

Subregional RTEP Committee – Mid-Atlantic FirstEnergy Supplemental Projects Penelec Transmission Zone

Changes to the Existing Supplemental Projects

Penelec Transmission Zone - Scope Change S1769 - Dubois – Harvey Run – Whetstone 115 kV Line Rehab, PA

s1769: Originally presented as a need at 9/21/2018 and solution at 10/29/2018 Mid-Atlantic meetings.

Project Driver(s):

Equipment Material Condition, Performance and Risk

Specific Assumption Reference(s)

Substation/Line Equipment Limits

Consider upgrading transmission line equipment (switches, conductor, splices, etc.) as well as terminal and protection equipment to meet or exceed the transmission line conductor rating.

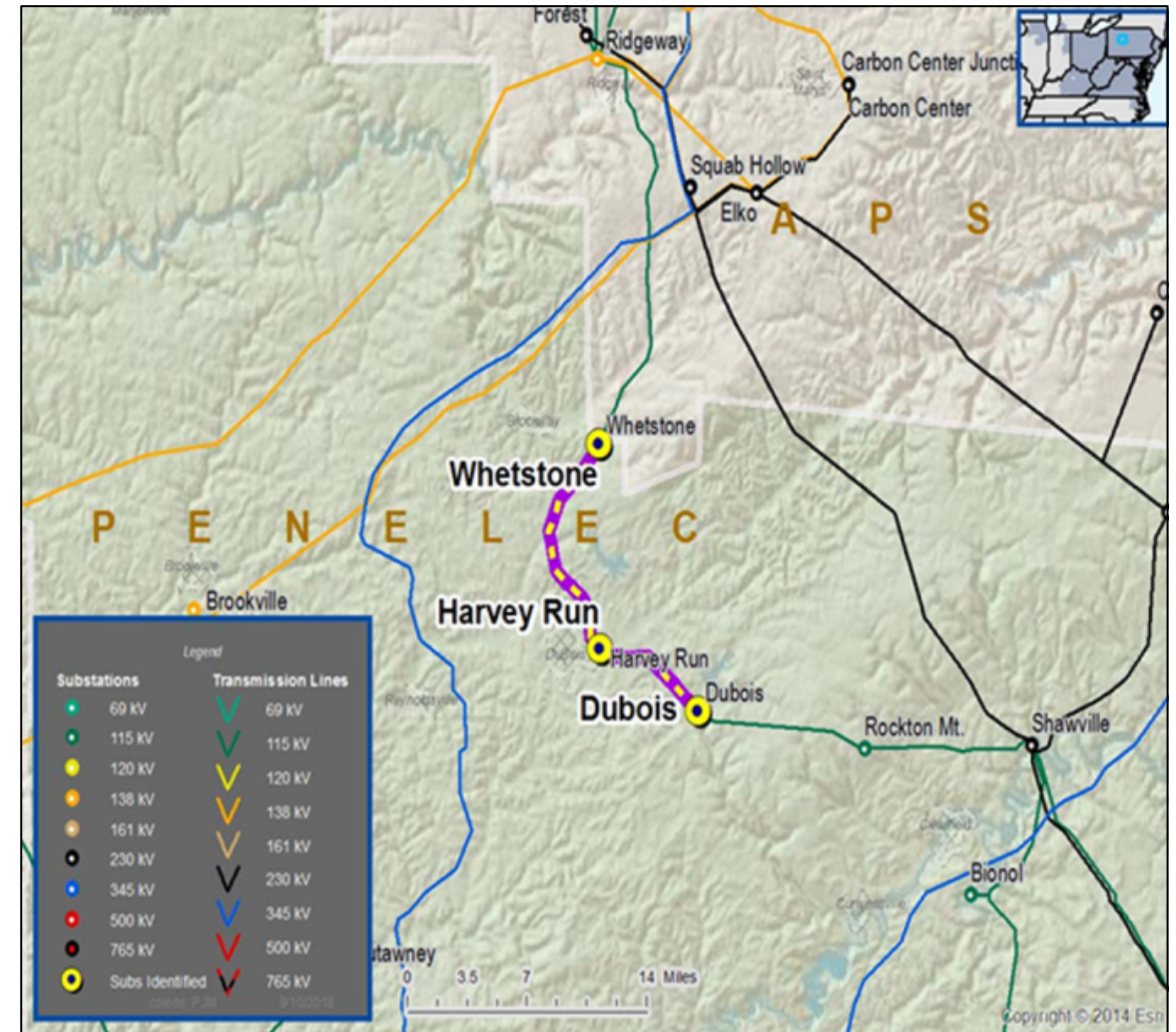
Problem Statement

Maintenance/rehab work will be performed on the Dubois-Harvey Run-Whetstone 115 kV line.

Transmission line rating limited by terminal equipment.

Dubois – Harvey Run 115 kV line: Existing emergency line rating is 179 MVA. Existing conductor emergency rating is 245 MVA.

Harvey Run – Whetstone 115 kV line: Existing emergency line rating is 172 MVA. Existing conductor emergency rating is 245 MVA.



Penelec Transmission Zone - Scope Change S1769 - Dubois – Harvey Run – Whetstone 115 kV Line Rehab, PA

s1769: Originally presented as a need at 9/21/2018 and solution at 10/29/2018 Mid-Atlantic meetings.

Need Number: PN-2018-001

Proposed Solution:

Dubois – Harvey Run – Whetstone 115 kV Line Rehab

- Rehab approximately 14.25 miles of wood pole construction

Dubois 115 kV Substation – Terminal equipment to be replaced includes:

- Line relaying, line trap, substation conductor, line tuner, CCVT, circuit breaker and breaker disconnects

Harvey Run 115 kV Substation – Terminal equipment to be replaced includes:

- Substation conductor, disconnect switches and CVTs

Whetstone 115 kV Substation – Terminal equipment to be replaced includes:

- Line relaying, line trap, substation conductor, line tuner, CCVT, circuit breaker and breaker disconnects

Transmission Line Ratings:

- Dubois – Harvey Run 115 kV Line
 - Before Proposed Solution: 164 MVA SN / 179 MVA SE
 - After Proposed Solution: 202 MVA SN / 245 MVA SE
- Harvey Run – Whetstone 115 kV Line
 - Before Proposed Solution: 137 MVA SN / 172 MVA SE
 - After Proposed Solution: 202 MVA SN / 245 MVA SE

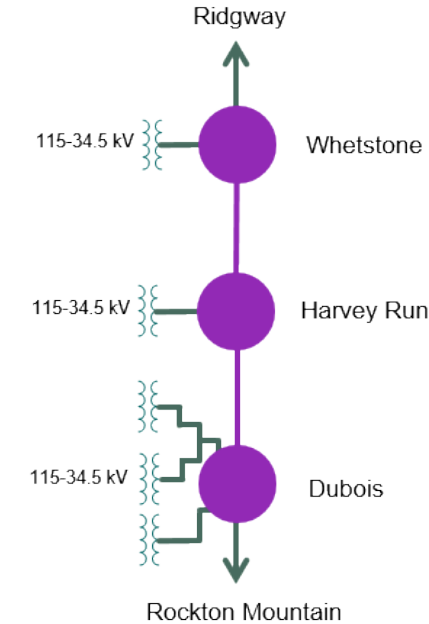
Alternatives Considered:

- Maintain existing condition and elevated risk of failure

Estimated Project Cost: \$5.3M

Projected IS Date: 12/31/2021

Status: Conceptual



Legend	
500 kV	
230 kV	
138 kV	
115 kV	
69 kV	
46 kV	
New	

Penelec Transmission Zone - Scope Change S1769 - Dubois – Harvey Run – Whetstone 115 kV Line Rehab, PA

s1769: Originally presented as a need on 9/21/2018 and solution on 10/29/2018 Mid-Atlantic meetings.

Revised Solution:

Selected Solution:

Dubois – Harvey Run – Whetstone 115 kV Line Rehab

- Rehab approximately 14.25 miles of wood pole construction (s1769.1)

- Reconductor approximately 10.1 miles of existing transmission line

Dubois 115 kV Substation – Terminal equipment to be replaced includes:

- Line relaying, line trap, substation conductor, line tuner, CCVT, circuit breaker and breaker disconnects (s1769.2)

Harvey Run 115 kV Substation – Terminal equipment to be replaced includes:

- Substation conductor, disconnect switches and CVTs (s1769.3)

Whetstone 115 kV Substation – Terminal equipment to be replaced includes:

- Line relaying, line trap, substation conductor, line tuner, CCVT, circuit breaker and breaker disconnects (s1769.4)

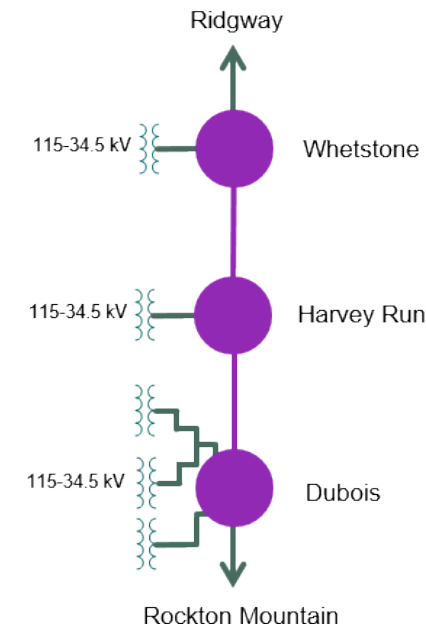
Transmission Line Ratings:

- Dubois – Harvey Run 115 kV Line
 - Before Proposed Solution: 202 / 245 / 228 / 290 MVA (SN/SE/WN/WE)
 - After Proposed Solution: 232 / 282 / 263 / 334 MVA (SN/SE/WN/WE)
- Harvey Run – Whetstone 115 kV Line
 - Before Proposed Solution: 202 / 245 / 228 / 290 MVA (SN/SE/ WN/WE)
 - After Proposed Solution: 232 / 282 / 263 / 334 MVA (SN/SE/WN/WE)

Alternatives Considered:

- Maintain existing condition and elevated risk of failure

Estimated Project Cost: \$39.3M
Projected IS Date: 6/29/2030
Status: Conceptual



Legend	
500 kV	
230 kV	
138 kV	
115 kV	
69 kV	
46 kV	
New	

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

Need Number: PN-2020-013

Process Stage: Solution Meeting – SRRTEP-MA – 07/17/2026

Previously Presented: Need Meeting – SRRTEP-MA – 08/13/2020

Project Driver:

Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

- Line Condition Rebuild/Replacement
 - Age/condition of wood pole transmission line structures
- Substation Performance Projects Global Factors
 - Substation/line equipment limits

Problem Statement:

The Reeds Switching Station – Reeds Gap – Blain 115 kV line was originally constructed in 1967 and is exhibiting deterioration.

- Total line distance is approximately 9.8 miles
- 72 out of 77 wood structures failed inspection (93% failure rate)
- Failure reasons include rotten/cracked poles, decay, top rot, woodpecker, and cracked arms and braces

Transmission line ratings are limited by terminal equipment.

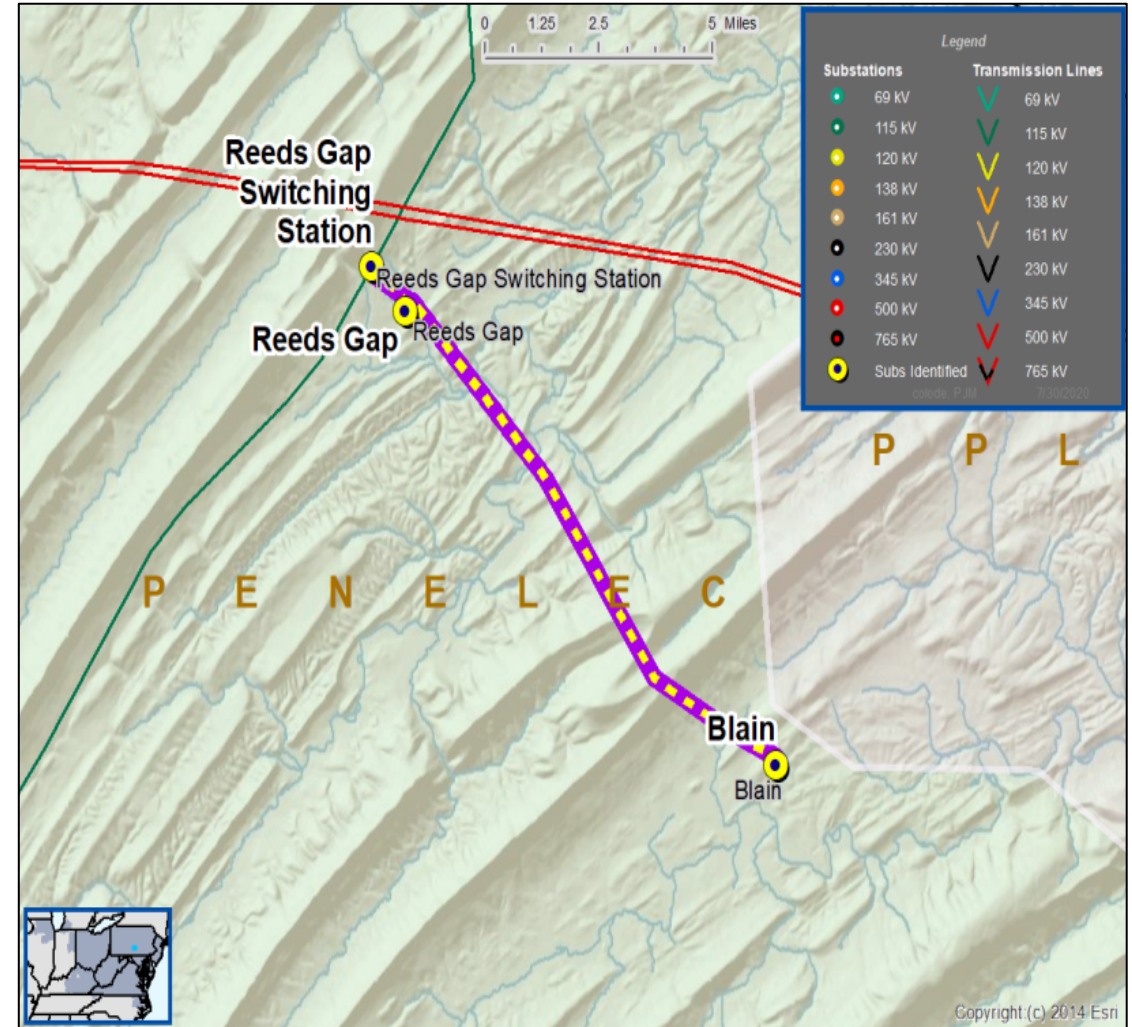
Reeds Switching Station – Reeds Gap 115 kV Line (substation conductor)

- Existing line rating: 86 / 99 MVA (SN / SE)
- Existing conductor rating: 95 / 99 MVA (SN / SE)

Reeds Gap – Blain 115 kV Line (substation conductor)

- Existing line rating: 88 / 129 MVA (SN / SE)
- Existing conductor rating: 133 / 160 MVA (SN / SE)

Penelec Transmission Zone M-3 Process Reeds Gap Switching Station – Blain 115 kV Line Rebuild, PA



Penelec Transmission Zone M-3 Process Reeds Gap Switching Station – Blain 115 kV Line Rebuild, PA

Need number: PN-2020-013

Process Stage: Solution Meeting –SRRTEP-MA – 07/17/2026

Proposed Solution:

- Rebuild and reconductor 9.9 miles of 115 kV line from Reeds Gap Switching Station to Blain Switching Station on the Lewiston - Shade Gap 115 kV Line.
- Upgrade all substation equipment at the line terminal stations. Replace CT's and substation conductor at Reed's Gap Switching Station on line terminal to Shade Gap Substation.
- Replace substation conductor at Reed's Gap Switching on line terminal to Reeds Gap Substation.
- Replace substation conductor at Reeds Gap Substation on line terminal to Blain Substation.

Transmission Line Ratings:

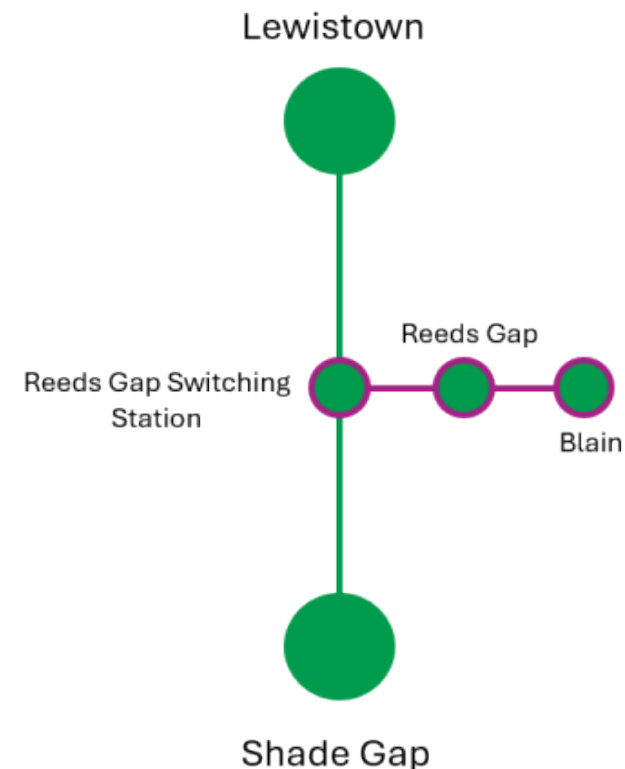
Reeds Gap Switching Station - Reeds Gap 115 kV Line:

- Before Proposed Solution: 95 / 99 / 121 / 121 MVA (SN/SE/WN/WE)
- After Proposed Solution: 232 / 282 / 263 / 334 MVA (SN/SE/WN/WE)

Reeds Gap - Blain 115 kV Line:

- Before Proposed Solution: 86 / 110 / 122 / 137 MVA (SN/SE/WN/WE)
- After Proposed Solution: 232 / 282 / 263 / 334 MVA (SN/SE/WN/WE)

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Legend	
500 kV	
345 kV	
230 kV	
138 kV	
115 kV	
69 kV	
46 kV	
34.5 kV	
23 kV	
New	

Penelec Transmission Zone M-3 Process Reeds Gap Switching Station – Blain 115 kV Line Rebuild, PA

Need number: PN-2020-013

Process Stage: Solution Meeting –SRRTEP-MA – 07/17/2026

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Alternatives Considered:

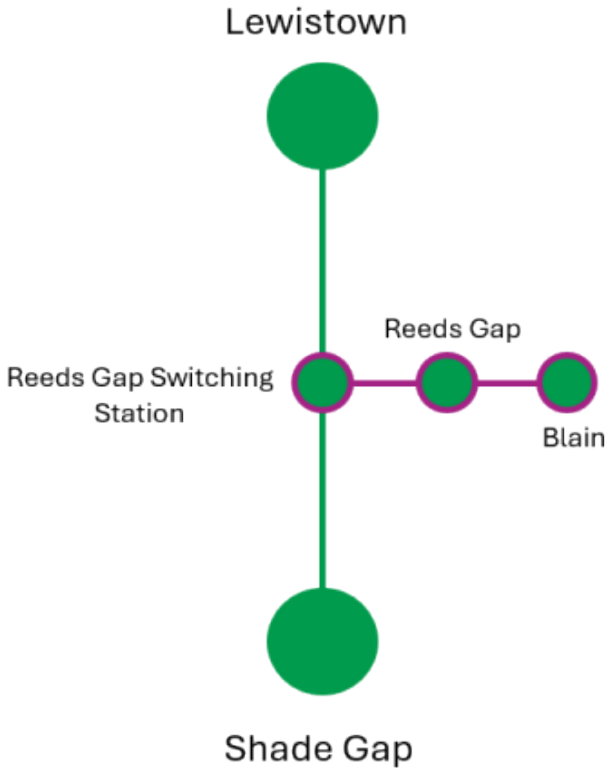
Maintain existing condition with elevated risk of failure due to equipment deterioration.

Estimated Project Cost: \$36.80M

Projected In-Service: 12/15/2029

Project Status: Conceptual

Model: 2024 RTEP model for 2029 Summer (50/50)



Legend	
500 kV	
345 kV	
230 kV	
138 kV	
115 kV	
69 kV	
46 kV	
34.5 kV	
23 kV	
New	

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

07/06/2026 – V1 – Original version posted to pjm.com

07/07/2026 – V2 – Updated formatting