Stonewater - Waxpool 230kV Transmission Project

General Information

Proposing entity name	Confidential
Company proposal ID	
PJM Proposal ID	721
Project title	Stonewater - Waxpool 230kV Transmission Project
Project description	The Stonewater - Waxpool 230kV Transmission Project will connect the Stonewater and Waxpool substations with a new single-circuit 230kV overhead/underground transmission line. The proposed project will include substation upgrades at both Stonewater and Waxpool to accommodate the new transmission line. The proposed project will require new right-of-way.
Project in-service date	06/2024
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	

Project Components

1. Stonewater - Waxpool 230kV Transmission Line
2. Stonewater 230kV Substation Upgrade
3. Waxpool 230kV Substation Upgrade
4. Belmont 230k Substation Upgrade

Greenfield Transmission Line Component

Component title	Stonewater - Waxpool 230kV Transmission Line

Point A	Stonewater	
Point B	Waxpool	
Point C		
	Normal ratings	**Emergency ratings**
Summer (MVA)	836.000000	1165.000000
Winter (MVA)	836.000000	1165.000000
Conductor size and type	Overhead: 2-1033 ACSS "Curlew". Underground: 2-2000 kcmil XLPE	
Nominal voltage	AC	
Nominal voltage	230	
Line construction type	Overhead, Underground	
General route description	See Routing Map attachment for information on the general project route. Most high-voltage transmission projects will require a state siting approval. To begin the siting approval process, Central Transmission plans to hold pre-application meetings with the regulatory agency to introduce Central Transmission and the Project, as well as confirm its understanding of the process. Shortly thereafter, Central Transmission will simultaneously begin collecting siting data and start its outreach efforts so that public siting input is incorporated at the earliest stages of the Project. Once Central Transmission identifies a preferred site/route and at least one viable alternative site/route, Central Transmission will carry out the environmental and detailed engineering work described in the Site Selection/Routing Analysis section above in order to establish a highly- detailed Project plan to support the siting applications.	
Terrain description	The terrain traversed by the project is generally flat and crosses a combination of forested areas and suburban/industrial areas.	
Right-of-way width by segment	Right-of-way width will be determined during the detailed design process based on input from internal design staff, external design consultants, and various stakeholders.	
Electrical transmission infrastructure crossings	No planned electrical transmission infrastructure crossings.	
Civil infrastructure/major waterway facility crossing plan	The project will require crossing Virginia State HIghway 267 (Dulles Greenway) at two different locations. The project will also require crossing the Goose Creek Reservoir.	

Environmental impacts	The proposed Project was sited to avoid and minimize impacts to wetlands or other areas of environmental concern based on GIS data. It is possible that the Project cannot avoid impacts to a limited number of wetlands and waterways. If so, Central Transmission expects the Project will be subject to regulation under certain permitting programs, namely Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 401 of the Clean Water Act. Central Transmission will engage a qualified consultant to conduct a wetlands delineation of the selected site/route in order to establish the extent of proposed impacts and the need for specific permits from the state or U.S. Army Corps of Engineers. In addition to the permits described above, Central Transmission has identified other permits which may be required for the construction of the Project. Central Transmission considers these permits to be minor due to the more limited effort to prepare applications and the less intensive permitting processes which follow. These include permits related to airspace clearance, stormwater/erosion and sedimentation control, road crossings, and utility and railroad crossings.
Tower characteristics	The preliminary design for the overhead transmission line segment utilizes tubular steel monopole structures with single circuit, double-bundle 1033.5 kcmil ACSS conductor in a vertical configuration and a single optical groundwire. The preliminary design for the underground segment of transmission line utilizes two (2) cables per phase of 2000 kcmil XLPE conductor in a ductbank.
Construction responsibility	Proposer
Additional comments	

Component Cost Details - In Current Year $

Engineering & design	Confidential
Permitting / routing / siting	Confidential
ROW / land acquisition	Confidential
Materials & equipment	Confidential
Construction & commissioning	Confidential
Construction management	Confidential
Overheads & miscellaneous costs	Confidential
Contingency	Confidential
Total component cost	$24,674,518.00

Component cost (in-service year)	$26,971,308.00

Substation Upgrade Component

Component title	Stonewater 230kV Substation Upgrade
Substation name	Stonewater 230kV Substation
Substation zone	352
Substation upgrade scope	Add a 230kV circuit breaker to create a new 230kV line position to connect the new transmission line.

Transformer Information

None

New equipment description	230kV circuit breakers (1) - 4000A
Substation assumptions	It appears that the Stonewater 230kV substation can be expanded to accommodate a new transmission line connection and that the substation has space available.
Real-estate description	The proposed facilities can be accommodated within the current substation fence.
Construction responsibility	Dominion
Additional comments	

Component Cost Details - In Current Year $

Engineering & design	Confidential
Permitting / routing / siting	Confidential
ROW / land acquisition	Confidential
Materials & equipment	Confidential
Construction & commissioning	Confidential
Construction management	Confidential
Overheads & miscellaneous costs	Confidential

Contingency	Confidential
Total component cost	$1,307,035.00
Component cost (in-service year)	$1,428,699.00

Substation Upgrade Component

Component title	Waxpool 230kV Substation Upgrade
Substation name	Waxpool 230kV Substation Upgrade
Substation zone	352
Substation upgrade scope	Add a 230kV circuit breaker to create a new 230kV line position to connect the new transmission line.

Transformer Information

None

New equipment description	230kV circuit breakers (1) - 4000A
Substation assumptions	It appears that the Waxpool 230kV substation can be expanded to accommodate a new transmission line connection and that the substation has space available.
Real-estate description	The proposed facilities can be accommodated within the current substation fence without acquiring additional real-estate.
Construction responsibility	Dominion
Additional comments	Please redact the one-line and general arrangement for this project component.

Component Cost Details - In Current Year $

Engineering & design	Confidential
Permitting / routing / siting	Confidential
ROW / land acquisition	Confidential
Materials & equipment	Confidential

Construction & commissioning	Confidential
Construction management	Confidential
Overheads & miscellaneous costs	Confidential
Contingency	Confidential
Total component cost	$2,800,855.00
Component cost (in-service year)	$3,061,571.00

Substation Upgrade Component

Component title	Belmont 230k Substation Upgrade
Substation name	Belmont 230kV Substation Upgrade
Substation zone	352
Substation upgrade scope	Upgrade the terminal equipment to 3000A for the Belmont - Stonewater 230kV transmission line to accommodate a higher flow on the Stonewater - Belmont 230kV line.

Transformer Information

None

New equipment description	New 3000A terminal equipment for the Stonewater line position at Belmont.
Substation assumptions	The substation terminal equipment can be replaced in kind with higher rated (3000A) equipment to allow for higher flows on the Stonewater - Belmont 230kV line.
Real-estate description	No additional real-estate is required.
Construction responsibility	Dominion
Additional comments	Please redact the substation one-line and general arrangement for this project component.

Component Cost Details - In Current Year $

Engineering & design	Confidential
Permitting / routing / siting	Confidential

ROW / land acquisition	Confidential
Materials & equipment	Confidential
Construction & commissioning	Confidential
Construction management	Confidential
Overheads & miscellaneous costs	Confidential
Contingency	Confidential
Total component cost	$467,499.00
Component cost (in-service year)	$552,165.00

Congestion Drivers

None

Existing Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type
N2-WT1	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (winter)
N2-WT2	314171	6BRAMBL	313827	6EVERGR MILL	1	230/230	345/345	N-1-1 Thermal (winter)
N2-WT3	314171	6BRAMBL	313827	6EVERGR MILL	1	230/230	345/345	N-1-1 Thermal (winter)
N2-WT8	314171	6BRAMBL	313827	6EVERGR MILL	2	230/230	345/345	N-1-1 Thermal (winter)
N2-SLD8	313721	6BUTTERMILK	313729	6CUMULUS	1	230	345	N-1-1 Load Drop (summer)
N2-WLD4	313721	6BUTTERMILK	313729	6CUMULUS	1	230	345	N-1-1 Load Drop (winter)
GD-S11	314171	6BRAMBL	313827	6EVERGR MILL	2	230	345	Gen Deliv (Summer)
GD-S12	314171	6BRAMBL	313827	6EVERGR MILL	1	230	345	Gen Deliv (Summer)

New Flowgates

None

Financial Information

Capital spend start date	01/2021
Construction start date	01/2023
Project Duration (In Months)	41

Cost Containment Commitment

Cost cap (in current year)	Confidential
Cost cap (in-service year)	Confidential

Components covered by cost containment

1. Stonewater - Waxpool 230kV Transmission Line - Proposer

Cost elements covered by cost containment

Engineering & design	No
Permitting / routing / siting	No
ROW / land acquisition	No
Materials & equipment	No
Construction & commissioning	No
Construction management	No
Overheads & miscellaneous costs	No
Taxes	No
AFUDC	No
Escalation	No
Additional Information	Confidential

Is the proposer offering a binding cap on ROE?	Yes
Would this ROE cap apply to the determination of AFUDC?	Yes
Would the proposer seek to increase the proposed ROE if FERC finds that a higher ROE would not be unreasonable?	No
Engineering & design	No
Permitting / routing / siting	No
ROW / land acquisition	No
Materials & equipment	No
Construction & commissioning	No
Construction management	No
Overheads & miscellaneous costs	No
Taxes	No
AFUDC	No
Escalation	No
Additional Information	Confidential
Is the proposer offering a Debt to Equity Ratio cap?	Confidential
Additional cost containment measures not covered above	

Additional comments

None