# Garrett Tap - Garrett 115 kV Line Rebuild

## General Information

| | |
|---|---|
| Proposing entity name | Confidential Information |
| Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project? | Confidential Information |
| Company proposal ID | Confidential Information |
| PJM Proposal ID | 692 |
| Project title | Garrett Tap - Garrett 115 kV Line Rebuild |
| Project description | Rebuild the Garrett Tap - Garrett 115 kV Line to increase the rating and eliminate the congestion on the system. |
| Email | Confidential Information |
| Project in-service date | 06/2029 |
| Tie-line impact | Yes |
| Interregional project | No |
| Is the proposer offering a binding cap on capital costs? | No |
| Additional benefits | Confidential Information |

## Project Components

1. Garrett - Garrett Tap 115 kV Line Upgrade
2. Penn Mar- Deep Creek -Garrett 115 kV Line: Upgrade Relay Settings

### Transmission Line Upgrade Component

| | |
|---|---|
| Component title | Garrett - Garrett Tap 115 kV Line Upgrade |

| | |
|---|---|
| Project description | Confidential Information |
| Impacted transmission line | Garrett - Penn Mar - Deep Creek 115 kV Line (Garrett - Garrett Tap 115 kV) |
| Point A | Garrett Substation |
| Point B | Penn Mar Substation |
| Point C | Deep Creek Substation |
| Terrain description | This line will be constructed on an existing right of way. The line primarily crosses rolling hills and farm fields, with one portion traversing through a forested area. |

Existing Line Physical Characteristics

| | |
|---|---|
| Operating voltage | 115 kV |
| Conductor size and type | 336 ACSR 26/7 |
| Hardware plan description | The line is currently on FirstEnergy's end of life list. The line will be rebuilt. No equipment is expected to be reused. |
| Tower line characteristics | The Garrett - Garrett Tap 115 kV Line section is composed of a mixture of 2, 3, and 4 pole wooden H frames installed in 1969. Making them 56 years old, nearing the end of their useful life. This line section is on FirstEnergy's End of Life list. Since 2021, there are 60 maintenance repair records on this line section (Structures 1-16). Forty-two have been closed, eighteen repairs have yet to be complete and are active. Maintenance repair causes are broken and lose components, rust and corrosion issues, rotten members, animal damage and infringement, and worn hardware and fixtures. |

Proposed Line Characteristics

| | Designed | Operating |
|---|---|---|
| Voltage (kV) | 115.000000 | 115.000000 |
| | Normal ratings | Emergency ratings |
| Summer (MVA) | 417.000000 | 480.000000 |
| Winter (MVA) | 417.000000 | 506.000000 |

| | |
|---|---|
| Conductor size and type | 954 ACSS 54/7 |
| Shield wire size and type | (1) SFSJ-J-6641 OPGW and (1) 7#8 Alumoweld. |
| Rebuild line length | ~1.9 miles |
| Rebuild portion description | ~1.9 miles of line to be rebuilt. It is assumed line can be rebuilt on existing right of way with all new angle and deadend structures will be engineered steel poles on drilled shaft foundations and that all in-line tangent structures will be direct-embed wood pole equivalents. It is assumed the line will be rebuilt structure for structure on the existing centerline. It is also assumed the line will be rebuilt in the same horizontal configuration to limit structure height increases and maintain existing span lengths. It is assumed that new OPGW will be installed in the shield wire position. It is assumed the new switch structure will be engineered steel structures on drilled shaft foundations. |
| Right of way | FirstEnergy and its subsidiaries currently maintain the right-of-way for the entire length of the existing line, and FirstEnergy plans to reuse these rights. It is assumed that no additional right of way will be required, and any renegotiations necessary to migrate from wood poles to metal poles will not hinder or inhibit the project. |
| Construction responsibility | Confidential Information |
| Benefits/Comments | Confidential Information |
| Component Cost Details - In Current Year $ | |
| Engineering & design | Confidential Information |
| Permitting / routing / siting | Confidential Information |
| ROW / land acquisition | Confidential Information |
| Materials & equipment | Confidential Information |
| Construction & commissioning | Confidential Information |
| Construction management | Confidential Information |
| Overheads & miscellaneous costs | Confidential Information |
| Contingency | Confidential Information |
| Total component cost | $9,016,308.00 |

| | |
|---|---|
| Component cost (in-service year) | $9,762,133.00 |

## Substation Upgrade Component

| | |
|---|---|
| Component title | Penn Mar- Deep Creek -Garrett 115 kV Line: Upgrade Relay Settings |
| Project description | Confidential Information |
| Substation name | Penn Mar, Garrett, and Deep Creek |
| Substation zone | PENELEC |
| Substation upgrade scope | Adjust the relay settings at Penn Mar, Garrett, and Deep Creek substations to accommodate the new ratings and impedance changes associates with the Garrett- Garrett Tap 115 kV Line rebuild. |

## Transformer Information

None

| | |
|---|---|
| New equipment description | No new equipment is anticipated, relay settings adjustment only. This line is already equipped with new digital relays. |
| Substation assumptions | Existing relays can be adjusted and will not require replacement. |
| Real-estate description | No real estate requirements are associated with this substation scope. |
| Construction responsibility | Confidential Information |
| Benefits/Comments | Confidential Information |

Component Cost Details - In Current Year $

| | |
|---|---|
| Engineering & design | Confidential Information |
| Permitting / routing / siting | Confidential Information |
| ROW / land acquisition | Confidential Information |
| Materials & equipment | Confidential Information |
| Construction & commissioning | Confidential Information |
| Construction management | Confidential Information |

| | |
|---|---|
| Overheads & miscellaneous costs | Confidential Information |
| Contingency | Confidential Information |
| Total component cost | $134,664.00 |
| Component cost (in-service year) | $139,612.00 |

## Congestion Drivers

None

## Existing Flowgates

| FG # | Fr Bus No. | From Bus Name | To Bus No. | To Bus Name | CKT | Voltage | TO Zone | Analysis type | Status |
|---|---|---|---|---|---|---|---|---|---|
| 2025W1-GD-LL32 | 200762 | 26GARRETT | 235470 | 01GARRET | 1 | 115 | 226/201 | Generation Deliverability | Included |
| 2025W1-GD-LL136 | 200762 | 26GARRETT | 235470 | 01GARRET | 1 | 115 | 226/201 | Generation Deliverability | Included |
| 2025W1-GD-LL28 | 200762 | 26GARRETT | 235470 | 01GARRET | 1 | 115 | 226/201 | Generation Deliverability | Included |
| 2025W1-GD-LL180 | 200762 | 26GARRETT | 235470 | 01GARRET | 1 | 115 | 226/201 | Generation Deliverability | Included |

## New Flowgates

Confidential Information

## Financial Information

| | |
|---|---|
| Capital spend start date | 07/2025 |
| Construction start date | 05/2028 |
| Project Duration (In Months) | 47 |

## Additional Comments

Proposal is ready for submission. Please reach out if you have any questions or concerns.