# Line #85 Rebuild (Lanexa to West Point)

## General Information

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|---|---|
| Proposing entity name | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project? | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Company proposal ID | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| PJM Proposal ID | 836 |
| Project title | Line #85 Rebuild (Lanexa to West Point) |
| Project description | Rebuild approximately 10.94-mile double circuit segment of Line #85 between Lanexa (structure 85/1A) and structure 85/75C to current 115kV standards, and with a minimum summer rating of 393 MVA. Line #85 shares a double circuit with 230kV Line #2016. The terminal ends should be upgraded as needed to not limit the conductor rating. |
| Email | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Project in-service date | 11/2028 |
| Tie-line impact | No |
| Interregional project | No |
| Is the proposer offering a binding cap on capital costs? | No |
| Additional benefits | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |

## Project Components

1. Line 85 Rebuild (Lanexa to West Point)
2. Line 2016 Rebuild (Lanexa to Harmony Village)
3. Lanexa Substation Terminal Equipment Upgrade
4. Goalders Creek Substation Relay Reset

## Transmission Line Upgrade Component

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|---|---|
| Component title | Line 85 Rebuild (Lanexa to West Point) |
| Project description | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Impacted transmission line | Line 85 |
| Point A | Lanexa |
| Point B | Owl Trap |
| Point C | |
| Terrain description | The project is in the Coastal Plains region, specifically New Kent County and a portion of King William County. The area is mostly rural. There are several crossings of The Diascund Reservoir, a major crossing over the Pamunkey River and numerous wetland areas. There are elevation changes along the route with the highest being approximately 152 feet and the lowest being approximately 6 feet. |
| Existing Line Physical Characteristics | |
| Operating voltage | 115 |
| Conductor size and type | 1351.5 ACSR (45/7) 90°C MOT & 1109 ACAR (24/13) 90°C MOT |
| Hardware plan description | New hardware will be used for line rebuild |
| Tower line characteristics | The existing line consists mainly of weathering steel double circuit H-frame structures built in 1979 and weathering steel double circuit towers built in 1969 and 1979. |
| Proposed Line Characteristics | |

| | Designed | Operating |
|---|---|---|
| Voltage (kV) | 115.000000 | 115.000000 |
| | Normal ratings | Emergency ratings |
| Summer (MVA) | 393.000000 | 393.000000 |
| Winter (MVA) | 412.000000 | 412.000000 |

| | |
|---|---|
| Conductor size and type | 1-768.2 ACSS/TW/HS (20/7) 250°C MOT |
| Shield wire size and type | (2) DNO-10410 shield wire |
| Rebuild line length | 10.94 Miles |
| Rebuild portion description | Refer to "993539-Proposal 4_T-Line Scope & One Lines" for complete description. |
| Right of way | The existing right of way (ROW) width varies based on the map viewer inputs as well as plan and profiles. It ranges from 120 to 180 feet between Lanexa Substation and structure 85/2 (2016/2). From structures 85/2 (2016/2) to 85/6 (2016/6), the ROW remains at 180 feet and between structures 85/6 (2016/6) to West Point Substation, the ROW is 100 feet. For approximately 8.24 miles from structure 85/6 (2016/6) to 85/67 (2016/67) and for approximately 0.18 miles from structure 85/74 (2016/74) to 85/75A an additional 20 feet of right of way is required. This results in approximately 20.41 acres of additional ROW being required. a. An alternative option to acquiring ROW would be to rebuild the line with vertical structures rather than double circuit H-frames or to receive a project specific exemption for not meeting typical ROW requirements. |
| Construction responsibility | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Benefits/Comments | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Component Cost Details - In Current Year $ | |
| Engineering & design | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Permitting / routing / siting | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| ROW / land acquisition | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Materials & equipment | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Construction & commissioning | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Construction management | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Overheads & miscellaneous costs | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Contingency | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Total component cost | $58,154,106.00 |
| Component cost (in-service year) | $62,283,048.00 |

## Transmission Line Upgrade Component

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|---|---|
| Component title | Line 2016 Rebuild (Lanexa to Harmony Village) |
| Project description | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Impacted transmission line | Line 2016 |
| Point A | Lanexa |
| Point B | Harmony Village |
| Point C | |
| Terrain description | The project is in the Coastal Plains region, specifically New Kent County and a portion of King William County. The area is mostly rural. There are several crossings of The Diascund Reservoir, a major crossing over the Pamunkey River and numerous wetland areas. There are elevation changes along the route with the highest being approximately 152 feet and the lowest being approximately 6 feet. |
| Existing Line Physical Characteristics | |
| Operating voltage | 230 |
| Conductor size and type | 1033.5 ACSS (45/7) 90°C MOT |
| Hardware plan description | New hardware will be used for line rebuild |
| Tower line characteristics | The existing line consists mainly of weathering steel double circuit H-frame structures built in 1979 and weathering steel double circuit towers built in 1969 and 1979. |
| Proposed Line Characteristics | |

| | Designed | Operating |
|---|---|---|
| Voltage (kV) | 230.000000 | 230.000000 |
| | Normal ratings | Emergency ratings |
| Summer (MVA) | 1573.000000 | 1573.000000 |
| Winter (MVA) | 1648.000000 | 1648.000000 |

| | |
|---|---|
| Conductor size and type | 2-768.2 ACSS/TW/HS (20/7) 250°C MOT |
| Shield wire size and type | (2) DNO-10410 shield wire |
| Rebuild line length | 11.08 Miles |
| Rebuild portion description | Refer to "993539-Proposal 4_T-Line Scope & One Lines" for complete description. |
| Right of way | The existing right of way (ROW) width varies based on the map viewer inputs as well as plan and profiles. It ranges from 120 to 180 feet between Lanexa Substation and structure 85/2 (2016/2). From structures 85/2 (2016/2) to 85/6 (2016/6), the ROW remains at 180 feet and between structures 85/6 (2016/6) to West Point Substation, the ROW is 100 feet. For approximately 8.24 miles from structure 85/6 (2016/6) to 85/67 (2016/67) and for approximately 0.18 miles from structure 85/74 (2016/74) to 85/75A an additional 20 feet of right of way is required. This results in approximately 20.41 acres of additional ROW being required. a. An alternative option to acquiring ROW would be to rebuild the line with vertical structures rather than double circuit H-frames or to receive a project specific exemption for not meeting typical ROW requirements. |
| Construction responsibility | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Benefits/Comments | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Component Cost Details - In Current Year $ | |
| Engineering & design | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Permitting / routing / siting | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| ROW / land acquisition | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Materials & equipment | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Construction & commissioning | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Construction management | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Overheads & miscellaneous costs | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Contingency | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Total component cost | $.00 |
| Component cost (in-service year) | $.00 |

## Substation Upgrade Component

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|---|---|
| Component title | Lanexa Substation Terminal Equipment Upgrade |
| Project description | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Substation name | Lanexa |
| Substation zone | 345 |
| Substation upgrade scope | Purchase & Install Substation Material: 1. One (1), 115KV Wave Trap 2. One (1) 115KV Coupling Capacitor Voltage Transformer. 3. Conductors, connectors, insulators, control cables, foundations, steel structures, and grounding connections as per engineering standards. Retire Substation Material: 1. One (1), 115kV, Single phase Coupling Capacitor Voltage Transformer due to aging. 2. One (1), 115kV, 1600A, Wave Trap. Purchase & Install Relay Material: 1. Relay reset only. |

## Transformer Information

None

| | |
|---|---|
| New equipment description | 1. One (1), 115KV Wave Trap 2. One (1) 115KV Coupling Capacitor Voltage Transformer. |
| Substation assumptions | 1. The scope of work depicted on the drawings assumes that there is no overlap with other designs and construction activities, except if mentioned in this Project Summary. 2. Relay Settings and P&C design will be revised as part of the SPE Scope of Work. |
| Real-estate description | Substation is not being expanded. |
| Construction responsibility | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Benefits/Comments | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |

Component Cost Details - In Current Year $

| | |
|---|---|
| Engineering & design | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Permitting / routing / siting | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| ROW / land acquisition | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Materials & equipment | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Construction & commissioning | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |

| | |
|---|---|
| Construction management | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Overheads & miscellaneous costs | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Contingency | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Total component cost | $252,776.40 |
| Component cost (in-service year) | $270,723.10 |

## Substation Upgrade Component

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|---|---|
| Component title | Goalders Creek Substation Relay Reset |
| Project description | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Substation name | Goalders Creek |
| Substation zone | 345 |
| Substation upgrade scope | 1. Relay Reset Only. |

## Transformer Information

None

| | |
|---|---|
| New equipment description | None. |
| Substation assumptions | 1. The scope of work depicted on the drawings assumes that there is no overlap with other designs and construction activities, except if mentioned in this Project Summary. 2. Relay Settings and P&C design will be revised as part of the SPE Scope of Work. |
| Real-estate description | Substation is not being expanded. |
| Construction responsibility | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Benefits/Comments | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Component Cost Details - In Current Year $ | |
| Engineering & design | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Permitting / routing / siting | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |

| | |
|---|---|
| ROW / land acquisition | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Materials & equipment | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Construction & commissioning | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Construction management | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Overheads & miscellaneous costs | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Contingency | The redacted information is proprietary to the Company; therefore, it is privileged and confidential |
| Total component cost | $20,108.20 |
| Component cost (in-service year) | $21,535.67 |

## 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-ME2 | 314188 | 3WEST PT | 314387 | 3LANEXA | 1 | 115 | 345 | Market Efficiency | Included |

## New Flowgates

The redacted information is proprietary to the Company; therefore, it is privileged and confidential

## Financial Information

| | |
|---|---|
| Capital spend start date | 10/2025 |
| Construction start date | 11/2027 |
| Project Duration (In Months) | 37 |

## Additional Comments

The project is in the Coastal Plains region, specifically New Kent County and a portion of King William County. There are several crossings of The Diascund Reservoir, a major crossing over the Pamunkey River and numerous wetland areas. These are the main reasons for the relatively high cost estimate.