# Subregional RTEP Committee – Mid-Atlantic
# FirstEnergy Supplemental Projects

PENELEC Transmission Zone

# 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

# PENELEC Transmission Zone M-3 Process
# Bethlehem, PA

**Need Number:** PN-2025-009

**Process Stage:** Need Meeting 12/11/2025

**Project Driver:**

*Equipment Condition/Performance/Risk*

**Specific Assumption References:**

Line Condition Rebuild/Replacement

**Problem Statement:**

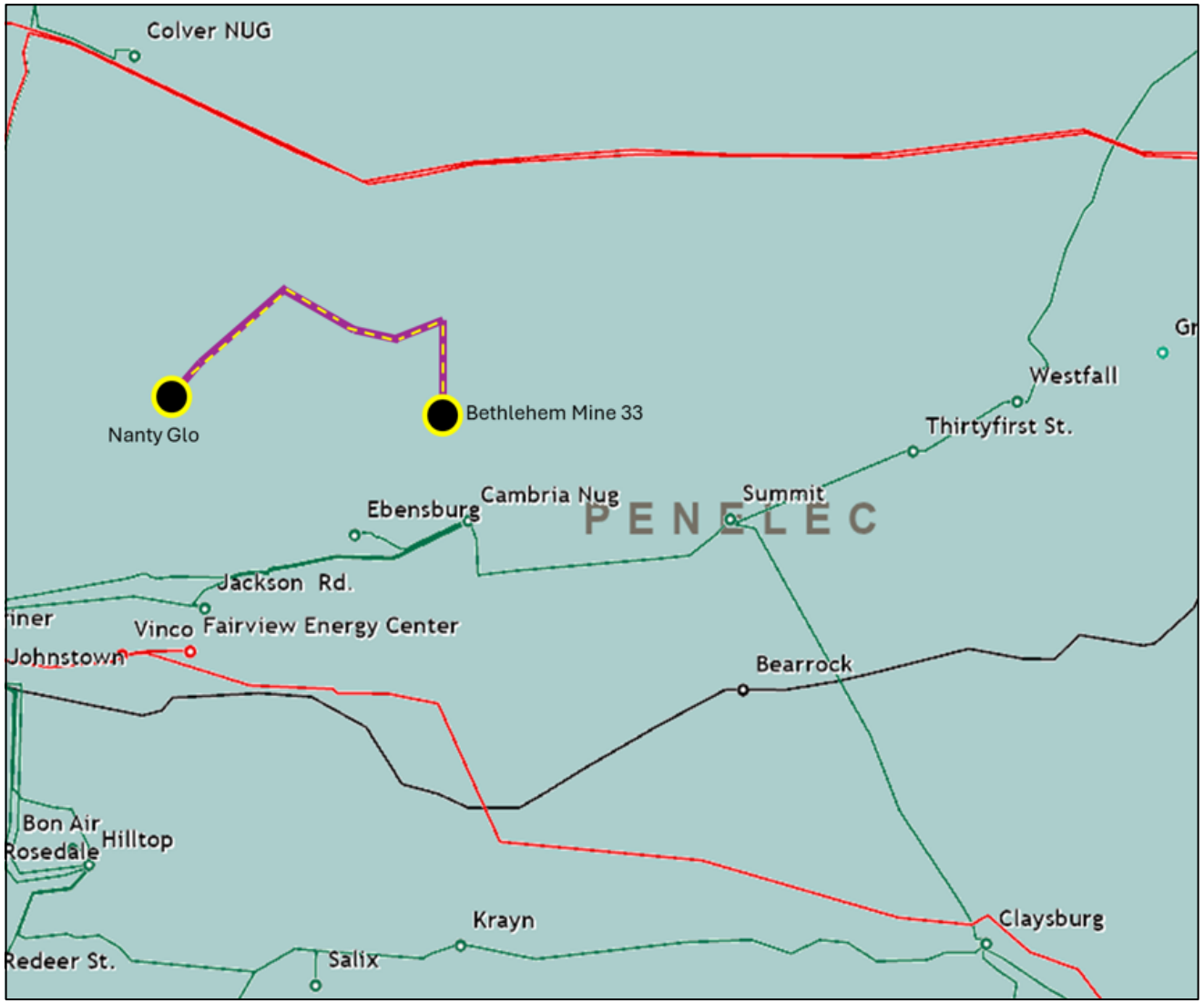
The Bethlehem - Nanty Glo 46 kV SGR Line is 12 miles in length. Per recent inspection, safety concerns were identified on four spans as this circuit passes above and adjacent to several buildings and above existing distribution circuits. The four spans are located on the Ebensburg - Revloc 46 kV Line section. The line is currently derated due to insufficient clearance.

Existing Derated Line Ratings for Ebensburg - Revloc 46 kV Line:

- 30 / 31 / 35 / 35 MVA (SN/SE/WN/WE)

Existing Conductor Ratings for Ebensburg - Revloc 46 kV Line:

- 32 / 32 / 35 / 35 MVA (SN/SE/WN/WE)



# 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

# PENELEC Transmission Zone M-3 Process
# Grand Point – Roxbury 138kV Line

**Need Number:** PN-2024-012

**Process Stage:** Solution Meeting SRRTEP-MA - 12/11/2025

**Previously Presented:** Need Meeting 03/14/2024

**Project Driver:**

*Equipment Condition/Performance/Risk*

**Specific Assumption References:**

System Performance Global Factors

- Past system reliability/performance

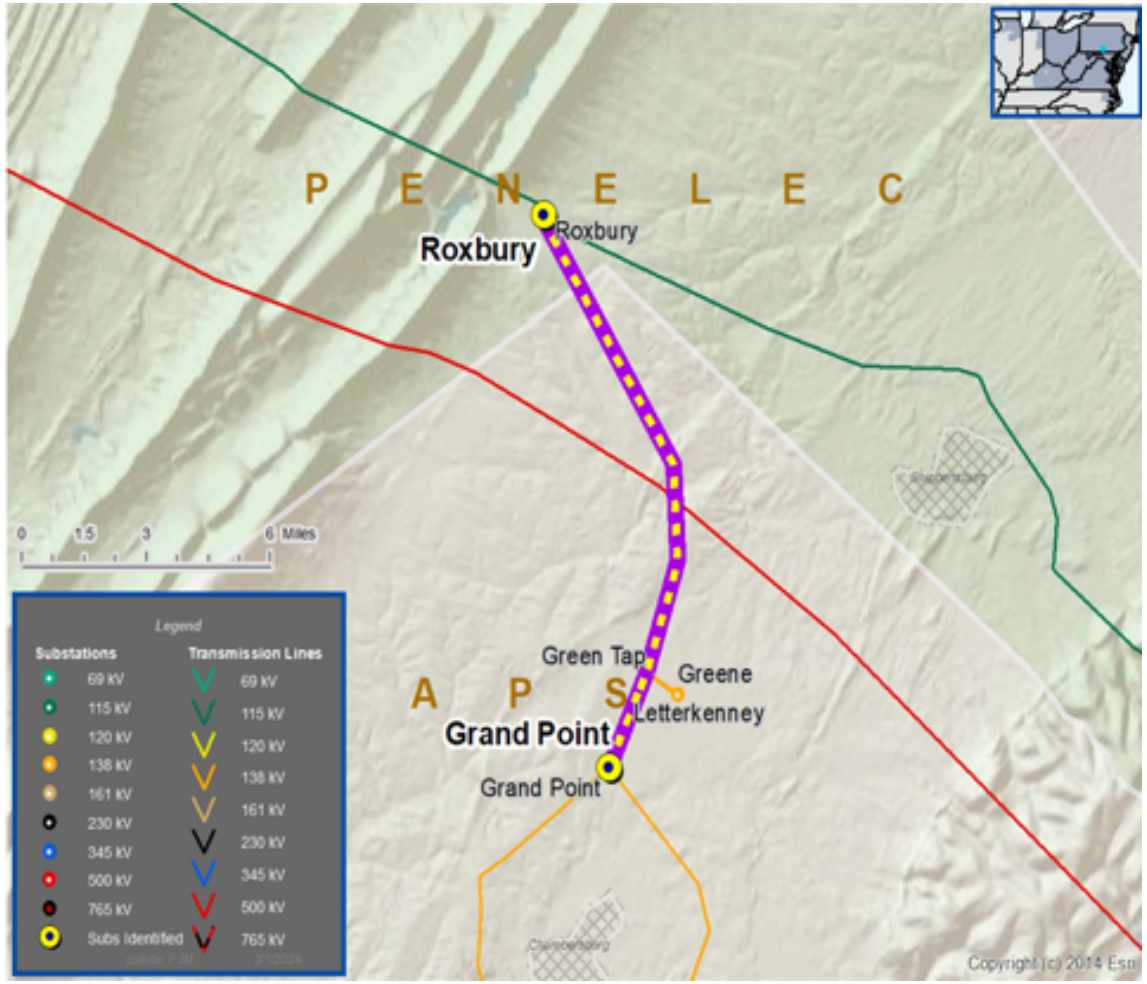
Line Condition Rebuild/Replacement

- Age/condition of wood pole transmission line structures

**Problem Statement:**

- The Grand Point – Roxbury 138 kV Line was constructed in 1960. The line is approximately 14 miles long with 109 wood pole structures.
- Recent inspections have indicated that 87 structures are exhibiting deterioration. Inspection findings include woodpecker damage, top rot, groundline decay and cracking.
- Since 2014, the line has had eight unscheduled outages.

- Existing Grand Point – Letterkenny 138 kV Line Rating:
  - 221 / 268 / 250 / 317 MVA (SN/SE/WN/WE)
- Existing Letterkenny – Greene Tap 138 kV Line Rating:
  - 221 / 268 / 250 / 317 MVA (SN/SE/WN/WE)
- Existing Greene Tap – Roxbury 138 kV Line Rating:
  - 221 / 268 / 250 / 317 MVA (SN/SE/WN/WE)



# PENELEC Transmission Zone M-3 Process
# Grand Point – Roxbury 138kV Line

**Need number(s):** PN-2024-012
**Process Stage:** Solution Meeting SRRTEP-MA - 12/11/2025

**Proposed Solution:**
- Rebuild the Grand Point - Roxbury 138 kV Line (14 miles total) with steel H-frame structures and new conductor.
- 5.5 miles per PN-2024-012, 8.5 miles per APS-2024-028
- At Roxbury Substation: Replace limiting substation conductor and revise relay settings.
- At Greene Substation (APS): Revise relay settings.
- At Letterkenny Substation (APS): Replace line switch and revise relay settings.
- At Grand Point Substation (APS): Replace substation conductor, circuit breaker, install surge arrestors and ground switch, and revise relay settings.

Transmission Line Ratings:
Roxbury - AD2-062 138 kV Line:
- Before Proposed Solution: 221 / 268 / 250 / 317 MVA (SN/SE/WN/WE)
- After Proposed Solution: 308 / 376 / 349 / 445 MVA (SN/SE/WN/WE)

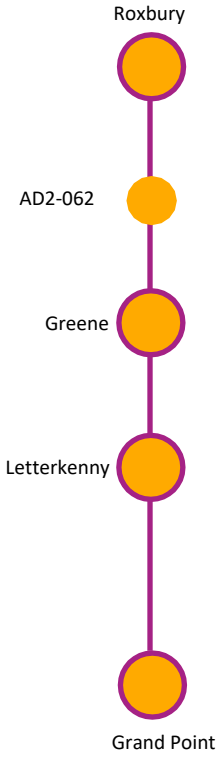
Greene - AD2-062 138 kV Line:
- Before Proposed Solution: 221 / 268 / 250 / 317 MVA (SN/SE/WN/WE)
- After Proposed Solution: 308 / 376 / 349 / 445 MVA (SN/SE/WN/WE)

Letterkenny - Greene 138 kV Line:
- Before Proposed Solution: 221 / 268 / 250 / 317 MVA (SN/SE/WN/WE)
- After Proposed Solution: 308 / 376 / 349 / 445 MVA (SN/SE/WN/WE)

Grand Point - Letterkenny 138 kV Line
- Before Proposed Solution: 221 / 268 / 250 / 317 MVA (SN/SE/WN/WE)
- After Proposed Solution: 308 / 376 / 349 / 445 MVA (SN/SE/WN/WE)

**Alternatives Considered:**
Maintain the line in existing condition with elevated risk of failure due to equipment deterioration.

**Estimate Project Cost:** $17.94M
**Projected In-Service:** 06/15/2029
**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 | |

# PENELEC Transmission Zone M-3 Process
# Glory – Nanty Glo – Spangler 46 kV Line

**Need Number:** PN-2024-022

**Process Stage:** Solution Meeting SRRTEP-MA - 12/11/2025

**Previously Presented:** Need Meeting 05/16/2024

**Project Driver:**

*Operational Flexibility and Efficiency*

**Specific Assumption References:**

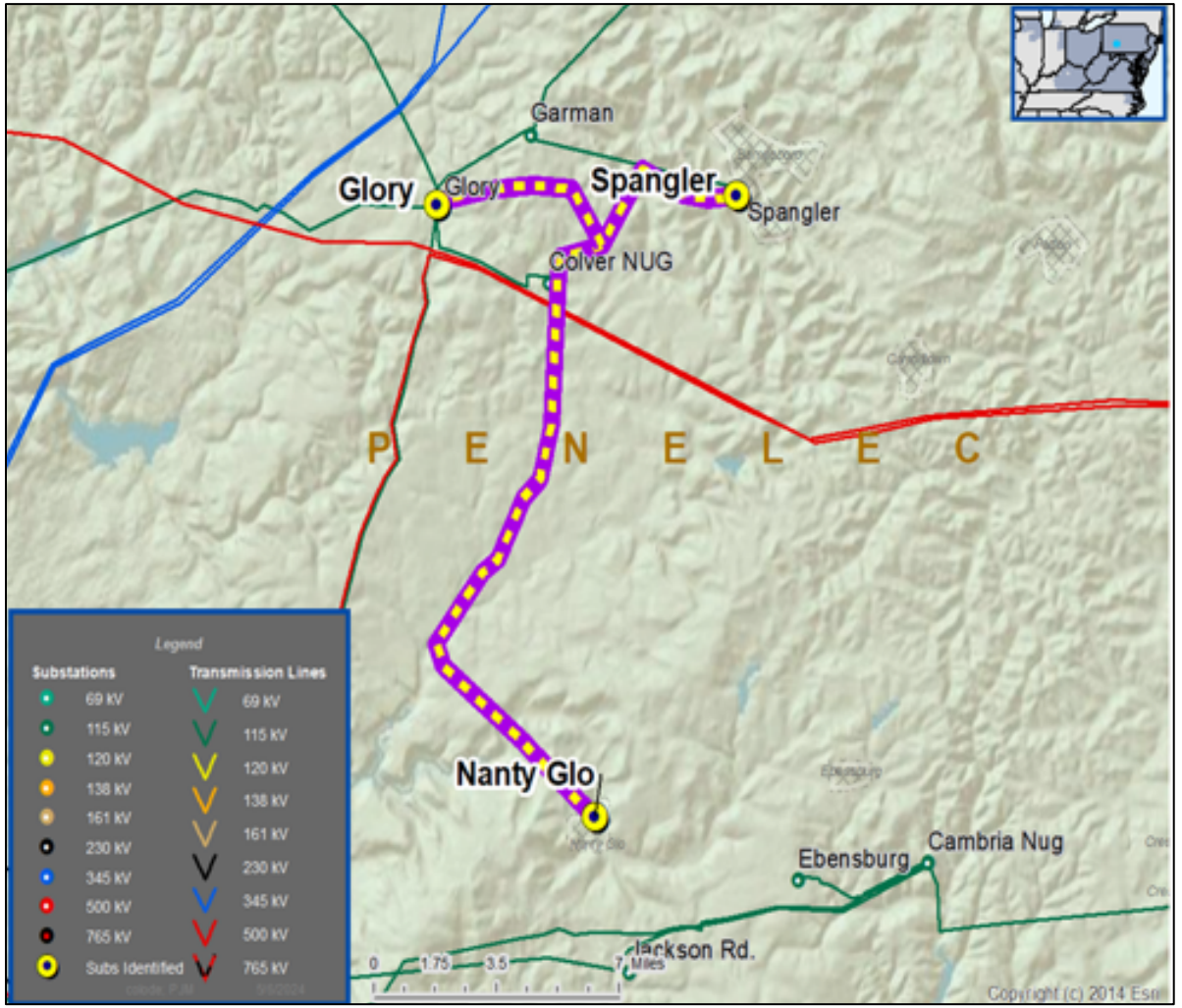
System Performance Projects

- Add/Expand Bus Configuration
- Load at risk in planning and operational scenarios
- Reduce the amount of exposed potential local load loss during contingency conditions

**Problem Statement:**

The Glory – Nanty Glo – Spangler 46 kV Line has over 23 miles of line exposure. A fault on this line will outage over 1,000 customers and multiple substations, including two rural electric cooperatives.

An outage on the Glory – Nanty Glo – Spangler 46 kV Line results in the loss of over 11 MW.



# PENELEC Transmission Zone M-3 Process
# Glory – Nanty Glo – Spangler 46 kV Line

**Need number(s):** PN-2024-022
**Process Stage:** Solution Meeting SRRTEP-MA - 12/11/2025

**Proposed Solution:**
- At Bobik Lane: Construct a new 46 kV four breaker ring bus station
- At Glory Substation: Replace line relaying
- At Spangler Substation: Replace line relaying
- At Nanty Glo Substation: Replace line relaying
- At Strongstown Substation: Replace disconnect switches and install SCADA control

Transmission Line Ratings:
Bobik Lane - Glory 46 kV Line:
- Before Proposed Solution: N/A
- After Proposed Solution: 67 / 81 / 75 / 95 MVA (SN/SE/WN/WE)

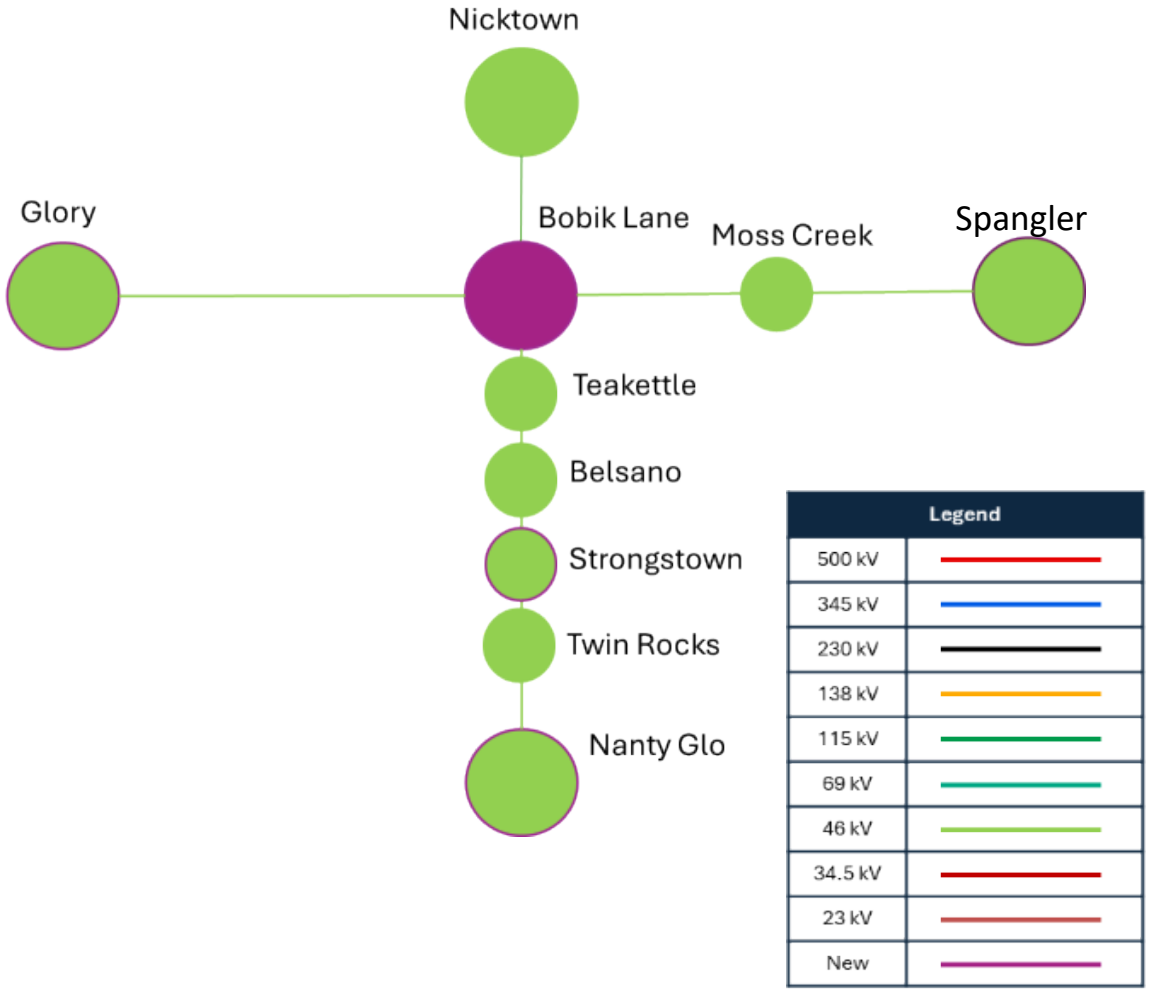
Bobik Lane - Teakettle 46 kV Line:
- Before Proposed Solution: N/A
- After Proposed Solution: 67 / 81 / 75 / 95 MVA (SN/SE/WN/WE)

Bobik Lane - Moss Creek 46 kV Line:
- Before Proposed Solution: N/A
- After Proposed Solution: 67 / 81 / 75 / 95 MVA (SN/SE/WN/WE)

Bobik Lane - Nicktown 46 kV Line:
- Before Proposed Solution: N/A
- After Proposed Solution: 67 / 81 / 75 / 95 MVA (SN/SE/WN/WE)

**Alternatives Considered:**
Maintain existing configuration with risk of customer outages under contingency scenarios.

**Estimated Project Cost:** $13.81M
**Projected In-Service:** 06/30/2028
**Project Status:** Conceptual
**Model:** 2024 RTEP model for 2029 Summer (50/50)



# 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

12/1/2025 – V1 – Original version posted to pjm.com
12/2/2025 – V2 – Formatting corrected,