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_1-593
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, add a Peach Bottom 500-230 kV transformer, add a Peach Bottom-Graceton 230 kV line and reconfigure the 230 kV connections at Peach Bottom into a new switching 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	*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	*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)	$ 170,719,068
Total in-service year project cost estimate including estimates for any required Transmission Owner upgrades.	1.j.	Project cost estimate (in-service year)	$ 183,691,280

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	Addresses additional congestion on lines into Conastone substation from Peach Bottom and Furnace Run created as a result of alleviating congestion on Hunterstown-Lincoln line; May eliminate the need for the special protection system presently in place at Peach Bottom to avoid potential instability of the Muddy Run generating units
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

Market Efficiency flowgate(s) addressed by the proposed project

Instructions: Identify the Market Efficiency flowgate(s) the proposed project mitigates.

2.c.

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)	Add Peach Bottom 500-230 kV transformer, add Peach Bottom-Graceton 230 kV line, add 230 kV switching station at Peach Bottom (includes subcomponents 2a-2f as described in tabs 4-7)	Connect new 115 kV line at Germantown substation

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

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	$ 129,152,329	$ 622,832

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

3.c.	Component cost (in-service year)	$ 44,245,051	$ 138,773,181	$ 673,048

Identify the entity who will be designated the component.

3.d.	Construction responsibility	[redacted]

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	[redacted]
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**

7. Greenfield Substation Component

Instructions		Inputs - 2	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	7.a.	Component number	2a
Provide the name for the proposed substation.	7.b.	Proposed substation name	Peach Bottom West
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 230 kV bus in a breaker and a half configuration with a total of eight positions for connecting existing and new transmission facilities
Describe the major substation equipment and provide the equipment ratings.	7.e.	Substation description	230 kV bus in breaker and a half configuration with four strings and three circuit breakers per string; rating of bus and circuit breakers will not limit rating of any connected facilities; rating of circuit breakers will exceed required fault interrupting capability
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; potential location is just across from the existing Peach Bottom North substation; potential site is presently unoccupied and used as ROW for existing aerial transmission lines that will either be connected to new substation or moved to the side of the new substation
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 - 2
Provide the corresponding component number from the "Project Components" tab of the proposal template.	7.a.	Component number: 2a
Community and landowner outreach plan	7.h.	Outreach plan: The potential site for the proposed switching station is located within existing transmission line ROW just across from a major transmission substation. The site is owned by [redacted] and is presently unoccupied open land, with few surrounding residents. However, [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: The potential site is owned by [redacted] and it is not anticipated that the acquisition of additional land will be necessary.
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	7.j.	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	2b
Identify the name of the existing substation where the upgrade will take place.	5.b.	Substation	Peach Bottom South
Describe the scope of the upgrade work at the identified substation.	5.c.	Substation upgrade scope	existing substation will be expanded to add a position to the existing 500 kV bus and facilitate connection of a new 500-230 kV transformer
Describe any new substation equipment and provide the equipment ratings.	5.d.	New equipment description	500 kV bus section with two 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
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	expansion will require regrading of sloped area adjacent to east side of substation, however, this additional cost is included in cost estimate
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	the substation fence will need to be expanded, but the property required is owned by [redacted]
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**	2c
Identify the name of the existing substation where the upgrade will take place.	**5.b.**	**Substation**	Peach Bottom South
Describe the scope of the upgrade work at the identified substation.	**5.c.**	**Substation upgrade scope**	install a new 500-230 kV transformer and short 230 kV transmission line to connect Peach Bottom South 500 kV bus to new Peach Bottom West 230 kV substation
Describe any new substation equipment and provide the equipment ratings.	**5.d.**	**New equipment description**	500-230 kV transformer consisting of three single phases with a total summer rating of 1479 MVA normal and 1839 MVA emergency; 230 kV transmission line one mile in length with summer rating of 1462 MVA normal and 1770 MVA emergency
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**	The connection for the Peach Bottom-Keeney 500 kV line at Peach Bottom will be moved to the new bus position created as part of the substation expansion and the new transformer will be connected to the bus position presently occupied by the Peach Bottom-Keeney line.
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		Inputs - 1	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	4.a.	Component number	2d
Identify the line terminal points. Add additional spaces if required.	4.b.	Terminal points	Peach Bottom 230 kV bus (new PECO) Cooper 230 kV bus (PECO) Graceton 230 kV bus(BGE)
		Existing Line Physical Characteristics	
Provide the size and type conductor that will be removed.	4.c.	Existing conductor size and type	795kcmil 30/19 ACSR
Indicate whether the existing line hardware will be reused. If so, provide the age and condition of the hardware.	4.d.	Existing hardware plan	new hardware will be used
Provide the condition and age of the existing structures. Describe the findings of any recent inspections or of analysis that has indicated a need for structural repair or reinforcement to re-conductor the line.	4.e.	Existing tower line characteristics	age is approximately 60 years; a detailed condition assessment will be performed after project award
Describe the terrain that the existing line traverses. Additionally, provide a Google Earth .KMZ file with the existing line path as an included document with the project proposal package.	4.f.	Terrain description	relatively flat or gently sloping, mostly open space

Reconductor/Rebuild Transmission Line Component

4. Transmission Line Reconductor/Rebuild Component

Instructions		Inputs - 1	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	4.a.	Component number	2d
		Reconductor/Rebuild Component Plan	
Provide the target ratings for the line.	4.g.	Component target ratings	1331 MVA normal / 1594 MVA emergency (summer)
Provide the type and size of the conductor to be installed.	4.h.	Proposed conductor size and type	2x1590 kcmil 54/19 ACSR
If the shield wire is to be replaced, identify the type and size to be used.	4.i.	Proposed shield wire size and type	1-9/16 7#5 ALUMOWELD
Describe the amount of the line that is anticipated to be rebuilt versus reconductored. Provide any assumptions that were used in arriving at this determination. If specific line sections have been identified for rebuild, provide route maps for (or specify in a Google Earth .KMZ file) those segments and identify the areas.	4.j.	Rebuild portion	the entire line between the new Peach Bottom West substation, Cooper substation and Graceton substation will be 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.	Right of way	No additional ROW should be needed. The double circuit tower line will be a single pole structure that is expected to fit within the space of the existing single circuit lattice tower.
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	4.l.	Redacted information	

5. Substation Upgrade Component

Instructions		Inputs-3	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	**5.a.**	**Component number**	2e
Identify the name of the existing substation where the upgrade will take place.	**5.b.**	**Substation**	Peach Bottom West (new)
Describe the scope of the upgrade work at the identified substation.	**5.c.**	**Substation upgrade scope**	cut and connect existing Cooper-Peach Bottom Tap 230 kV line and both Muddy Run-Peach Bottom 230 kV lines at new Peach Bottom West substation
Describe any new substation equipment and provide the equipment ratings.	**5.d.**	**New equipment description**	short sections of transmission line (one or two spans each) to connect existing lines to new substation; two new circuit breakers on resulting tie lines between Peach Bottom West 230 kV bus and existing Peach Bottom 230 kV bus; ratings on short sections connecting both Muddy Run lines and Peach Bottom Tap line will meet or exceed present ratings of those lines; resulting tie lines between new substation and existing 230 kV bus at Peach Bottom will be built with 2x1590 kcmil 54/19 ACSR conductor with summer ratings of 1462 MVA normal and 1770 MVA emergency
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**	the two circuit breakers that will be added to the two lines that will tie the existing and new 230 kV buses will be located inside Peach Bottom North substation
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-4	
Provide the corresponding component number from the "Project Components" tab of the proposal template.	**5.a.**	**Component number**	2f
Identify the name of the existing substation where the upgrade will take place.	**5.b.**	**Substation**	Graceton
Describe the scope of the upgrade work at the identified substation.	**5.c.**	**Substation upgrade scope**	attach new Peach Bottom-Graceton 230 kV line to existing bus at Graceton by adding a new circuit breaker to an existing string of the breaker and a half bus configuration
Describe any new substation equipment and provide the equipment ratings.	**5.d.**	**New equipment description**	new 230 kV circuit breaker with ratings that will meet or exceed the ratings of the new Peach Bottom-Graceton 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**	a line position can be created by adding a circuit breaker to one of the existing strings of the breaker and a half bus configuration
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-5	
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**	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**	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	$ 170,719,068	$ 8,860,907	$ 42,212,679	$ 43,146,855	$ 43,146,855	$ 33,351,772	

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	$ 33,574,453	$ 643,603	$ 3,709,681	$ 6,843,611	$ 9,977,542	$ 12,400,016	

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*

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**