# Executive Summary

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*
*Orange indicates input cells for PJM to complete*

## 1. Executive Summary

| Instructions | | Inputs | |
|---|---|---|---|
| Provide the name of the Proposing Entity. If there are multiple entities, please identify each party. | 1.a. | Proposing Entity name | [redacted] |
| Provide the RTEP Proposal Window in which this proposal is being submitted. | 1.b. | Proposal window | 2019 Proposal Window 1 |
| Provide the Proposing Entity project proposal id. Use "A, B, C, …", etc. to differentiate between proposals. | 1.c. | Proposal identification | A |
| PJM proposal identification | 1.d. | PJM proposal identification | 2019_1-640 |
| Provide a general description of the scope of this project (e.g. Project is a new line between X and Y substations utilizing AAA structures. A new bay will be created within the existing substation X footprint. Substation Y will be reconfigured to a breaker and a half with accomodations for the new line.) | 1.e. | General project description | Proposal A increases the ampacity on Line 227 between Pleasant View Junction and Beaumeade by increasing the maximum operating temperature of the 1192.5 ACSS 45/7 conductor from 145º C to 200º C and the 1590 ACSR 45/7 conductor at Ashburn from 145º C to 150º C . |
| Identify if the proposal or a proposal component span two PJM Transmission Owner zones. I.e. The proposal topology 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). | 1.f. | Tie line impact | *No* |
| 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.) | 1.g. | Interregional project | *No* |
| Indicate if the Proposing Entity intends to construct, own, operate, and maintain the infrastructure built under this proposal. | 1.h. | Construct, own, operate and maintain | *Yes* |
| Total current year project cost estimate including estimates for any required Transmission Owner upgrades. | 1.i. | Project cost estimate (current year) | $7,010,888 |
| Total in-service year project cost estimate including estimates for any required Transmission Owner upgrades. | 1.j. | Project cost estimate (in-service year) | $8,163,444.00 |
| Project estimated schedule duration in months. | 1.k. | Project schedule duration | 20 |
| Indicate if any cost containment commitment is being proposed as part of the project. If yes, the "10. Cost Contain" tab within this project proposal template is to be completed | 1.l. | Cost containment commitment | *No* |
| If the project provides any known additional benefits above solving the identified violations or constraints, identify those benefits (e.g. reliability, economic, resilience, etc.). | 1.m. | Additional benefits | No new ROW required. [redacted] is providing three viable alternatives (A, B, C) to resolve the violations caused by the flowgates listed under Tab 2. Proposal C, with the highest conductor capacity, meets the current [redacted] standard for 230kV construction in northern Virginia and [redacted] believes that this is the best long term solution for these violations. Proposal A, although the least expensive, provides the least amount of additional capacity on Line 227 to support the future load growth of the area. |
| Confirm that all technical analysis files have been provided for this proposal. | 1.n. | Technical analysis files provided | ☑ |

## Executive Summary

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*
*Orange indicates input cells for PJM to complete*

### 1. Executive Summary

| Instructions | | Inputs | |
|---|---|---|---|
| Confirm that all necessary project diagrams have been provided for this proposal. | 1.o. | 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 | *No* |
| 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. | | If 'yes,' specify analysis and applicable Tariff or Operating Agreement provisions | NA |
| 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. | 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. | NA |

## Overloaded Facilities

To be publically posted by PJM

2.a.

| Facilities addressed by the proposed project | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instructions: | List the criteria violation(s) or system constraint(s) solved or mitigated by the proposed project. | | | | | | | |
| FG # | Analysis Type | Bus # | Facility Name | To Bus # | To Bus Name | CKT | Voltage | Area |
| N1-ST46 | Sum Basecase Analysis Thermal | 314170 | 6COHMIL | 314006 | 6ASHBURA | 1 | 230/230 | 345/345 |
| GD-S5 | Sum Gen Deliv | 314170 | 6COHMIL | 314006 | 6ASHBURA | 1 | 230/230 | 345/345 |
| GD-S7 | Sum Gen Deliv | 314006 | 6ASHBURA | 314010 | 6BEAMEAD | 1 | 230/230 | 345/345 |
| N2-ST69 | Sum N-1-1 Thermal | 314170 | 6COHMIL | 314006 | 6ASHBURA | 1 | 230/230 | 345/345 |
| N2-ST70 | Sum N-1-1 Thermal | 314170 | 6COHMIL | 314006 | 6ASHBURA | 1 | 230/230 | 345/345 |
| N2-ST71 | Sum N-1-1 Thermal | 314170 | 6COHMIL | 314006 | 6ASHBURA | 1 | 230/230 | 345/345 |

## Major Project Components

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*

**3. Major Project Components**

**Instructions**

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.

Provide a project cost breakdown by the inticated categories for each component. State costs in current year dollars.

For Market Efficiency projects, provide an in-service year component project total cost.

Identify the entity who will be designated to build the component.

| | | Component 1 | Component 2 | Component 3 |
|---|---|---|---|---|
| 3.a. | Component description(s) | At Beaumeade Substation, replace terminal equipment | At Ashburn Substation, replace terminal equipment | Uprate line segment from Beaumeade to Ashburn to increase capacity by replacing clamps and re-sagging conductor |
| 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 | $ - | $ - | $ - |
| 3.c. | Component cost (in-service year) | | | |
| 3.d. | Construction responsibility | Dominion Energy Virginia | Dominion Energy Virginia | Dominion Energy Virginia |

## Major Project Components

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*

**3. Major Project Components**

**Instructions**

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.

Provide a project cost breakdown by the inticated categories for each component. State costs in current year dollars.

For Market Efficiency projects, provide an in-service year component project total cost.

Identify the entity who will be designated to build the component.

| | | Component 4 | Component 5 | Component 6 |
|---|---|---|---|---|
| 3.a. | Component description(s) | Uprate line segment from Ashburn to Cochran Mill DP to increase capacity by replacing clamps and re-sagging conductor (from Ashburn to Pleasant View Junction) | | |
| 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 | $ - | $ - | $ - |
| 3.c. | Component cost (in-service year) | | | |
| 3.d. | Construction responsibility | Dominion Energy Virginia | | |

## Substation Upgrade Component

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*

### 5. Substation Upgrade Component

| Instructions | | Inputs-1 | |
|---|---|---|---|
| Provide the corresponding component number from the "Project Components" tab. | **5.a.** | **Component number** | 1 |
| Identify the name of the existing substation where the upgrade will take place. | **5.b.** | **Substation** | Beaumeade |
| Describe the scope of the upgrade work at the identified substation. | **5.c.** | **Substation upgrade scope** | Replace wave trap, line switch, and breaker disconnects. |
| Describe any new substation equipment and provide the equipment ratings. | **5.d.** | **New equipment description** | NA |
| 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** | NA |
| 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** | NA |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction. | **5.h.** | **Redacted information** | 5f |

# Substation Upgrade Component

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*

## 5. Substation Upgrade Component

| Instructions | | Inputs-1 | |
|---|---|---|---|
| Provide the corresponding component number from the "Project Components" tab. | **5.a.** | **Component number** | 2 |
| Identify the name of the existing substation where the upgrade will take place. | **5.b.** | **Substation** | Ashburn |
| Describe the scope of the upgrade work at the identified substation. | **5.c.** | **Substation upgrade scope** | Replace line lead and line switch. |
| Describe any new substation equipment and provide the equipment ratings. | **5.d.** | **New equipment description** | NA |
| 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** | NA |
| 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** | NA |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction. | **5.h.** | **Redacted information** | 5f |

# Reconductor/Rebuild Transmission Line Component

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*

## 4. Transmission Line Reconductor/Rebuild Component

| Instructions | | Inputs - 1 | |
|---|---|---|---|
| Provide the corresponding component number from the "Project Components" tab. | **4.a.** | **Component number** | 3 |
| Identify the line terminal points. Add additional spaces if required. | **4.b.** | **Terminal points** | Beaumeade |
| | | | Ashburn |
| | | | |
| | | **Existing Line Physical Characteristics** | |
| Provide the size and type conductor that will be removed. | **4.c.** | **Existing conductor size and type** | NA |
| 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 conductor will remain in use. Only the conductor 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** | |
| 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** | From Pleasant View Substation, southeast to Beaumeade Substation, the line traverses through still, relatively flat terrain with more dense scrub shrub and wooded vegetation. The surrounding area is industrial in nature as the existing line parallels a large quarry and crosses Goose Creek, a tributary to the Potomac River. After crossing Belmont Ridge Road (Route 659) the existing line is surrounded mostly by residential homes on flat terrain. This final segment crosses another unnamed tributary to the Potomac River. From Pleasant View Substation to Beaumeade Substation, the existing line also parallels a paved and flat Pedestrian/Bike Trail. |
| | | **Reconductor/Rebuild Component Plan** | |
| Provide the target ratings for the line. | **4.g.** | **Component target ratings** | 937 MVA |
| Provide the type and size of the conductor to be installed. | **4.h.** | **Proposed conductor size and type** | NA |
| For shield wire replacements, identify the type and size to be used. | **4.i.** | **Proposed shield wire size and type** | NA |

# Reconductor/Rebuild Transmission Line Component

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*

## 4. Transmission Line Reconductor/Rebuild Component

| Instructions | | Inputs - 1 | |
|---|---|---|---|
| Provide the corresponding component number from the "Project Components" tab. | **4.a.** | **Component number** | 3 |
| 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** | NA |
| 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** | NA |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction. | **4.l.** | **Redacted information** | 4e |

# Reconductor/Rebuild Transmission Line Component

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*

## 4. Transmission Line Reconductor/Rebuild Component

| Instructions | | Inputs - 2 | |
|---|---|---|---|
| Provide the corresponding component number from the "Project Components" tab. | **4.a.** | **Component number** | 4 |
| Identify the line terminal points. Add additional spaces if required. | **4.b.** | **Terminal points** | Ashburn<br>Cochran Mill DP |
| | | **Existing Line Physical Characteristics** | |
| Provide the size and type conductor that will be removed. | **4.c.** | **Existing conductor size and type** | NA |
| 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 conductor will remain in use. Only the conductor 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** | |
| 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** | From Pleasant View Substation, southeast to Beaumeade Substation, the line traverses through still, relatively flat terrain with more dense scrub shrub and wooded vegetation. The surrounding area is industrial in nature as the existing line parallels a large quarry and crosses Goose Creek, a tributary to the Potomac River. After crossing Belmont Ridge Road (Route 659) the existing line is surrounded mostly by residential homes on flat terrain. This final segment crosses another unnamed tributary to the Potomac River. From Pleasant View Substation to Beaumeade Substation, the existing line also parallels a paved and flat Pedestrian/Bike Trail. |
| | | **Reconductor/Rebuild Component Plan** | |
| Provide the target ratings for the line. | **4.g.** | **Component target ratings** | 937 MVA |
| Provide the type and size of the conductor to be installed. | **4.h.** | **Proposed conductor size and type** | NA |
| For shield wire replacements, identify the type and size to be used. | **4.i.** | **Proposed shield wire size and type** | NA |

# Reconductor/Rebuild Transmission Line Component

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*

## 4. Transmission Line Reconductor/Rebuild Component

| Instructions | | Inputs - 2 | |
|---|---|---|---|
| Provide the corresponding component number from the "Project Components" tab. | **4.a.** | **Component number** | 4 |
| | **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. | | NA | |
| | **4.k.** | **Right of way** | |
| 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. | | NA | |
| | **4.l.** | **Redacted information** | |
| Describe any files or information that has been redacted from this section and provide the basis for the redaction. | | 4e | |

## Project Financial Information

**To be publically posted by PJM**

*Blue indicates input cells for the Proposing Entity to complete*

### 9. Project Financial Information

| Instructions | | Inputs |
|---|---|---|
| | | **Project Schedule** |
| Provide the planned construction period. Include start and end dates (month and year) of capital spend as well as the start and end dates (month and year) of construction. Commercial operation typically begins in the month following the end of construction. | 9.a. | **Capital spend start date (Mo-Yr)**: May-21 |
| | | **Construction start date (Mo-Yr)**: Mar-22 |
| | | **Commercial operation date (Mo-Yr)**: Dec-22 |
| | | **Project Capital Expenditures** |

9.b.

| Capital expenditure details | Total | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| 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 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |

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.

Provide a yearly AFUDC cash flow, even if AFUDC is not going to be employed.

9.c.

| | Total | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| AFUDC | $ - | | | | | | |

9.d. **Assumptions for the capital expenditure estimate**

Describe any files or information that has been redacted from this section and provide the basis for the redaction.

9.e. **Redacted information**

Describe any files or information that has been redacted from this section and provide the basis for the redaction.

9b,c,d