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
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_1-830
Provide a general description of the scope of this project (e.g. Project is a new line between X and Y substations utilizing AAA structures. A new bay will be created within the existing substation X footprint. Substation Y will be reconfigured to a breaker and a half with accomodations for the new line.)	1.e.	General project description	Add a 500 kV substation on Hunterstown-Conastone 500 kV line near Littlestown, PA., add a 500-115 kV transformer at new substation, add a 115 kV line from new substation to Germantown substation
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	*Choose Yes or No* — Yes, except for connection of new 115 kV line at Germantown substation
Total current year project cost estimate including estimates for any required Transmission Owner upgrades.	1.i.	Project cost estimate (current year)	$ 41,566,739
Total in-service year project cost estimate including estimates for any required Transmission Owner upgrades.	1.j.	Project cost estimate (in-service year)	$ 44,918,099

1. Executive Summary

Instructions		Inputs	
Project estimated schedule duration in months.	**1.k.**	**Project schedule duration**	50 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**	☑
Confirm that all necessary project diagrams have been provided for this proposal.	**1.o.**	**Project diagram files provided**	☑
Indicate if company evaluation and operations and maintenance information has been provided for this proposal.	**1.p.**	**Company evaluation and operations and maintenance information provided**	☑

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**	
	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.			

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.

2.a.

FG #	Analysis Type	Bus #	Facility Name	To Bus #	To Bus Name	CKT	Voltage	Area

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

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-Lincoln 115 kV line	METED	Internal FG	1720	20.77	1832	29.62

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 1	Component 2	Component 3
3.a.	Component description(s)	Add 500 kV substation on Hunterstown-Conastone 500 kV line near Littlestown, PA., add 500-115 kV transformer at new substation, add 115 kV line from new substation to Germantown substation (includes subcomponents 1a-1b as described in tabs 4-7)	Connect new 115 kV line at Germantown substation	
3.b.	Component cost (current year)			
	Engineering and design	[redacted]		
	Permitting / routing / siting			
	ROW / land acquisition			
	Materials and equipment			
	Construction and commissioning			
	Construction management			
	Overheads and miscellaneous costs			
	Contingency			
	Total component cost	$ 40,943,907	$ 622,832	
3.c.	Component cost (in-service year)	$ 44,245,051	$ 673,048	
3.d.	Construction responsibility	[redacted]	[redacted]	

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.

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	1a
Provide the name for the proposed substation.	7.b.	Proposed substation name	Littlestown
Provide the latitude and longitude (in decimal degrees) of the site(s) evaluated for the substation.	7.c.	Evaluated location(s)	[redacted]
Provide a general description of the substation. Also, provide a single line diagram and general arrangement drawing.	7.d.	Substation description	substation will contain a 500 kV ring bus with three circuit breakers creating three positions for connecting transmission facilities; a 500-115 kV transformer will also be added at the substation
Describe the major substation equipment and provide the equipment ratings.	7.e.	Substation equipment	500 kV ring bus with three circuit breakers; rating of bus and circuit breakers will not limit rating of any connected facilities; rating of circuit breakers will exceed required fault interrupting capability; summer rating of transformer will be 356 MVA normal and 378 MVA emergency
Describe the required site size, geography and current land use for the proposed site(s).	7.f.	Geography and land use	eight acres of land is estimated to be required; siting would be along 500 kV ROW to minimize required land acquisition; area is rural, relatively flat farmland
Provide an assessment of the potential environmental impacts (i.e. environmental impact study requirements, environmental permitting, sediment, and erosion control issues).	7.g.	Environmental assessment	An environmental assessment study will be performed prior to construction to identify and mitigate any potential environmental impacts. All environmental permits and requirements related to construction and operation of a new electric substation will be obtained and followed.

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: 1a
Community and landowner outreach plan	7.h.	**Outreach plan** As much of the new substation would be sited within the ROW of the 500 kV line as possible. However, there will likely need to be some land acquired. [redacted] will design the substation to minimize the footprint. [redacted] will work with nearby residents to construct appropriate screening to soften visual impact. [redacted] will reach out and address any nearby resident or community concerns related to the building and operation of the new substation.
Provide the project land acquisition plan and approach for both public and private lands.	7.i.	**Land acquisition plan** It is estimated that the new substation will require eight acres of land. However, a significant amount of that could be within the existing 500 kV ROW. Additional land that is required would have to be purchased from the owner. Since the area is rural and mostly farmland, there is some flexibility in locating the substation along the ROW and therefore where the land would have to be acquired.
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	7.j.	**Redacted information**

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	1b
Provide the substation endpoints for the proposed transmission line component.	6.b.	Line terminal points	Littlestown 115 kV (new substation) Germantown 115 kV bus
Provide the target ratings for the proposed line.	6.c.	Project ratings	335 MVA normal / 437 MVA emergency
Provide the proposed conductor type and size.	6.d.	Conductor type and size	2167 kcmil 72/7 ACSR
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	line will be 115 kV AC all aerial construction with single conductor on pole type towers; line length would be approximately two miles
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	from new substation, line would be routed west approx. 1 mile across [redacted] then south approx. 1 mile across [redacted]. and [redacted]. into Germantown substation
Describe the terrain traversed by the proposed new line.	6.g.	Terrain description	relatively flat, open space and farmland
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.	6.h.	Right of way plan by segment	line will require new ROW, [redacted]

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**: 1b
Provide the project right of way and land acquisition plan and approach for both public and private lands.	**6.i.**	**ROW and land acquisition plan**: It is estimated that approximately two miles of 70 ft. wide ROW would be needed to route the new line from the new substation at the 500 kV ROW to Germantown substation. There is no known ROW available in that area, so the assumption is that this ROW would have to be acquired from the property owners. Since the area is rural, there is some flexibility in how the line could be routed, thereby minimizing impact to the community.
Provide the location and plan for any transmission facility crossings.	**6.j.**	**Transmission facility crossings**: there would be no transmission facility crossings
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**: An environmental assessment study will be performed prior to construction to identify and mitigate any potential environmental impacts. All environmental permits and requirements related to construction and operation of a new transmission line will be obtained and followed.
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.	**6.l.**	**Tower characteristics**: new line would be constructed as a single circuit on pole type towers with phases arranged in vertical configuration
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	**6.m.**	**Redacted information**:

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	Germantown
Describe the scope of the upgrade work at the identified substation.	5.c.	Substation upgrade scope	attach new 115 kV line to Germantown substation by adding a new circuit breaker to the existing bus
Describe any new substation equipment and provide the equipment ratings.	5.d.	New equipment description	new 115 kV circuit breaker with ratings that will meet or exceed the ratings of the new line and interrupting capability that will exceed the required fault interrupting capability
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	space is available to add a circuit breaker in the substation and create a position for the new line on the existing straight bus
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	

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)	Apr-20
Construction start date (Mo-Yr)	Apr-21
Commercial operation date (Mo-Yr)	May-24

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	$ 41,566,739	$ 3,234,725	$ 10,992,086	$ 9,791,284	$ 9,791,284	$ 7,757,360	

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	$ 8,391,139	$ 232,278	$ 1,021,594	$ 1,724,684	$ 2,427,773	$ 2,984,811	

9. Project Financial Information

Instructions		Inputs
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** assumes standard seasonal weather and permitting schedule
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	**9.e.**	**Redacted information**

Cost Containment Commitment

10. Cost Containment Commitment

Instructions		Inputs
Provide a description of the cost containment mechanism being proposed.	10.a.	**Cost containment commitment description**
Indicate what project scope is covered by the proposed cost containment commitment. Identify the components covered by number.	10.b.	**Project scope covered by the cost containment commitment**
Provide, in present year dollars and year of occurrence dollars, the Proposing Entity's proposed binding cap on capital expenditures.	10.b.i.	**Cost cap in present year dollars**
		Cost cap in in-service year dollars
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.	10.b.ii.	**Additional Information on cost cap:**
Indicate which components of capital costs fall under the cost cap.	10.b.iii.	**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*

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**