



Executive Summary

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	2018/19 RTEP Long-Term Window
Provide the Proposing Entity project proposal id. Use "A, B, C, ...", etc. to differentiate between proposals.	1.c.	Proposal identification	[Redacted]
PJM proposal identification	1.d.	PJM proposal identification	201819_1-021
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 accommodations for the new line.)	1.e.	General project description	Rebuild the Hunterstown-Lincoln 115 kV line to a larger capacity. Create a new Peach Bottom - Graceton 230 kV circuit, with a series reactor at Graceton, by rebuilding the existing Peach Bottom Tap - Cooper - Graceton 230 line to double circuit, leaving the configuration of the existing facility relatively unchanged. Upgrade/Replace the existing Face Rock 115/69 kV transformers and related terminal equipment to achieve higher ratings on those facilities. Add circuit breakers/re-configure the Rice and Ringgold 230 kV stations to allow the presently gang operated 230 kV Rice-Ringgold Facilities to be operated independently.
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	Yes
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)	\$46,099,887
Total in-service year project cost estimate including estimates for any required Transmission Owner upgrades.	1.j.	Project cost estimate (in-service year)	\$54,740,916



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Instructions		Inputs	
Project estimated schedule duration in months.	1.k.	Project schedule duration	47
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	Resolves additional congestion on facilities which were masked by the congestion on the identified constraint
Confirm that all technical analysis files have been provided for this proposal.	1.n.	Technical analysis files provided	<input checked="" type="checkbox"/>
Confirm that all necessary project diagrams have been provided for this proposal.	1.o.	Project diagram files provided	<input checked="" type="checkbox"/>
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	<input type="checkbox"/>



Executive Summary

1. Executive Summary

Instructions

Inputs

If the answer to the cross-border question above at 1.g. was yes, complete the questions

Indicate if an evaluation for interregional cost allocation is desired.

1.q.i.

Interregional Cost Allocation Evaluation

Choose Yes or No

1.q.ii.

Evaluated in interregional analysis under PJM
Tariff or Operating Agreement provisions

Choose Yes or 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

Empty text box for providing 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.

Empty text box for listing specific regional and interregional violations and issues.



Overloaded Facilities

2. Overloaded Facilities

2.b.

Facilities not addressed/caused by the proposed project								
Instructions:		Identify the criteria violation(s) or system constraint(s) that the proposed project causes or does not address.						
Unique Proposer Generated ID	Analysis Type	Bus #	Facility Name	To Bus #	To Bus Name	CKT	Voltage	Area



Overloaded Facilities

2. Overloaded Facilities

2.c.

Market Efficiency flowgate(s) addressed by the proposed project							
Instructions:		Identify the Market Efficiency flowgate(s) the proposed project mitigates.					
FG#	Facility Name	Area	Type	Frequency (Hours)	Market Congestion (\$ millions)	Frequency (Hours)	Market Congestion (\$ millions)
ME-1	Hunterstown to Lincoln 115 kV	METED	Line	1720	20.77	1832	29.62



Major Project Components

3. Major Project Components

Instructions

Provide a description for each major project component. Each project component will require the completion of the tab corresponding to the category of the component ("Greenfield Substation Component" tab for any proposed new substation, for example).

Provide a component project cost breakdown into the identified categories along with a total component cost. Costs should be in current year dollars.

If this proposal is being submitted as Market Efficiency project, provide an in-service year component project

Identify the entity who will be designated the component.

	Component 1	Component 2	Component 3
3.a. Component description(s)	Re-build the existing Hunterstown - Lincoln 115 kV line, and any related terminal equipment to achieve ratings of at least 190 MVA Summer Normal and 260 MVA Summer Emergency	At Peach Bottom 230 kV, add a new 4000 Amp breaker and line termination position for a new line to Graceton. Also add a 2000 Amp breaker on the line termination for the Muddy Run 230 kV generator lead.	At Graceton 230 kV, add a new 4000 Amp breaker and a half string with 2 breakers to accommodate the new line termination from Peach Bottom. Also install a new 4000 Amp, ~3% impedance (16 Ohm), 230 kV series reactor for that line.
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	\$ 5,200,000.00	\$ 1,974,103.00	\$ 4,088,382.00
3.c. Component cost (in-service year)	\$ 5,852,645.81	\$ 2,221,870.32	\$ 4,601,509.96
3.d. Construction responsibility	█	█	█



Major Project Components

3. Major Project Components

Instructions

Provide a description for each major project component. Each project component will require the completion of the tab corresponding to the category of the component ("Greenfield Substation Component" tab for any proposed new substation, for example).

		Component 4	Component 5	Component 6
3.a.	Component description(s)	Rebuild the existing ~7.5 mile 230 kV line between Peach Bottom Tap and Graceton (via Cooper) to double circuit standards similar to those used for BGE's Graceton - Bagley 230 kV line. Install a new circuit from Peach Bottom 230 kV to Graceton with 2 bundle 1590 ACSR. The existing Peach Bottom Tap - Cooper - Graceton facility will be largely unchanged other than being on new towers.	At Face Rock 115/69, Upgrade/Replace the 115/69 kV Transformers and any associated equipment to achieve a combined total rating comparable to the expected ratings of the upgraded 115 kV line to Five Forks (210 SN/261 SE)	ITEM DELETED IN REV 1.0
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	\$ 26,250,000.00	\$ 3,517,890.00	\$ -
3.c.	Component cost (in-service year)	\$ 29,544,606.26	\$ 3,959,416.19	\$ -
3.d.	Construction responsibility	██████████	██	██████████

Provide a component project cost breakdown into the identified categories along with a total component cost. Costs should be in current year dollars.

If this proposal is being submitted as Market Efficiency project, provide an in-service year component project

Identify the entity who will be designated the component.



3. Major Project Components

Instructions

Provide a description for each major project component. Each project component will require the completion of the tab corresponding to the category of the component ("Greenfield Substation Component" tab for any proposed new substation, for example).

Provide a component project cost breakdown into the identified categories along with a total component cost. Costs should be in current year dollars.

If this proposal is being submitted as Market Efficiency project, provide an in-service year component project

Identify the entity who will be designated the component.

	Component 7	Component 8	Component 9
3.a. Component description(s)	At Rice 500/230 kV, add a new 4000 A 500 kV breaker and reconfigure the planned layout to allow the planned transformers to operate independently. Add a new 4000 A 230 kV breaker to allow the planned Rice - Ringgold 230 kV lines to operate independently.	At Ringgold 230 kV, add a new 4000 A double breaker/double bus string to the planned rebuild of the station to allow the Rice - Ringgold 230 kV lines to operate independently.	
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	\$ 2,904,439.00	\$ 2,165,073.00	\$ -
3.c. Component cost (in-service year)	\$ 3,268,971.68	\$ 2,436,808.74	
3.d. Construction responsibility			



4. Transmission Line Reconductor/Rebuild Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template.

Identify the line terminal points. Add additional spaces if required.

Provide the size and type conductor that will be removed.

Indicate whether the existing line hardware will be reused. If so, provide the age and condition of the hardware.

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.

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.

Inputs - 1

4.a.	Component number	1
4.b.	Terminal points	Hunterstown 115
		Lincoln 115

Existing Line Physical Characteristics

4.c.	Existing conductor size and type	unknown
4.d.	Existing hardware plan	unknown
4.e.	Existing tower line characteristics	unknown
4.f.	Terrain description	Hilly



4. Transmission Line Reconductor/Rebuild Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template.

Provide the target ratings for the line.

Provide the type and size of the conductor to be installed.

If the shield wire is to be replaced, identify the type and size to be used.

Describe the amount of the line that is anticipated to be rebuilt versus reconducted. 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.

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.

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

Inputs - 1

4.a.

Component number

1

Reconductor/Rebuild Component Plan

4.g.

Component target ratings

at least 190 MVA Summer Normal and 260 MVA Summer Emergency

4.h.

Proposed conductor size and type

perhaps 795 ACSR

4.i.

Proposed shield wire size and type

unknown

4.j.

Rebuild portion

assume all rebuilt

4.k.

Right of way

assume existing right of way is fine

4.l.

Redacted information



Substation Upgrade Component

5. Substation Upgrade Component

Instructions	Inputs-1	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	5.a. Component number	2
Identify the name of the existing substation where the upgrade will take place.	5.b. Substation	Peach Bottom 230 kV
Describe the scope of the upgrade work at the identified substation.	5.c. Substation upgrade scope	Add a new 4000 Amp breaker and line termination position for a new line to Graceton. Also add a 2000 Amp breaker on the line termination for the Muddy Run 230 kV generator lead.
Describe any new substation equipment and provide the equipment ratings.	5.d. New equipment description	Add a new 4000 Amp breaker and line termination position for a new line to Graceton. Also add a 2000 Amp breaker on the line termination for the Muddy Run 230 kV generator lead.
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	Assume the station can be expanded as necessary given PECO/BGE proposals 1-6L, 1-7H, 1-7I, 1-7J from the 2016/2017 Long Term Window.
If the upgrade changes or expands upon the substation configuration provide a single line diagram and a station general arrangement drawing. These documents should be provided 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	
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	5.h. Redacted information	



Substation Upgrade Component

5. Substation Upgrade Component

Instructions	Inputs-1	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	5.a. Component number	3
Identify the name of the existing substation where the upgrade will take place.	5.b. Substation	Graceton 230 kV
Describe the scope of the upgrade work at the identified substation.	5.c. Substation upgrade scope	Add a new 4000 Amp breaker and a half string with 2 breakers to accommodate the new line termination from Peach Bottom. Also install a new 4000 Amp, ~3% impedance (16 Ohm), 230 kV series reactor for that line.
Describe any new substation equipment and provide the equipment ratings.	5.d. New equipment description	add a new 4000 Amp breaker and a half string with 2 breakers to accommodate the new line termination from Peach Bottom. Also install a new 4000 Amp, ~3% impedance (16 Ohm), 230 kV series reactor for that line.
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	Substation appears to have ample space to add these facilities
If the upgrade changes or expands upon the substation configuration provide a single line diagram and a station general arrangement drawing. These documents should be provided 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	
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	5.h. Redacted information	



4. Transmission Line Reconductor/Rebuild Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template.

Identify the line terminal points. Add additional spaces if required.

Provide the size and type conductor that will be removed.

Indicate whether the existing line hardware will be reused. If so, provide the age and condition of the hardware.

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.

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.

Inputs - 2

4.a.	Component number	4
4.b.	Terminal points	Peach Bottom Tap 230 kV
		Cooper 230 kV
		Graceton 230 kV
		Peach Bottom 230 kV

Existing Line Physical Characteristics

4.c.	Existing conductor size and type	unknown
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4.d.	Existing hardware plan	unknown
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4.e.	Existing tower line characteristics	unknown
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4.f.	Terrain description	Hilly
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4. Transmission Line Reconductor/Rebuild Component

Instructions	Inputs - 2					
Provide the corresponding component number from the "Project Components" tab of the proposal template.	4.a.	<table border="1"> <tr> <th data-bbox="1578 445 2147 566">Component number</th> <td data-bbox="2147 445 3008 566">4</td> </tr> </table>	Component number	4		
Component number	4					
Provide the target ratings for the line.	4.g.	<table border="1"> <tr> <th colspan="2" data-bbox="1578 566 3008 606">Reconductor/Rebuild Component Plan</th> </tr> <tr> <th data-bbox="1578 606 2147 808">Component target ratings</th> <td data-bbox="2147 606 3008 808">For existing line, at least what is there today For new circuit, 1331 MVA Summer Normal and 1594 MVA Summer Emergency similar to the BGE Graceton-Bagley 230 kV line</td> </tr> </table>	Reconductor/Rebuild Component Plan		Component target ratings	For existing line, at least what is there today For new circuit, 1331 MVA Summer Normal and 1594 MVA Summer Emergency similar to the BGE Graceton-Bagley 230 kV line
Reconductor/Rebuild Component Plan						
Component target ratings	For existing line, at least what is there today For new circuit, 1331 MVA Summer Normal and 1594 MVA Summer Emergency similar to the BGE Graceton-Bagley 230 kV line					
Provide the type and size of the conductor to be installed.	4.h.	<table border="1"> <tr> <th data-bbox="1578 808 2147 969">Proposed conductor size and type</th> <td data-bbox="2147 808 3008 969">For existing line, at least what is there today For new circuit 2 bundle 1590 ACSR similar to the BGE Graceton-Bagley 230 kV line</td> </tr> </table>	Proposed conductor size and type	For existing line, at least what is there today For new circuit 2 bundle 1590 ACSR similar to the BGE Graceton-Bagley 230 kV line		
Proposed conductor size and type	For existing line, at least what is there today For new circuit 2 bundle 1590 ACSR similar to the BGE Graceton-Bagley 230 kV line					
If the shield wire is to be replaced, identify the type and size to be used.	4.i.	<table border="1"> <tr> <th data-bbox="1578 969 2147 1090">Proposed shield wire size and type</th> <td data-bbox="2147 969 3008 1090">unknown</td> </tr> </table>	Proposed shield wire size and type	unknown		
Proposed shield wire size and type	unknown					
Describe the amount of the line that is anticipated to be rebuilt versus reconducted. 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.	<table border="1"> <tr> <th data-bbox="1578 1090 2147 1130">Rebuild portion</th> <td data-bbox="2147 1090 3008 1312">assume all rebuilt</td> </tr> </table>	Rebuild portion	assume all rebuilt		
Rebuild portion	assume all rebuilt					
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.	<table border="1"> <tr> <th data-bbox="1578 1312 2147 1352">Right of way</th> <td data-bbox="2147 1312 3008 1574">assume existing right of way is fine</td> </tr> </table>	Right of way	assume existing right of way is fine		
Right of way	assume existing right of way is fine					
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	4.l.	<table border="1"> <tr> <th data-bbox="1578 1574 2147 1614">Redacted information</th> <td data-bbox="2147 1574 3008 1806"></td> </tr> </table>	Redacted information			
Redacted information						



Substation Upgrade Component

5. Substation Upgrade Component

Instructions	Inputs-3					
Provide the corresponding component number from the "Project Components" tab of the proposal template.	5.a.	<table border="1"> <tr> <td data-bbox="1578 447 2147 554">Component number</td> <td data-bbox="2147 447 3014 554">5</td> </tr> </table>	Component number	5		
Component number	5					
Identify the name of the existing substation where the upgrade will take place.	5.b.	<table border="1"> <tr> <td data-bbox="1578 554 2147 635">Substation</td> <td data-bbox="2147 554 3014 635">Face Rock 115/69 kV</td> </tr> </table>	Substation	Face Rock 115/69 kV		
Substation	Face Rock 115/69 kV					
Describe the scope of the upgrade work at the identified substation.	5.c.	<table border="1"> <tr> <td colspan="2" data-bbox="1578 635 2147 675">Substation upgrade scope</td> </tr> <tr> <td colspan="2" data-bbox="1578 675 3014 836">Upgrade/Replace the 115/69 kV Transformers and any associated equipment to achieve a combined total rating comparable to the expected ratings of the upgraded 115 kV line to Five Forks (210 SN/261 SE)</td> </tr> </table>	Substation upgrade scope		Upgrade/Replace the 115/69 kV Transformers and any associated equipment to achieve a combined total rating comparable to the expected ratings of the upgraded 115 kV line to Five Forks (210 SN/261 SE)	
Substation upgrade scope						
Upgrade/Replace the 115/69 kV Transformers and any associated equipment to achieve a combined total rating comparable to the expected ratings of the upgraded 115 kV line to Five Forks (210 SN/261 SE)						
Describe any new substation equipment and provide the equipment ratings.	5.d.	<table border="1"> <tr> <td colspan="2" data-bbox="1578 836 2147 876">New equipment description</td> </tr> <tr> <td colspan="2" data-bbox="1578 876 3014 1038">Upgrade/Replace the 115/69 kV Transformers and any associated equipment to achieve a combined total rating comparable to the expected ratings of the upgraded 115 kV line to Five Forks (210 SN/261 SE)</td> </tr> </table>	New equipment description		Upgrade/Replace the 115/69 kV Transformers and any associated equipment to achieve a combined total rating comparable to the expected ratings of the upgraded 115 kV line to Five Forks (210 SN/261 SE)	
New equipment description						
Upgrade/Replace the 115/69 kV Transformers and any associated equipment to achieve a combined total rating comparable to the expected ratings of the upgraded 115 kV line to Five Forks (210 SN/261 SE)						
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.	<table border="1"> <tr> <td colspan="2" data-bbox="1578 1038 2147 1078">Substation assumptions</td> </tr> <tr> <td colspan="2" data-bbox="1578 1078 3014 1239">Replace existing equipment in in same locations</td> </tr> </table>	Substation assumptions		Replace existing equipment in in same locations	
Substation assumptions						
Replace existing equipment in in same locations						
If the upgrade changes or expands upon the substation configuration provide a single line diagram and a station general arrangement drawing. These documents should be provided on the 'Redacted Information' tab under the appropriate project component.	5.f.	<table border="1"> <tr> <td colspan="2" data-bbox="1578 1239 2147 1280">Substation drawings</td> </tr> <tr> <td colspan="2" data-bbox="1578 1280 3014 1401"></td> </tr> </table>	Substation drawings			
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.	<table border="1"> <tr> <td colspan="2" data-bbox="1578 1401 2147 1441">Real-estate plan</td> </tr> <tr> <td colspan="2" data-bbox="1578 1441 3014 1602"></td> </tr> </table>	Real-estate plan			
Real-estate plan						
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	5.h.	<table border="1"> <tr> <td colspan="2" data-bbox="1578 1602 2147 1643">Redacted information</td> </tr> <tr> <td colspan="2" data-bbox="1578 1643 3014 1844"></td> </tr> </table>	Redacted information			
Redacted information						



Substation Upgrade Component

5. Substation Upgrade Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template.

Identify the name of the existing substation where the upgrade will take place.

Describe the scope of the upgrade work at the identified substation.

Describe any new substation equipment and provide the equipment ratings.

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.

If the upgrade changes or expands upon the substation configuration provide a single line diagram and a station general arrangement drawing. These documents should be provided on the 'Redacted Information' tab under the appropriate project component.

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.

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

Inputs-4

Component number

6

Substation

DELETED IN REV 1

Substation upgrade scope

New equipment description

Substation assumptions

Substation drawings

Real-estate plan

Redacted information



Substation Upgrade Component

5. Substation Upgrade Component

Instructions	Inputs-5		
Provide the corresponding component number from the "Project Components" tab of the proposal template.	<table border="1"> <tr> <td data-bbox="1578 485 2147 526">5.a. Component number</td> <td data-bbox="2147 485 2965 526">7</td> </tr> </table>	5.a. Component number	7
5.a. Component number	7		
Identify the name of the existing substation where the upgrade will take place.	<table border="1"> <tr> <td data-bbox="1578 556 2147 596">5.b. Substation</td> <td data-bbox="2147 556 2965 596">Rice 230 kV</td> </tr> </table>	5.b. Substation	Rice 230 kV
5.b. Substation	Rice 230 kV		
Describe the scope of the upgrade work at the identified substation.	<table border="1"> <tr> <td data-bbox="1578 631 2147 671">5.c. Substation upgrade scope</td> <td data-bbox="2147 631 2965 842">Add a new 4000 A 500 kV breaker and reconfigure the planned layout to allow the planned transformers to operate independantly. Add a new 4000 A 230 kV breaker to allow the planned Rice - Ringgold 230 kV lines to operate independantly.</td> </tr> </table>	5.c. Substation upgrade scope	Add a new 4000 A 500 kV breaker and reconfigure the planned layout to allow the planned transformers to operate independantly. Add a new 4000 A 230 kV breaker to allow the planned Rice - Ringgold 230 kV lines to operate independantly.
5.c. Substation upgrade scope	Add a new 4000 A 500 kV breaker and reconfigure the planned layout to allow the planned transformers to operate independantly. Add a new 4000 A 230 kV breaker to allow the planned Rice - Ringgold 230 kV lines to operate independantly.		
Describe any new substation equipment and provide the equipment ratings.	<table border="1"> <tr> <td data-bbox="1578 842 2147 883">5.d. New equipment description</td> <td data-bbox="2147 842 2965 1054">Add a new 4000 A 500 kV breaker and reconfigure the planned layout to allow the planned transformers to operate independantly. Add a new 4000 A 230 kV breaker to allow the planned Rice - Ringgold 230 kV lines to operate independantly.</td> </tr> </table>	5.d. New equipment description	Add a new 4000 A 500 kV breaker and reconfigure the planned layout to allow the planned transformers to operate independantly. Add a new 4000 A 230 kV breaker to allow the planned Rice - Ringgold 230 kV lines to operate independantly.
5.d. New equipment description	Add a new 4000 A 500 kV breaker and reconfigure the planned layout to allow the planned transformers to operate independantly. Add a new 4000 A 230 kV breaker to allow the planned Rice - Ringgold 230 kV lines to operate independantly.		
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.	<table border="1"> <tr> <td data-bbox="1578 1054 2147 1094">5.e. Substation assumptions</td> <td data-bbox="2147 1054 2965 1266"></td> </tr> </table>	5.e. Substation assumptions	
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If the upgrade changes or expands upon the substation configuration provide a single line diagram and a station general arrangement drawing. These documents should be provided on the 'Redacted Information' tab under the appropriate project component.	<table border="1"> <tr> <td data-bbox="1578 1266 2147 1306">5.f. Substation drawings</td> <td data-bbox="2147 1266 2965 1437"></td> </tr> </table>	5.f. Substation drawings	
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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.	<table border="1"> <tr> <td data-bbox="1578 1437 2147 1477">5.g. Real-estate plan</td> <td data-bbox="2147 1437 2965 1649"></td> </tr> </table>	5.g. Real-estate plan	
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Describe any files or information that has been redacted from this section and provide the basis for the redaction.	<table border="1"> <tr> <td data-bbox="1578 1649 2147 1689">5.h. Redacted information</td> <td data-bbox="2147 1649 2965 1844"></td> </tr> </table>	5.h. Redacted information	
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Substation Upgrade Component

5. Substation Upgrade Component

Instructions	Inputs-6	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	5.a. Component number	8
Identify the name of the existing substation where the upgrade will take place.	5.b. Substation	Ringgold 230 kV
Describe the scope of the upgrade work at the identified substation.	5.c. Substation upgrade scope	Add a new 4000 A double breaker/double bus string to the planned rebuild of the station to allow the Rice - Ringgold 230 kV lines to operate independantly.
Describe any new substation equipment and provide the equipment ratings.	5.d. New equipment description	add a new 4000 A double breaker/double bus string to the planned rebuild of the station to allow the Rice - Ringgold 230 kV lines to operate independantly.
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Describe any files or information that has been redacted from this section and provide the basis for the redaction.	5.h. Redacted information	

9. Project Financial Information

Instructions

Inputs

Project Schedule

Provide the planned construction period, include the month and year of when capital spend will begin, when construction will begin and when construction will end. The final construction month should be the month preceding the commercial operation month.

9.a.

Capital spend start date (Mo-Yr)

Jan-20

Construction start date (Mo-Yr)

Jan-22

Commercial operation date (Mo-Yr)

Dec-23

Project Capital Expenditures

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. Capital expenditure estimates should include all capital expenditure, including any ongoing expenditures, for which the Proposing Entity plans to seek FERC approval for recovery.

9.b.

Capital expenditure details	Total	2020	2021	2022	2023	2024	2025
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	\$ 46,099,887.00	\$ 2,304,994.35	\$ 2,304,994.35	\$ 17,056,958.19	\$ 24,432,940.11		

Even if AFUDC is not going to be employed, provide a yearly AFUDC cash flow.

9.c.

	Total	2020	2021	2022	2023	2024	2025
AFUDC	\$ 3,783,315.39	\$ 70,749.65	\$ 240,882.84	\$ 945,956.15	\$ 2,525,726.75		

9. Project Financial Information

Instructions	Inputs
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Provide any assumptions for the capital expenditure estimate (e.g. design assumptions, weather, manpower needed and work schedule, number of hours per day, construction area

9.d.

Assumptions for the capital expenditure estimate

Work to be performed by incumbents

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

9.e.

Redacted information

[Redacted information]



Cost Containment Commitment

10. Cost Containment Commitment

Instructions	Inputs																								
<p>10.a.</p> <p>Provide a description of the cost containment mechanism being proposed.</p>	<table border="1"> <thead> <tr> <th style="background-color: #444; color: white;">Cost containment commitment description</th> </tr> </thead> <tbody> <tr> <td style="background-color: #cce5ff;">No Cost Containment</td> </tr> </tbody> </table>	Cost containment commitment description	No Cost Containment																						
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<p>10.b.</p> <p>Indicate what project scope is covered by the proposed cost containment commitment. Identify the components covered by number.</p>	<table border="1"> <thead> <tr> <th style="background-color: #444; color: white;">Project scope covered by the cost containment commitment</th> </tr> </thead> <tbody> <tr> <td style="background-color: #cce5ff;"> </td> </tr> </tbody> </table>	Project scope covered by the cost containment commitment																							
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<p>10.b.i.</p> <p>Provide, in present year dollars and year of occurrence dollars, the Proposing Entity's proposed binding cap on capital expenditures.</p>	<table border="1"> <tbody> <tr> <td style="background-color: #444; color: white;">Cost cap in present year dollars</td> <td style="background-color: #cce5ff;"> </td> </tr> <tr> <td style="background-color: #444; color: white;">Cost cap in in-service year dollars</td> <td style="background-color: #cce5ff;"> </td> </tr> </tbody> </table>	Cost cap in present year dollars		Cost cap in in-service year dollars																					
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<p>10.b.ii.</p> <p>Provide any additional information related to the cap on capital expenditures, including but not limited to: if AFUDC is included in the cap, if all costs prior to commercial operation date are included in the cap, if the cap includes a variable or fixed inflation rate, etc.</p>	<table border="1"> <thead> <tr> <th style="background-color: #444; color: white;">Additional Information on cost cap:</th> </tr> </thead> <tbody> <tr> <td style="background-color: #cce5ff;"> </td> </tr> </tbody> </table>	Additional Information on cost cap:																							
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<p>10.b.iii.</p> <p>Indicate which components of capital costs fall under the cost cap.</p>	<table border="1"> <thead> <tr> <th colspan="2" style="background-color: #444; color: white;">Cost containment capital expenditure exemptions</th> </tr> <tr> <th style="background-color: #444; color: white;">Capital cost component</th> <th style="background-color: #444; color: white;">Component covered by cost containment</th> </tr> </thead> <tbody> <tr> <td>Engineering and design</td> <td>Choose Yes or No</td> </tr> <tr> <td>Permitting / routing / siting</td> <td>Choose Yes or No</td> </tr> <tr> <td>ROW / land acquisition</td> <td>Choose Yes or No</td> </tr> <tr> <td>Materials and equipment</td> <td>Choose Yes or No</td> </tr> <tr> <td>Construction and commissioning</td> <td>Choose Yes or No</td> </tr> <tr> <td>Construction management</td> <td>Choose Yes or No</td> </tr> <tr> <td>Overheads and miscellaneous costs</td> <td>Choose Yes or No</td> </tr> <tr> <td>Taxes</td> <td>Choose Yes or No</td> </tr> <tr> <td>AFUDC</td> <td>Choose Yes or No</td> </tr> <tr> <td>Escalation</td> <td>Choose Yes or No</td> </tr> </tbody> </table>	Cost containment capital expenditure exemptions		Capital cost component	Component covered by cost containment	Engineering and design	Choose Yes or No	Permitting / routing / siting	Choose Yes or No	ROW / land acquisition	Choose Yes or No	Materials and equipment	Choose Yes or No	Construction and commissioning	Choose Yes or No	Construction management	Choose Yes or No	Overheads and miscellaneous costs	Choose Yes or No	Taxes	Choose Yes or No	AFUDC	Choose Yes or No	Escalation	Choose Yes or No
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Cost Containment Commitment

10. Cost Containment Commitment

Instructions	Inputs
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<p>Describe any other cost containment measures not detailed above.</p>	<p>10.c. Describe any other Cost Containment Measures not covered above:</p>
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<p>Provide language to be included in the Designated Entity Agreement that expresses the legally binding commitment of the developer to the construction cost cap.</p>	<p>10.d. Cost Commitment Legal Language</p>
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<p>Explain any plans the proposing entity has in place to address the situation where project actual costs exceed the proposed cost containment commitment.</p>	<p>10.e. Actuals Exceed Commitment</p>
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<p>Describe any files or information that has been redacted from this section and provide the basis for the redaction.</p>	<p>10.f. Redacted information</p>
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