



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	2018-2019 Market Efficiency
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_1-622
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 962 line (~2.6 mi.). Upgrade limiting terminal equipment at Hunterstown and Lincoln.
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)	\$ 6,430,000.00
Total in-service year project cost estimate including estimates for any required Transmission Owner upgrades.	1.j.	Project cost estimate (in-service year)	\$ 7,210,000.00



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Project estimated schedule duration in months.	1.k. Project schedule duration 17 months
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
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

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

[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

Facilities addressed by the proposed project								
Instructions: Identify the criteria violation(s) or system constraint(s) that the proposed project solves or mitigates.								
FG #	Analysis Type	Bus #	Facility Name	To Bus #	To Bus Name	CKT	Voltage	Area

2.a.



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	2023 Frequency (Hours)	2023 Market Congestion (\$ millions)	2026 Frequency (Hours)	2026 Market Congestion (\$ millions)
ME-1	Hunterstown - Lincoln 115 kV	METED		1720	20.77	1832	29.62



Major Project Components

3. Major Project Components			
Instructions			
	Component 1	Component 2	Component 3
<p>3.a.</p> <p>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).</p>	<p>Component description(s)</p> <p>Hunterstown - Lincoln 115 kV 962 Line - Rebuild Hunterstown-Lincoln 115 kV line</p>	<p>Hunterstown Substation (115 kV)</p> <p>Replace Limiting Terminal Equipment -Replace Relays -Replace Line Trap -Replace Substation Conductors</p>	<p>Lincoln Substation (115 kV)</p> <p>Replace Limiting Terminal Equipment -Replace Relay -Replace Line Trap -Replace Meter -Replace Current Transformer -Replace Substation Conductors</p>
<p>3.b.</p> <p>Provide a component project cost breakdown into the identified categories along with a total component cost. Costs should be in current year dollars.</p>	<p>Component cost (current year)</p> <p>Engineering and design</p> <p>Permitting / routing / siting</p> <p>ROW / land acquisition</p> <p>Materials and equipment</p> <p>Construction and commissioning</p> <p>Construction management</p> <p>Overheads and miscellaneous costs</p> <p>Contingency</p> <p>Total component cost</p>	<p>\$ 5,940,000.00</p>	<p>\$ 220,000.00</p>
<p>3.c.</p> <p>If this proposal is being submitted as Market Efficiency project, provide an in-service year component project</p>	<p>Component cost (in-service year)</p>	<p>\$ 6,650,000.00</p>	<p>\$ 250,000.00</p>
<p>3.d.</p> <p>Identify the entity who will be designated the component.</p>	<p>Construction responsibility</p>	<p>█</p>	<p>█</p>



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 Lincoln

Existing Line Physical Characteristics

4.c. Existing conductor size and type 336.4 ACSR

4.d. Existing hardware plan Due to the increase in conductor size, a full rebuild of the line will be required.

4.e. Existing tower line characteristics Condition and age of line is not relevant to the rebuild. Increasing conductor size from 336.4 ACSR to 795 ACSR requires rebuild.

4.f. Terrain description



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 232 / 282 MVA (SN/SE)

4.h. Proposed conductor size and type 795 ACSR

4.i. Proposed shield wire size and type OPGW

4.j. Rebuild portion
The entire length of the line (~2.6 miles) is anticipated to be rebuilt. The new conductors will be 795 ACSR. The existing structures are not designed to support new conductor.

4.k. Right of way
Existing ROW will be used.

4.l. Redacted information
under PJM review



Substation Upgrade Component

5. Substation Upgrade Component

Instructions	Inputs-1				
Provide the corresponding component number from the "Project Components" tab of the proposal template.	<table border="1"> <tr> <td data-bbox="1485 445 2147 546">5.a. Component number</td> <td data-bbox="2147 445 3039 546">2</td> </tr> </table>	5.a. Component number	2		
5.a. Component number	2				
Identify the name of the existing substation where the upgrade will take place.	<table border="1"> <tr> <td data-bbox="1485 546 2147 626">5.b. Substation</td> <td data-bbox="2147 546 3039 626">Hunterstown 115 kV</td> </tr> </table>	5.b. Substation	Hunterstown 115 kV		
5.b. Substation	Hunterstown 115 kV				
Describe the scope of the upgrade work at the identified substation.	<table border="1"> <tr> <td data-bbox="1485 626 2147 667">5.c. Substation upgrade scope</td> <td data-bbox="2147 626 3039 667"></td> </tr> <tr> <td colspan="2" data-bbox="2147 667 3039 828">Upgrade Relays, Line Trap, and Substation conductor at the Hunterstown substation (115 kV terminal).</td> </tr> </table>	5.c. Substation upgrade scope		Upgrade Relays, Line Trap, and Substation conductor at the Hunterstown substation (115 kV terminal).	
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Upgrade Relays, Line Trap, and Substation conductor at the Hunterstown substation (115 kV terminal).					
Describe any new substation equipment and provide the equipment ratings.	<table border="1"> <tr> <td data-bbox="1485 828 2147 868">5.d. New equipment description</td> <td data-bbox="2147 828 3039 868"></td> </tr> <tr> <td colspan="2" data-bbox="2147 868 3039 1070"> <ul style="list-style-type: none"> - Electromechanical relaying to be replaced with new standard line relay panel. - 1200 A Line Trap to be replaced with a 2000 A Line Trap. - Substation conductor to be replaced will be rated higher than line conductor. </td> </tr> </table>	5.d. New equipment description		<ul style="list-style-type: none"> - Electromechanical relaying to be replaced with new standard line relay panel. - 1200 A Line Trap to be replaced with a 2000 A Line Trap. - Substation conductor to be replaced will be rated higher than line conductor. 	
5.d. New equipment description					
<ul style="list-style-type: none"> - Electromechanical relaying to be replaced with new standard line relay panel. - 1200 A Line Trap to be replaced with a 2000 A Line Trap. - Substation conductor to be replaced will be rated higher than line conductor. 					
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="1485 1070 2147 1110">5.e. Substation assumptions</td> <td data-bbox="2147 1070 3039 1110"></td> </tr> <tr> <td colspan="2" data-bbox="2147 1110 3039 1312"> All work will be performed within the existing substation Estimate assumes existing line tuner is adequate. Estimate assumes existing wave trap stand is adequate. Estimate assumes modifications will be needed to existing SCADA points </td> </tr> </table>	5.e. Substation assumptions		All work will be performed within the existing substation Estimate assumes existing line tuner is adequate. Estimate assumes existing wave trap stand is adequate. Estimate assumes modifications will be needed to existing SCADA points	
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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="1485 1312 2147 1352">5.f. Substation drawings</td> <td data-bbox="2147 1312 3039 1352"></td> </tr> <tr> <td colspan="2" data-bbox="2147 1352 3039 1453"><i>Not necessary, no configuration change</i></td> </tr> </table>	5.f. Substation drawings		<i>Not necessary, no configuration change</i>	
5.f. Substation drawings					
<i>Not necessary, no configuration change</i>					
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="1485 1453 2147 1493">5.g. Real-estate plan</td> <td data-bbox="2147 1453 3039 1493"></td> </tr> <tr> <td colspan="2" data-bbox="2147 1493 3039 1634">N/A</td> </tr> </table>	5.g. Real-estate plan		N/A	
5.g. Real-estate plan					
N/A					
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="1485 1634 2147 1675">5.h. Redacted information</td> <td data-bbox="2147 1634 3039 1675"></td> </tr> <tr> <td colspan="2" data-bbox="2147 1675 3039 1830">N/A</td> </tr> </table>	5.h. Redacted information		N/A	
5.h. Redacted information					
N/A					



Substation Upgrade Component

5. Substation Upgrade Component

Instructions	Inputs-1
<p>Provide the corresponding component number from the "Project Components" tab of the proposal template.</p>	<p>5.a. Component number 3</p>
<p>Identify the name of the existing substation where the upgrade will take place.</p>	<p>5.b. Substation Lincoln 115 kV</p>
<p>Describe the scope of the upgrade work at the identified substation.</p>	<p>5.c. Substation upgrade scope Upgrade Relays, Line Trap, Meter, Current Transformer, and Substation Conductors at the Hunterstown 115 kV terminal.</p>
<p>Describe any new substation equipment and provide the equipment ratings.</p>	<p>5.d. New equipment description - Electromechanical relaying to be replaced with new standard line relay panel. - 1200 A Line Trap to be replaced with a 2000 A Line Trap. - Substation conductor, CTs, Metering to be replaced will be rated higher than line conductor.</p>
<p>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.</p>	<p>5.e. Substation assumptions All work will be performed within the existing substation Estimate assumes existing line tuner is adequate. Estimate assumes existing CT stand and line trap stand is adequate. Estimate assumes modifications will be needed to existing SCADA points</p>
<p>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.</p>	<p>5.f. Substation drawings <i>Not necessary, no configuration change</i></p>
<p>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.</p>	<p>5.g. Real-estate plan N/A</p>
<p>Describe any files or information that has been redacted from this section and provide the basis for the redaction.</p>	<p>5.h. Redacted information N/A</p>



Redacted Information

8 Redacted information

Question ID	Redacted financial information Redacted response
	under PJM review

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-22
	Construction start date (Mo-Yr)	Feb-23
	Commercial operation date (Mo-Yr)	Jun-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	2022	2023	2024	2025	2026	2027
	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	\$ 6,440,000.00	\$ 440,000.00	\$ 6,000,000.00				

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

9.c.	Total	2022	2023	2024	2025	2026	2027
AFUDC	\$ 30,563.46	\$ 2,337.62	\$ 28,225.84				

9. Project Financial Information

Instructions

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 access, etc.).

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

Inputs

9.d.

Assumptions for the capital expenditure estimate

- 1) Rebuild is assumed to be a structure for structure replacement of 29 structures
- 2) Existing switch 96266 will be replaced with a new SCADA controlled switch
- 3) An Letter of Notification will be required to be filed with the PA PUC.
- 4) The line route crosses US Route 15. Crossing permits will be required.
- 5) The line route crosses a railroad in one location. Crossing and proximity permits will be required.
- 6) Assume minimal social and ecological impacts.
- 7) An environmental review will be required to identify any construction constraints or additional permitting requirements.
- 8) All work will be performed within the existing ROW and no new ROW will be required.
- 9) Assume existing aerial LiDAR survey data is sufficient.
- 10) Access roads will be required along the entire line route.

9.e.

Redacted information

[Redacted information block containing the text "under PJM review" in red font]



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"> <tr> <th style="background-color: #444; color: white;">Cost containment commitment description</th> </tr> <tr> <td style="background-color: #cce5ff;"> </td> </tr> </table>	Cost containment commitment description																							
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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"> <tr> <th style="background-color: #444; color: white;">Project scope covered by the cost containment commitment</th> </tr> <tr> <td style="background-color: #cce5ff;"> </td> </tr> </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"> <tr> <th style="background-color: #444; color: white;">Cost cap in present year dollars</th> <td style="background-color: #cce5ff;"> </td> </tr> <tr> <th style="background-color: #444; color: white;">Cost cap in in-service year dollars</th> <td style="background-color: #cce5ff;"> </td> </tr> </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"> <tr> <th style="background-color: #444; color: white;">Additional Information on cost cap:</th> </tr> <tr> <td style="background-color: #cce5ff;"> </td> </tr> </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"> <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> <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> </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

Describe any other cost containment measures not detailed above.

10.c.

Describe any other Cost Containment Measures not covered above:

Provide language to be included in the Designated Entity Agreement that expresses the legally binding commitment of the developer to the construction cost cap.

10.d.

Cost Commitment Legal Language

Explain any plans the proposing entity has in place to address the situation where project actual costs exceed the proposed cost containment commitment.

10.e.

Actuals Exceed Commitment

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

10.f.

Redacted information