



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	Long Term Window RTEP 2018/2019
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_1-402
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	The project consists of building a new 115 kV line from existing Hunterstown 115 kV to existing Lincoln 115 kV stations approximately 2.6 miles long. Additionally, the project includes a 25 MW 2-hour battery to be connected to the existing Lincoln 115 kV station.
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)	\$ 24,855,127.66
Total in-service year project cost estimate including estimates for any required Transmission Owner upgrades.	1.j.	Project cost estimate (in-service year)	\$ 25,810,261.00



Executive Summary

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Instructions		Inputs	
Project estimated schedule duration in months.	1.k.	Project schedule duration	23
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	Yes
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	This solution provides additional grid resiliency as well as the potential for energy, ancillary and capacity market 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 checked="" type="checkbox"/>



Executive Summary

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	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.	<table border="1"> <tr> <td>1.q.i.</td> <td>Interregional Cost Allocation Evaluation</td> <td>No</td> </tr> <tr> <td>1.q.ii.</td> <td>Evaluated in interregional analysis under PJM Tariff or Operating Agreement provisions</td> <td>No</td> </tr> </table>	1.q.i.	Interregional Cost Allocation Evaluation	No	1.q.ii.	Evaluated in interregional analysis under PJM Tariff or Operating Agreement provisions	No
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.	<table border="1"> <tr> <td colspan="2">If 'yes,' specify analysis and applicable Tariff or Operating Agreement provisions</td> </tr> <tr> <td colspan="2">N/A</td> </tr> </table>	If 'yes,' specify analysis and applicable Tariff or Operating Agreement provisions		N/A			
If 'yes,' specify analysis and applicable Tariff or Operating Agreement provisions							
N/A							
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.	<table border="1"> <tr> <td>1.q.iii.</td> <td>Regional and Interregional violations and issues from the Regional and/or Interregional analyses that identified the violations and issues addressed by the proposal.</td> </tr> <tr> <td colspan="2">N/A</td> </tr> </table>	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.	N/A			
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.						
N/A							



Major Project Components

3. Major Project Components									
Instructions									
<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>	3.a.	Component description(s)	<table border="1"> <thead> <tr> <th>Component 1</th> <th>Component 2</th> <th>Component 3</th> </tr> </thead> <tbody> <tr> <td>Construct a new 3-mile 115 kV hybrid transmission Line (rated 1,000 A) from existing Lincoln to Hunterstown</td> <td>Construct a new 25 MW Shealer battery storage facility to the existing Lincoln 115 kV substation at the new ring BUS</td> <td>Re-configure Lincoln 115 kV substation to 5 breaker ring bus to accommodate new line</td> </tr> </tbody> </table>	Component 1	Component 2	Component 3	Construct a new 3-mile 115 kV hybrid transmission Line (rated 1,000 A) from existing Lincoln to Hunterstown	Construct a new 25 MW Shealer battery storage facility to the existing Lincoln 115 kV substation at the new ring BUS	Re-configure Lincoln 115 kV substation to 5 breaker ring bus to accommodate new line
	Component 1	Component 2	Component 3						
Construct a new 3-mile 115 kV hybrid transmission Line (rated 1,000 A) from existing Lincoln to Hunterstown	Construct a new 25 MW Shealer battery storage facility to the existing Lincoln 115 kV substation at the new ring BUS	Re-configure Lincoln 115 kV substation to 5 breaker ring bus to accommodate new line							
<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>	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	\$ 5,573,689.00	\$ 14,881,438.66	\$ 3,900,000.00					
<p>If this proposal is being submitted as Market Efficiency project, provide an in-service year component project</p>	3.c.	Component cost (in-service year)	<table border="1"> <tbody> <tr> <td>\$ 5,973,001.00</td> <td>\$ 15,259,500.00</td> <td>\$ 4,057,560.00</td> </tr> </tbody> </table>	\$ 5,973,001.00	\$ 15,259,500.00	\$ 4,057,560.00			
	\$ 5,973,001.00	\$ 15,259,500.00	\$ 4,057,560.00						
<p>Identify the entity who will be designated the component.</p>	3.d.	Construction responsibility	<table border="1"> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>						



Major Project Components

3. Major Project Components				
Instructions		Component 4	Component 5	Component 6
<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>	Component description(s)	Add new breaker and bus work at Hunterstown		
	Component cost (current year)			
<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>	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	\$ 500,000.00		\$ -
<p>3.c.</p> <p>If this proposal is being submitted as Market Efficiency project, provide an in-service year component project</p>	Component cost (in-service year)	\$ 520,200.00		
<p>3.d.</p> <p>Identify the entity who will be designated the component.</p>	Construction responsibility			



Greenfield Transmission Line Component

6. Transmission Line Component

Instructions	Inputs - 1	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	6.a. Component Number	1
Provide the substation endpoints for the proposed transmission line component.	6.b. Line terminal points	Hunterstown Lincoln
Provide the target ratings for the proposed line.	6.c. Project ratings	113/160 MVA
Provide the proposed conductor type and size.	6.d. Conductor type and size	Bittern 1272 kcmil ACSR, single
Provide a general description of the line, including nominal voltage, whether the facility will be AC or DC and if the construction will be overhead, underground, submarine or some combination.	6.e. General line description	The Hunterstown to Lincoln line will be a AC circuit overhead 115 kV AC line.
Provide a general description of the evaluated routes or routing study area. Provide a Google Earth .KMZ file with the evaluated routes or study plan.	6.f. General route description	The parcels are located predominantly in a low-density agricultural area northeast of the [REDACTED]. The 2011 National Land Cover Database issued by the Multi-Resolution Land Characteristics (MRLC) Consortium lists the majority of the area as cultivated crops and pasture/hay field some deciduous forest/scrub-shrub and developed, open space. No public land, parks, or recreational areas are located within the project area. The only municipality with potential local zoning or jurisdiction is Straban Township. [REDACTED]
Describe the terrain traversed by the proposed new line.	6.g. Terrain description	The transmission line route traverses mostly agricultural use lands.



6. Transmission Line Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template. 6.a.

Route description by segment that includes lengths and widths and classified by whether the segment will be new right of way, an expansion of an existing right of way or use an existing right of way. This information may be included with the Google Earth .KMZ.

Provide the project right of way and land acquisition plan and approach for both public and private lands.

Inputs - 1

Component Number

1

6.h.

Right of way plan by segment

Segment 1: Mile 0: Project will enter Lincoln 115 kV switchyard from the northwest. Final configuration will be developed in conjunction with switchyard owner.
Segment 2: Miles 0-1.28: Project will be adjacent to existing Hunterstown - Lincoln 115 kV line on the north side. Existing ROW may require expansion.
Segment 3: Miles 1.28-2.6: Project will be adjacent to existing Hunterstown - Lincoln 115 kV line on the south side. Existing ROW may require expansion.
Segment 4: Mile 2.5: Project will interconnect to Hunterstown from the south. Final configuration will be developed in conjunction with switchyard owner.

6.i.

ROW and land acquisition plan

Key elements in [redacted] approach to the landowner negotiation process for this project, and other projects in PJM, include:
• Proactively conducting a market analysis of land values in the project area;
• Producing a fair and comprehensive land acquisition plan and schedule for securing necessary land rights and site control;
• Utilizing local land acquisition teams knowledgeable of the project area; and
• Taking a transparent approach in discussing the project and [redacted] development interests in the subject property.

[redacted] will negotiate agreements with the landowners of the proposed project area. [redacted] philosophy for landowner relations is to work with residents during all phases of a project to address issues as they arise, before and after acquisition of land rights. [redacted] is committed to serving as the point of contact for residents, whether directly or indirectly affected by the project, for the duration of the project. [redacted] uses a collaborative and consultative approach to working with landowners, focusing on regular communication, to understand and address issues on an ongoing basis. [redacted] is also committed to using design and construction techniques that minimize impacts on private lands, and to restoring the construction sites of the projects to be both good stewards of the environment and good neighbors in the communities in which [redacted] live and work.



6. Transmission Line Component

Instructions

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

6.a.

Component Number

1

Provide the location and plan for any transmission facility crossings.

6.j.

Transmission facility crossings

Crossing 1: ~1.28 miles from Lincoln, cross over existing Lincoln-Hunterstown 115 kV line
Crossing 2: ~2 miles from Lincoln, cross underneath Hunterstown - Conemaugh 500 kV line
Crossing 3: ~2.3 miles from Lincoln, cross underneath Hunterstown - Conemaugh 500 kV line
Crossing 4: ~2.36 miles from Lincoln, cross underneath Hunterstown - Conastone 500 kV line

Provide an assessment of the potential environmental impacts (i.e. environmental impact study requirements, environmental permitting, sediment, and erosion control issues).

6.k.

Environmental impacts

A NPDES permit for stormwater discharges associated with construction activities would be required for this Project since greater than one acre of earth disturbance is proposed.
Any encroachment or adverse impacts to regulated aquatic resources would be permitted before construction activities can commence. This project is located in the [redacted]. In the vicinity of the project area exists Chapter 93 Designated Streams, described as warm water fisheries (WWF); special precautions will be taken in the stormwater and erosion and sediment control designs.
One hundred year floodplains exist in the project vicinity. The project would avoid or minimize impacts to the maximum extent practicable by placing project infrastructure outside of the floodplain/floodway boundaries. [redacted] requires floodplain development permit for any proposed development within a FEMA-recognized 100-year floodplain. Chapter 106 issued under Section 302 of the Flood Plain Management Act Authorization is required for construction activities within the regulated floodway boundary.
It appears that this project could be constructed on the selected site with minimal to no impacts to floodplain, streams and wetlands.
The USFWS identified the federally and state endangered Indiana Bat (Myotis sodalis), Northern Long Eared Bat (Myotis septentrionalis), Bog Turtle (Clemmys muhlenbergii), and Northeastern Bulrush (Scirpus ancistrochaetus) plant as potentially occurring in the vicinity of the project. The listed species should not present a permitting issue for the project as majority of the site is disturbed with agriculture activities and has no known critical habitat present. Biological field surveys and agency coordination would be conducted to validate this assumption. Tree clearing and vegetation removal activities will be targeted for the agency recommended clearing windows (i.e., winter).



6. Transmission Line Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template. 6.a.

Inputs - 1

Component Number

1

The study area was reviewed within The Nature Conservancy's Resilient and Connected Landscapes network mapping tool; the project area lies outside of any priority resilience or connected landscapes, therefore no environmental NGO project opposition is expected.

A review of the Pennsylvania Historical and Museum Commission's Cultural Resource GIS database was completed, and found the site to be in proximity to the [redacted] and the historic [redacted]. Close coordination with the [redacted] and possibly the National Park Service (NPS) is anticipated. [redacted] will engage state-approved archeologists and historians on additional studies and recommendations. Note, there may be properties or archaeological sites 50 years of age or older that have not yet been identified or evaluated within the project area of potential affect. During the Land Development process, a more detailed review of the subject parcels may be required by PHMC to determine if archeological or historical features exist. At this time, no known historic or culturally significant resources are anticipated to be directly impacted by the project.

A few residences and/or institutions are located in the vicinity of the proposed project that may be impacted by construction or operations. Noise and visual impact assessments will be prepared as necessary during the permitting process.

6.l.

Tower characteristics

Proposed tower characteristics such as monopole, lattice, wood h-frame design, double or single circuit, and horizontal, vertical or delta conductor configurations. Note, preliminary drawings for proposed structure types are acceptable in place of a written description.

Single circuit, spun concrete direct buried monopoles, delta configuration, approximately 60' above ground, with an average span of 450'.

6.m.

Redacted information

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

under PJM review



Greenfield Substation Component

7. Greenfield Substation Component

Instructions	Inputs - 1
Provide the corresponding component number from the "Project Components" tab of the proposal template.	7.a. Component number 2
Provide the name for the proposed substation.	7.b. Proposed substation name Shealer Battery Energy Storage System (BESS)
Provide the latitude and longitude (in decimal degrees) of the site(s) evaluated for the substation.	7.c. Evaluated location(s) [Redacted] [Redacted]
Provide a general description of the substation. Also, provide a single line diagram and general arrangement drawing.	7.d. Substation description The new 25 MW-2 Hour Shealer BESS will be located northwest of the existing Lincoln 115 kV switchyard. The BESS will interconnect to the Lincoln 115 kV switchyard. [Redacted] [Redacted]
Describe the major substation equipment and provide the equipment ratings.	7.e. Substation equipment 115/34.5 kV, 28 MVA Transformer
Describe the required site size, geography and current land use for the proposed site(s).	7.f. Geography and land use The proposed battery storage footprint will 3 acres of argicultural use land located in [Redacted]



Greenfield Substation Component

7. Greenfield Substation Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template. 7.a.

Provide an assessment of the potential environmental impacts (i.e. environmental impact study requirements, environmental permitting, sediment, and erosion control issues). 7.g.

Inputs - 1

Component number

2

Environmental assessment

A NPDES permit for stormwater discharges associated with construction activities would be required for this Project since greater than one acre of earth disturbance is proposed.

Any encroachment or adverse impacts to regulated aquatic resources would be permitted before construction activities can commence. This project is located in the [REDACTED]. In the vicinity of the project area exists Chapter 93 Designated Streams, described as warm water fisheries (WWF); special precautions will be taken in the stormwater and erosion and sediment control designs.

One hundred year floodplains exist in the project vicinity. The project would avoid or minimize impacts to the maximum extent practicable by placing project infrastructure outside of the floodplain/floodway boundaries. [REDACTED] requires floodplain development permit for any proposed development within a FEMA-recognized 100-year floodplain. Chapter 106 issued under Section 302 of the Flood Plain Management Act Authorization is required for construction activities within the regulated floodway boundary.

It appears that this project could be constructed on the selected site with minimal to no impacts to floodplain, streams and wetlands.

The USFWS identified the federally and state endangered Indiana Bat (*Myotis sodalis*), Northern Long Eared Bat (*Myotis septentrionalis*), Bog Turtle (*Clemmys muhlenbergii*), and Northeastern Bulrush (*Scirpus ancistrochaetus*) plant as potentially occurring in the vicinity of the project. The listed species should not present a permitting issue for the project as majority of the site is disturbed with agriculture activities and has no known critical habitat present. Biological field surveys and agency coordination would be conducted to validate this assumption. Tree clearing and vegetation removal activities will be targeted for the agency recommended clearing windows (i.e., winter).



Greenfield Substation Component

7. Greenfield Substation Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template. 7.a.

Inputs - 1

Component number

2

The study area was reviewed within The Nature Conservancy's Resilient and Connected Landscapes network mapping tool; the project area lies outside of any priority resilience or connected landscapes, therefore no environmental NGO project opposition is expected.

A review of the Pennsylvania Historical and Museum Commission's Cultural Resource GIS database was completed, and found the site to be in proximity to the [REDACTED] and the historic [REDACTED]. Close coordination with the [REDACTED] and possibly the National Park Service (NPS) is anticipated. [REDACTED] will engage state-approved archeologists and historians on additional studies and recommendations. Note, there may be properties or archaeological sites 50 years of age or older that have not yet been identified or evaluated within the project area of potential affect. During the Land Development process, a more detailed review of the subject parcels may be required by PHMC to determine if archeological or historical features exist. At this time, no known historic or culturally significant resources are anticipated to be directly impacted by the project.

A few residences and/or institutions are located in the vicinity of the proposed project that may be impacted by construction or operations. Noise and visual impact assessments will be prepared as necessary during the permitting process.



Greenfield Substation Component

7. Greenfield Substation Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template. 7.a.

Community and landowner outreach plan

Inputs - 1

Component number

2

7.h.

Outreach plan

██████████ is committed to working with all interested stakeholders through a robust outreach and education (O&E) program to address/respond to community concerns and inform the public about the project to the greatest extent practicable. ██████████ believes a well-designed O&E program can have numerous benefits, including fostering a cooperative relationship with landowners and other stakeholders, expediting the regulatory permitting process, and assisting with project development. In general, the purpose of the community outreach plan is to gain community support for the project, in particular the affected community, to enable ██████████ to expeditiously comply with all relevant regulatory requirements that would permit timely construction and operation of the proposed project. Elements of the community outreach plan will include the following:

- Identify potential issues at an early stage by engagement with key community stakeholders at the outset;
- Broaden the community engagement process to identify potential and relevant community benefits that can facilitate community support for the proposed project;
- Develop a broad base of community support for the proposed project before the regulatory agencies; and
- Develop a comprehensive administrative record documenting the community outreach process that can be presented to the regulatory agency or, in the event of a legal challenge, to the appropriate court.

The plan proposes to dedicate considerable time and resources in engaging the community, and specifically the affected community during the planning process to identify highly sensitive areas that have the least amount of cultural, environmental, and social impacts on the community. The plans will reflect avoidance of impacts rather than mitigation. However, in some cases, if avoidance is not possible, then ██████████ will involve the community in providing appropriate and practical mitigation measures.



Greenfield Substation Component

7. Greenfield Substation Component

Instructions

Provide the corresponding component number from the "Project Components" tab of the proposal template. 7.a.

Provide the project land acquisition plan and approach for both public and private lands. 7.i.

Describe any files or information that has been redacted from this section and provide the basis for the redaction. 7.j.

Inputs - 1

Component number

2

Land acquisition plan

Key elements in [redacted] approach to the landowner negotiation process for this project, and other projects in PJM, include:

- Proactively conducting a market analysis of land values in the project area;
- Producing a fair and comprehensive land acquisition plan and schedule for securing necessary land rights and site control;
- Utilizing local land acquisition teams knowledgeable of the project area; and
- Taking a transparent approach in discussing the project and [redacted] development interests in the subject property.

[redacted] will negotiate agreements with the landowners of the proposed project area. [redacted] philosophy for landowner relations is to work with residents during all phases of a project to address issues as they arise, before and after acquisition of land rights. [redacted] is committed to serving as the point of contact for residents, whether directly or indirectly affected by the project, for the duration of the project. [redacted] uses a collaborative and consultative approach to working with landowners, focusing on regular communication, to understand and address issues on an ongoing basis. [redacted] is also committed to using design and construction techniques that minimize impacts on private lands, and to restoring the construction sites of the projects to be both good stewards of the environment and good neighbors in the communities in which [redacted] live and work.

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.	5.a. Component number <input type="text" value="3"/>
Identify the name of the existing substation where the upgrade will take place.	5.b. Substation <input type="text" value="Lincoln"/>
Describe the scope of the upgrade work at the identified substation.	5.c. Substation upgrade scope <input type="text" value="Reconfigure Lincoln 115 kV substation into a 5 breaker ring bus configuration"/>
Describe any new substation equipment and provide the equipment ratings.	5.d. New equipment description <input type="text" value="New breakers, switches, and terminal equipment will be rated for at least 1000 amps."/>
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 <input type="text" value="Based on desktop analysis, it appears possible to reconfigure the switchyard and fit the 5 breaker ring bus within the existing footprint of the existing switchyard. Ultimately, this work will be designed by the owner of the switchyard."/>
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 <input type="text" value="Appendix 9 - System One-line 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 <input type="text" value="Desktop analysis indicates it may be possible to utilize the existing footprint"/>
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	5.h. Redacted information <input type="text" value="5F, Contains CEII Information"/>



Substation Upgrade Component

5. Substation Upgrade Component

Instructions	Inputs-2	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	5.a. Component number	4
Identify the name of the existing substation where the upgrade will take place.	5.b. Substation	Hunterstown
Describe the scope of the upgrade work at the identified substation.	5.c. Substation upgrade scope	Add new 115 kV breaker and buswork
Describe any new substation equipment and provide the equipment ratings.	5.d. New equipment description	New breakers, switches, and terminal equipment will be rated for at least 1000 amps.
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	It appears it is possible to expand the bus and add a 115 kV breaker on the southeast side of the switchyard.
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	<i>Appendix 9 - System One-line drawings</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.	5.g. Real-estate plan	Desktop analysis indicates it may be possible to utilize the existing footprint
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	5.h. Redacted information	5F, Contains CEII Information

8 Redacted information

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-20

Construction start date (Mo-Yr)

Mar-21

Commercial operation date (Mo-Yr)

Dec-21

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	\$ 20,455,127.66	\$ 10,484,638.67	\$ 9,970,488.99				
Work by others capex	\$ 4,400,000.00	\$ -	\$ 4,400,000.00				
Total project capex	\$ 24,855,127.66	\$ 10,484,638.67	\$ 14,370,488.99				

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	\$ 1,795,649.15	\$ 459,160.85	\$ 1,336,488.30				

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

-Includes sales and property tax
 -Non-union wages
 -Construction work schedule assumes standard 5-8 (40 hours per week), no work outside of daylight hours

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

9.e. Redacted information

under PJM review



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>The developer is proposing a firm cost cap on the project components they are responsible for. [REDACTED]</td> </tr> </table>	Cost containment commitment description	The developer is proposing a firm cost cap on the project components they are responsible for. [REDACTED]																				
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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>Project Component 1 and Project Component 2</td> </tr> </table>	Project scope covered by the cost containment commitment	Project Component 1 and Project Component 2																				
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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> <th style="background-color: #444; color: white;">\$</th> <td>[REDACTED]</td> </tr> <tr> <th style="background-color: #444; color: white;">Cost cap in in-service year dollars</th> <th style="background-color: #444; color: white;">\$</th> <td>[REDACTED]</td> </tr> </table>	Cost cap in present year dollars	\$	[REDACTED]	Cost cap in in-service year dollars	\$	[REDACTED]																
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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>With the exception of adjustments for inflation and "excluded costs" as identified in 10.d, all costs prior to commercial operation are included in the proposed cost containment commitment. See proposed cost commitment language in 10.d for more details.</td> </tr> </table>	Additional Information on cost cap:	With the exception of adjustments for inflation and "excluded costs" as identified in 10.d, all costs prior to commercial operation are included in the proposed cost containment commitment. See proposed cost commitment language in 10.d for more details.																				
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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 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>Yes</td> </tr> <tr> <td>Permitting / routing / siting</td> <td>Yes</td> </tr> <tr> <td>ROW / land acquisition</td> <td>Yes</td> </tr> <tr> <td>Materials and equipment</td> <td>Yes</td> </tr> <tr> <td>Construction and commissioning</td> <td>Yes</td> </tr> <tr> <td>Construction management</td> <td>Yes</td> </tr> <tr> <td>Overheads and miscellaneous costs</td> <td>Yes</td> </tr> <tr> <td>Taxes</td> <td>Yes</td> </tr> <tr> <td>AFUDC</td> <td>Yes</td> </tr> <tr> <td>Escalation</td> <td>Yes</td> </tr> </tbody> </table>	Capital cost component	Component covered by cost containment	Engineering and design	Yes	Permitting / routing / siting	Yes	ROW / land acquisition	Yes	Materials and equipment	Yes	Construction and commissioning	Yes	Construction management	Yes	Overheads and miscellaneous costs	Yes	Taxes	Yes	AFUDC	Yes	Escalation	Yes
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Cost Containment Commitment

10. Cost Containment Commitment

Instructions	Inputs
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Describe any other cost containment measures not detailed above.

10.c. Describe any other Cost Containment Measures not covered above:
Adjustments for inflation and "Excluded costs" as identified in 10.d

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
under PJM review

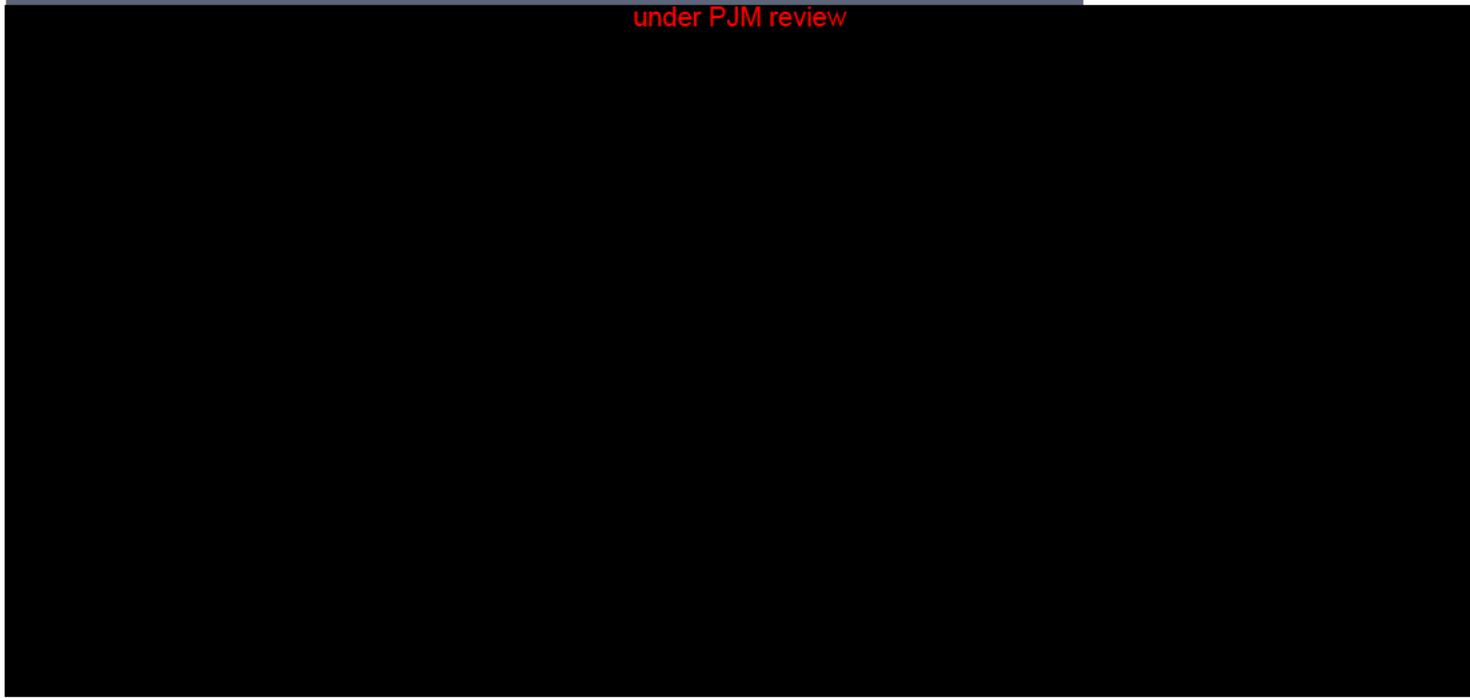


10. Cost Containment Commitment

Instructions

Inputs

under PJM review



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

agrees that it will not seek recovery through its Annual Transmission Revenue Requirement of any Construction Costs in excess of an amount equal to the lessor of (i) the Construction Cost Cap Amount, as adjusted for inflation, or (ii) the aggregate amount of actual construction costs associated with the Project.

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

10.f.

Redacted information

