Wescosville #1 & #2 138kV Lines: Bifurcate the Siegfried - Wescosville #1 & #2 138kV Lines and terminate at the new Orefield 500-138kV substation. Extend lines approximately 1.8 miles on separate double circuit pole lines to the Orefield 138kV yard. Estimated Cost: $14.4 M

Wescosville - Allentown #1 & #2 138kV Lines: Bifurcate the Wescosville - Allentown #1 & #2 138kV Lines and terminate at the new Orefield 500-138kV substation. Extend lines approximately 0.3 miles on separate double circuit pole lines to the Orefield 138kV yard. Estimated Cost: $2.4 M

Orefield Customer 138kV Lead Lines: Install six 138kV lead lines for approximately 0.75 miles from Orefield 138kV yard to the customer facility. Estimated Cost: $9 M

Wescosville 500-138kV Transformer #2: Connect on-site spare 500-138kV Transformer at Wescosville substation. Terminate 500kV side into a new GIS bay and install 138kV breaker and tie to 138kV bus. Estimated Cost: $5 M

Wescosville 138kV Yard: Rebuild the 138kV yard at Wescosville in a BAAH configuration. Re-terminate the 138kV lines and transformer connections into the new yard. Estimated Cost: $35 M

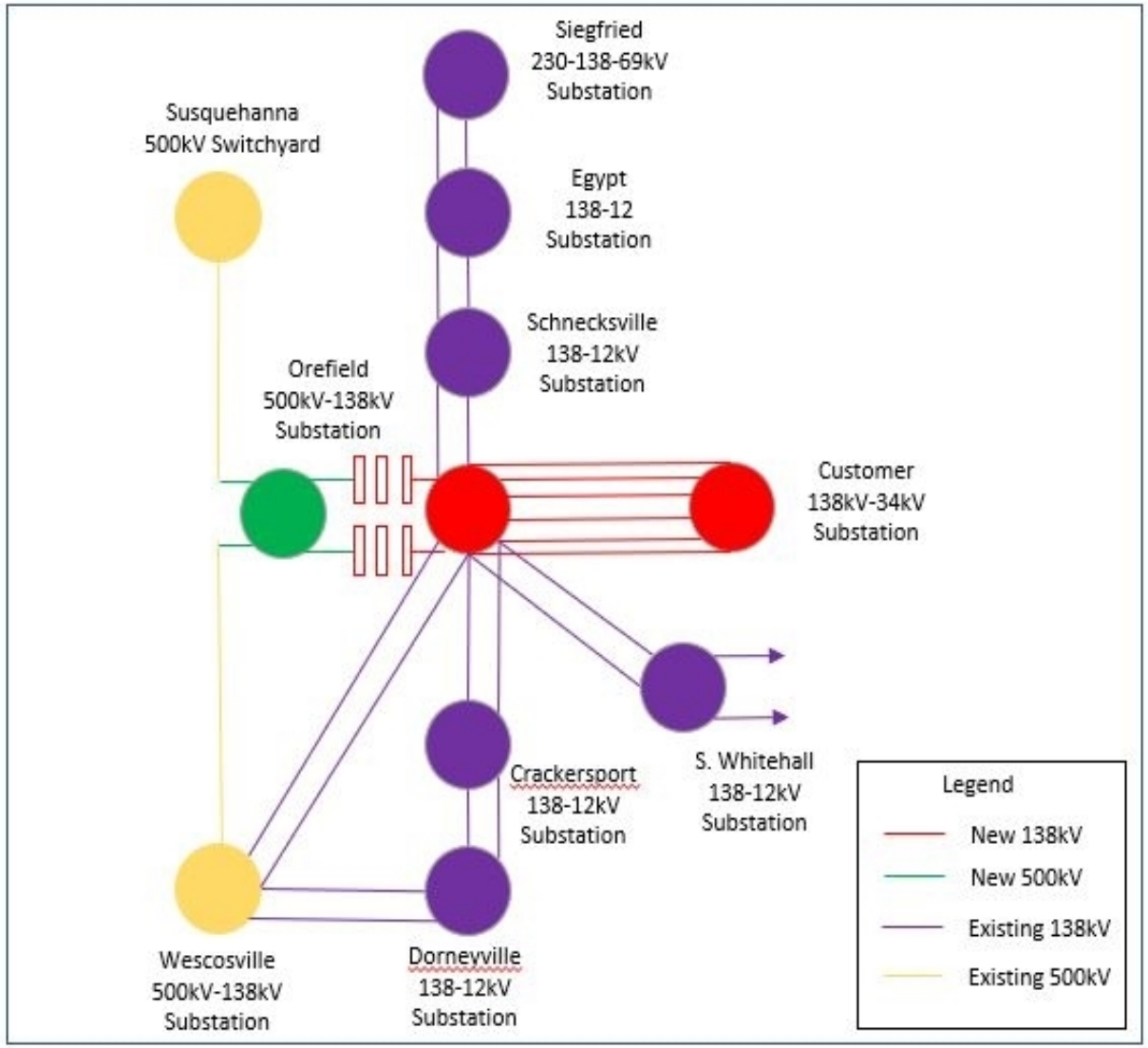
Transmission Cost Estimate: $194 M

Alternatives Considered:

Break the Susquehanna – Wescosville 500kV and install a 500kV-138kV substation with four 500-138kV transformers. Extend a new 500kV line from Alburtis 500kV yard to the new Orefield substation (~20 miles). Extend six 138kV lines to the new customer substation. Estimated cost: $359 Million

Projected In-Service: 05/31/2028

Project Status: Conceptual



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

10/24/2025 – V1 – Original version posted to pjm.com
10/27/2025 – V2 – Removed duplicate solution