

### **Executive Summary**

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1. Executive Summary Instructions Inputs **Proposing Entity name** 1.a. Provide the name of the Proposing Entity. If there are multiple entities, please identify each party. Provide the RTEP Proposal Window in which this proposal is being submitted. 1.b. **Proposal window** 2019 RTEP Open Window Provide the Proposing Entity project proposal id. Use "A, B, C, ...", etc. to differentiate between proposals. **Proposal identification** 1.c. 2019 1-673 PJM proposal identification 1.d. PJM proposal identification General project description 1.e. Provide a general description of the scope of this project (e.g. Project is a new line between X and Y substations utilizing Replace terminal equipment and implement reconductoring of the Silverside-Darley and Darley-Naamans lines to AAA structures. A new bay will be created within the existing substation X footprint. Substation Y will be reconfigured to a achieve breaker and a half with accomodations for the new line.) Identify if the proposal or a proposal component span two PJM Transmission Owner zones. I.e. The proposal topology 1.f. No Tie line impact connects equipment owned by more than one Transmission Owner. This group includes transmission that spans two or more affiliated companies (e.g. Meted and Allegheny Power). Interregional project No 1.g. Indicate if the project is being proposed as a solution to a cross-border (e.g. PJM to MISO, PJM to NYISO) issue. (Note: The Proposing Entity is responsible for initiating and satisfying all regional and interregional requirements.) Indicate if the Proposing Entity intends to construct, own, operate, and maintain the infrastructure built under this proposal. Yes 1.h. Construct, own, operate and maintain \$5.500.000.00 Total current year project cost estimate including estimates for any required Transmission Owner upgrades. 1.i. Project cost estimate (current year) \$6.283.292.26 Total in-service year project cost estimate including estimates for any required Transmission Owner upgrades. 1.j. **Project cost estimate (in-service year) Project schedule duration** 48 Project estimated schedule duration in months. 1.k. Indicate if any cost containment commitment is being proposed as part of the project. If yes, the "10. Cost Contain" tab No 1.l. **Cost containment commitment** within this project proposal template is to be completed **Additional benefits** 1.m. If the project provides any known additional benefits above solving the identified violations or constraints, identify those benefits (e.g. reliability, economic, resilience, etc.). Confirm that all technical analysis files have been provided for this proposal. Technical analysis files provided  $\checkmark$ 1.n.

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| Executive Summary   |          |   |
|---|----------|---|
| Instructions  |          | Inputs  |
| Confirm that all necessary project diagrams have been provided for this proposal.   | 1.0.     | Project diagram files provided ✓  |
| Indicate if company evaluation and operations and maintenance information has been provided for this proposal.  | 1.p.     | Company evaluation and operations and maintenance information provided  |
|   |          | If the answer to the cross-border question above at 1.g. was yes, complete the questions below.   |
| Indicate if an evaluation for interregional cost allocation is desired.   | 1.q.i.   | Interregional Cost Allocation Evaluation No   |
|   | 1.q.ii.  | Evaluated in interregional analysis under PJM  Tariff or Operating Agreement provisions   |
|   |          | If 'yes,' specify analysis and applicable Tariff or Operating Agreement provisions  |
| Indicate if the proposal has been evaluated in a coordinated interregional analysis under the PJM Tariff or Operating Agreement provisions. Specify the analysis and applicable Tariff or Operating Agreement provisions. |          |   |
|   |          |   |
|   | 1.q.iii. | Regional and Interregional violations and issues from the Regional and/or Interregional analyses that identified the violations and issues addressed by the proposal. |
| List the specific regional and interregional violations and issues from the regional and/or interregional analyses that identified the violations and issues addressed by the proposal.                                   |          |   |

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2.a.

### Overloaded Facilities

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Facilities addressed by the proposed project Instructions: List the criteria violation(s) or system constraint(s) solved or mitigated by the proposed project. To Bus Analysis Type Bus # **Facility Name** СКТ Voltage FG# To Bus # Area Name 2024 Summer Generation Deliverability 538 231215 SILVERSD 231205 DARLEY 1 69 235 2024 Summer Generation Deliverability 539 231205 DARLEY 231211 NAAMANS 235

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| 3. Major Project Components   |      |  |   |  |   |
|---|------|--|---|--|---|
| Instructions  |      |  | Component 1                                   | Component 2                                | Component 3                                 |
| Describe the scope of work for each major project component. Provide additional detail for each component on the cooresponding (yellow) component tab. For example, complete a component on the "Greenfield Sub Comp" tab for each proposed new substation. | 3.a. | Component description(s)   | Reconductor Silverside - Darley<br>69 kV Line | Reconductor Darley - Naamans<br>69 kV line | Upgrade Terminal Equipment at<br>Silverside |
| Provide a project cost breakdown by the inticated categories for each component. State costs in current year dollars.   | 3.b. | Component cost (current year)  Engineering and design  Permitting / routing / siting  ROW / land acquisition  Materials and equipment  Construction and commissioning  Construction management  Overheads and miscellaneous costs  Contingency  Total component cost | \$ 1,392,000.00                               | \$ 2,088,000.00                            | \$ 475,000.00                               |
| For Market Efficiency projects, provide an in-service year component project total cost.  | 3.c. | Component cost (in-service year)   | \$ 1,590,345.39                               | \$ 2,385,518.08                            | \$ 542,682.51                               |
| Identify the entity who will be designated to build the component.  | 3.d. | Construction responsibility  | Delmarva Power & Light<br>Company             | Delmarva Power & Light<br>Company          | Delmarva Power & Light<br>Company           |

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Company

Company

Company



## Major Project Components To be publically posted by PJM

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| 3. Major Project Components   | -    |   |   |  |             |
|---|------|---|---|--|-------------|
| Instructions  |      |   | Component 4   | Component 5  | Component 6 |
| Describe the scope of work for each major project component. Provide additional detail for each component on the cooresponding (yellow) component tab. For example, complete a component on the "Greenfield Sub Comp" tab for each proposed new substation. | 3.a. | Component description(s)  | Upgrade Terminal Equipment at<br>Naamans Substation | Upgrade Terminal Equipment at<br>Darley Substation |             |
| Provide a project cost breakdown by the inticated categories for each component. State costs in current year dollars.   | 3.b. | Component cost (current year) Engineering and design Permitting / routing / siting ROW / land acquisition Materials and equipment Construction and commissioning Construction management Overheads and miscellaneous costs Contingency Total component cost | \$ 595,000.00                                       | \$ 950,000.00                                      | \$          |
| For Market Efficiency projects, provide an in-service year component project total cost.  | 3.c. | Component cost (in-service year)  | \$ 679,781.25                                       | \$ 1,085,365.03                                    |             |
| Identify the entity who will be designated to build the component.  | 3.d. | Construction responsibility   | Delmarva Power & Light<br>Company                   | Delmarva Power & Light<br>Company                  |             |

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Company

Company



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| Instructions  |      | Inputs - 1   |
|---|------|--|
| Provide the corresponding component number from the "Project Components" tab.   | 4.a. | Component number 1   |
| Identify the line terminal points. Add additional spaces if required.   | 4.b. | Terminal points Silverside Substation Darley Substation  |
|   |      | Existing Line Physical Characteristics   |
| Provide the size and type conductor that will be removed.   | 4.c. | Existing conductor size and type 954 ACSR Phoenix 42/7, 477 ACSS Hawk 26/7   |
| Indicate whether the existing line hardware will be reused. If so, provide the age and condition of the hardware.   | 4.d. | Existing hardware plan  Existing hardware will be replaced.  |
| Provide the condition and age of the existing structures. Describe the findings of any recent inspections or of analysis that has indicated a need for structural repair or reinforcement to re-conductor the line. | 4.e. | Existing tower line characteristics  Existing structures will be reused where possible. In these instances, lattice towers are 50+ years old, but in good operating condition. No long-term plans to replace these towers.   |
| Describe the terrain that the existing line traverses. Additionally, provide a Google Earth .KMZ file with the existing line path as an included document with the project proposal package.                        | 4.f. | Terrain description  Roughly half of the line resides in private ROW through wooded areas, with the remaining half of the line located within residential areas. Generally, the area is reasonably flat and above sea-level. |
| Provide the target ratings for the line.  | 4.g. | Reconductor/Rebuild Component Plan  Component target ratings  263 MVA Summer Emergency / 294 MVA Winter Emergency  |
| Provide the type and size of the conductor to be installed.   | 4.h. | Proposed conductor size and type (2) 636 24/7 ACSR   |
| For shield wire replacements, identify the type and size to be used.  | 4.i. | Proposed shield wire size and type   |

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| 4. Transmission Line Reconductor/Rebuild Component Instructions  |              | Inputs - 1   |
|--|--------------|--|
| Provide the corresponding component number from the "Project Components" tab.  | 4.a.         | Component number 1   |
|  | 4.j.         | Rebuild portion  |
| Describe the amount of the line that is anticipated to be rebuilt versus reconductored. Provide any assumptions that were used in arriving at this determination. If specific line sections have been identified for rebuild, provide route maps for (or specify in a Google Earth .KMZ file) those segments and identify the areas. |              | Three (3) existing lattice towers would need to be replaced with steel structures. |
| Describe the segments of the existing right-of-way that will need to be expanded or any newly required rights-of-way that will be required. If new or expanded right-of-way is required, provide route maps for (or specify in a Google Earth .KMZ file) those segments and identify the areas.                                      | 4.k.         | Right of way  Existing right-of-way will be utilized for this construction.        |
|  | <b>4</b> .l. | Redacted information   |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction.  |              |  |

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| 1. Transmission Line Reconductor/Rebuild Component  |      |  |
|---|------|--|
| Instructions  |      | Inputs - 2   |
| Provide the corresponding component number from the "Project Components" tab.   | 4.a. | Component number 2   |
| Identify the line terminal points. Add additional spaces if required.   | 4.b. | Terminal points  Darley Substation  Naamans Substation   |
|   |      | Existing Line Physical Characteristics   |
| Provide the size and type conductor that will be removed.   | 4.c. | Existing conductor size and type 397.5 ACSR Lark 30/7, 636 ACSR Rook 24/7  |
| Indicate whether the existing line hardware will be reused. If so, provide the age and condition of the hardware.   | 4.d. | Existing hardware plan  Existing hardware will be replaced.  |
| Provide the condition and age of the existing structures. Describe the findings of any recent inspections or of analysis that has indicated a need for structural repair or reinforcement to re-conductor the line. | 4.e. | Existing tower line characteristics  Existing structures will be reused where possible. In these instances existing lattice towers are 50+ years old, but in good operating condition. No long-term plans to replace these towers. |
| Describe the terrain that the existing line traverses. Additionally, provide a Google Earth .KMZ file with the existing line path as an included document with the project proposal package.                        | 4.f. | Terrain description  |
| Provide the target ratings for the line.  | 4.g. | Reconductor/Rebuild Component Plan  Component target ratings 263 MVA Summer Emergency / 294 MVA Winter Emergency   |
| Provide the type and size of the conductor to be installed.   | 4.h. | Proposed conductor size and type (2) 636 24/7 ACSR   |
| For shield wire replacements, identify the type and size to be used.  | 4.i. | Proposed shield wire size and type   |

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| 4. Transmission Line Reconductor/Rebuild Component   |              |   |
|--|--------------|---|
| Instructions   |              | Inputs - 2  |
| Provide the corresponding component number from the "Project Components" tab.  | 4.a.         | Component number 2  |
| Describe the amount of the line that is anticipated to be rebuilt versus reconductored. Provide any assumptions that were used in arriving at this determination. If specific line sections have been identified for rebuild, provide route maps for (or specify in a Google Earth .KMZ file) those segments and identify the areas. | 4.j.         | Rebuild portion  Four (4) existing lattice towers and one (1) wood pole structure would need to be replaced with taller steel structures. |
| Describe the segments of the existing right-of-way that will need to be expanded or any newly required rights-of-way that will be required. If new or expanded right-of-way is required, provide route maps for (or specify in a Google Earth .KMZ file) those segments and identify the areas.                                      | 4.k.         | Right of way  Existing right-of-way will be utilized for this construction.   |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction.  | <b>4</b> .l. | Redacted information  |

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Substation Upgrade Component
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| 5. Substation Upgrade Component   |      |   |
|---|------|---|
| Instructions  |      | Inputs-1  |
| Provide the corresponding component number from the "Project Components" tab.   | 5.a. | Component number 3  |
| Identify the name of the existing substation where the upgrade will take place.   | 5.b. | Substation Silverside   |
|   | 5.c. | Substation upgrade scope  |
| Describe the scope of the upgrade work at the identified substation.  |      | Replace three (3) existing 1200A disconnect switches with 2000A disconnect switches |
|   | 5.d. | New equipment description   |
| Describe any new substation equipment and provide the equipment ratings.  |      | Three (3) new 2000A (310 MVA SE / 351 MVA WE) disconnect switches                   |
|   | 5.e. | Substation assumptions  |
| Describe the assumptions that were made about the substation that were used in developing the scope and cost for the upgrade. For example, the use of a bay that appears to be available, the proposed use of an open area within the substation or the relocation of existing equipment. |      | Replacing existing equipment, no reconfiguration needed.                            |
| Provide a single line diagram and a station general arrangement drawing for upgraded which change or expand the substation configuration List these documents on the 'Redacted Information' tab under the appropriate project component.  | 5.f. | Substation drawings   |
|   | 5.g. | Real-estate plan  |
| If the substation fence needs to be expanded, indicate the real-estate plan for acquiring the needed land. Also, provide a Google Earth .KMZ file detailing the expansion.  |      | No changes to existing substation plot.   |
|   | 5.h. | Redacted information  |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction.   |      |   |

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Substation Upgrade Component
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| 5. Substation Upgrade Component   |              |   |
|---|--------------|---|
| Instructions  |              | Inputs-1  |
| Provide the corresponding component number from the "Project Components" tab.   | 5.a.         | Component number 4  |
| Identify the name of the existing substation where the upgrade will take place.   | 5.b.         | Substation Naamans Naamans  |
| Describe the scope of the upgrade work at the identified substation.  | 5.c.         | Substation upgrade scope  Replace two (2) 1200A disconnect switches with 2000A disconnect switces. Replace existing 954 ACSR and 500 SDCU stranded bus with (2) 954 ACSR stranded bus. Reconfigure four (4) CTs from 1200A to 2000A |
| Describe any new substation equipment and provide the equipment ratings.  | 5.d.         | New equipment description  Two (2) new 2000A (310 MVA SE / 351 MVA WE) disconnect switches, new (2) 954 ACSR (331 MVA SE / 369 MVA WE) stranded bus   |
| Describe the assumptions that were made about the substation that were used in developing the scope and cost for the upgrade. For example, the use of a bay that appears to be available, the proposed use of an open area within the substation or the relocation of existing equipment. | 5.e.         | Substation assumptions  Replacing existing equipment, no reconfiguration needed.  |
| Provide a single line diagram and a station general arrangement drawing for upgraded which change or expand the substation configuration List these documents on the 'Redacted Information' tab under the appropriate project component.  | 5.f.<br>5.g. | Substation drawings  Real-estate plan   |
| If the substation fence needs to be expanded, indicate the real-estate plan for acquiring the needed land. Also, provide a Google Earth .KMZ file detailing the expansion.  | J.y.         | No changes to existing substation plot.   |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction.   | 5.h.         | Redacted information  |

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Substation Upgrade Component
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| 5. Substation Upgrade Component   |      |  |
|---|------|--|
| Instructions  |      | Inputs-3   |
| Provide the corresponding component number from the "Project Components" tab.   | 5.a. | Component number 5   |
| Identify the name of the existing substation where the upgrade will take place.   | 5.b. | Substation Darley  |
| Describe the scope of the upgrade work at the identified substation.  | 5.c. | Substation upgrade scope  Replace four (4) 1200A disconnect switches with 2000A disconnect switces. Replace existing 954 ACSR and 1272 MCM AL stranded bus with (2) 954 ACSR stranded bus. Reconfigure eight (8) CTs from 1200A to 2000A |
| Describe any new substation equipment and provide the equipment ratings.  | 5.d. | New equipment description  Four (4) new 2000A (310 MVA SE / 351 MVA WE) disconnect switches, new (2) 954 ACSR (331 MVA SE / 369 MVA WE) stranded bus   |
| Describe the assumptions that were made about the substation that were used in developing the scope and cost for the upgrade. For example, the use of a bay that appears to be available, the proposed use of an open area within the substation or the relocation of existing equipment. | 5.e. | Substation assumptions  Replacing existing equipment, no reconfiguration needed.   |
| Provide a single line diagram and a station general arrangement drawing for upgraded which change or expand the substation configuration List these documents on the 'Redacted Information' tab under the appropriate project component.  | 5.f. | Substation drawings  |
| If the substation fence needs to be expanded, indicate the real-estate plan for acquiring the needed land. Also, provide a Google Earth .KMZ file detailing the expansion.  | 5.g. | Real-estate plan  No changes to existing substation plot.  |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction.   | 5.h. | Redacted information   |

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## **Project Financial Information**

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| 9. Project Financial Information   |      |  |             |           |           |            |            |              |            |
|--|------|--|-------------|-----------|-----------|------------|------------|--------------|------------|
| Instructions   |      |  |             | Inp       | uts       |            |            |              |            |
|  |      | Project Schedule   |             |           |           |            |            |              |            |
| Provide the planned construction period. Include start and   | 9.a. | Capital spend start date (Mo-Yr)   | May-20      |           |           |            |            |              |            |
| end dates (month and year) of capital spend as well as the<br>start and end dates (month and year) of construction.  |      | Construction start date (Mo-Yr)  | Oct-23      |           |           |            |            |              |            |
| Commercial operation typically begins in the month following the end of construction.  |      | Commercial operation date (Mo-Yr)  | May-24      |           |           |            |            |              |            |
|  |      | Project Capital Expenditures   |             |           |           |            |            |              |            |
|  | 9.b. | Capital expenditure details  | Total       | 2019      | 2020      | 2021       | 2022       | 2023         | 2024       |
| Provide, in present year dollars, capital expenditure estimates by year for the Proposing Entity, work to be completed by others (e.g. incumbent TO) and total project.  Include all capital expenditure, such as ongoing expenditures, for which the Proposing Entity plans to seek FERC approval for recovery. |      | Engineering and design Permitting / routing / siting ROW / land acquisition Materials and equipment Construction and commissioning Construction management Overheads and miscellaneous costs Contingency Proposer total capex Work by others capex Total project capex | \$ 5,500,00 | 00   \$ - | \$ 66,950 | \$ 300,950 | \$ 954,000 | \$ 3,305,900 | \$ 872,200 |
| Provide a yearly AFUDC cash flow, even if AFUDC is not going to be employed.   | 9.c. | AFUDC  | Total       | 2019      | 2020      | 2021       | 2022       | 2023         | 2024       |
| going to be employed.  | 9.d. | Assumptions for the capital expenditure estimate   | <u> </u>    |           |           |            |            |              |            |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction.  |      |  |             |           |           |            |            |              |            |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction.  | 9.e. | Redacted information   |             |           |           |            |            |              |            |

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