Dogwood Sprint 115/500kV Transmission Project

General Information

Proposing entity name	CONFIDENTIAL INFORMATION
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	CONFIDENTIAL INFORMATION
Company proposal ID	CONFIDENTIAL INFORMATION
PJM Proposal ID	582
Project title	Dogwood Sprint 115/500kV Transmission Project
Project description	The Dogwood Sprint 500 kV project includes a new 500/115kV substation interconnecting the Juniata - Three Mile Island 500kV transmission line and the Allen to Roundtop 115kV transmission line. The substation will include a 500kV three-position ringbus that steps down, via a 500/115kV transformer, to a 115kV three-position ringbus.
Email	CONFIDENTIAL INFORMATION
Project in-service date	05/2026
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	CONFIDENTIAL INFORMATION

Project Components

1. 500/115kV Dogwood Sprint Substation
2. T-Line Interconnection: 500kV Dogwood Sprint Substation with Allen - Rou...
3. T-Line Interconnection: 500kV Dogwood Sprint Substation and Juniata - Th...

Greenfield Substation Component

Component title	500/115kV Dogwood Sprint Substation
Project description	CONFIDENTIAL INFORMATION
Substation name	500/115kV Dogwood Sprint Substation
Substation description	The 500/115kV Dogwood Sprint Substation will include a 500kV three-position ring bus that interconnects the existing Juniata - Three Mile Island 500kV transmission line. The 500kV substation will connect to a new three-position 115kV substation via a 500/115kV 350 MVA transformer. The 115kV substation will interconnect the existing Allen - Roundtop 115kV line. The new substation will also include a 6% series reactor.
Nominal voltage	AC
Nominal voltage	500/115

Transformer Information

	Name	Capacity (MVA)
Transformer	Dogwood Sprint 500/115kV Transformer	350

	High Side	Low Side	Tertiary
Voltage (kV)	500	115	
Major equipment description	500kV circuit breakers (3) will have a continuous current rating of 4000A. 500kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 4000A continuous current rating, 3464 MVA rating, and a short circuit current rating of 63kA. 500kV terminal equipment will be rated at 4000A. 115kV circuit breakers (3) will have a continuous current rating of 3000A. 115kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 3000A continuous current rating, 598 MVA rating, and a short circuit current rating of 40kA. 115kV terminal equipment will be rated at 3000A. The 500/115kV transformer will have a capacity of 350 MVA. The substation will also include a 6% series reactor.		

	Normal ratings	Emergency ratings
Summer (MVA)	3464.000000	3464.000000

Winter (MVA)	3464.000000	3464.000000
Environmental assessment	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, Proposer 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. Proposer 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, Proposer has identified other permits which may be required for the construction of the Project. Proposer 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.	
Outreach plan	Proposer will identify and engage stakeholders, such as community officials and landowners within the Project area, early in the process and maintain an active dialogue throughout. Public meetings may be held to offer a venue for landowners and other interested community members to learn about the Project and for Proposer to learn more about specific landowner and community preferences. Proposer plans to make information available on its website and provide notification of public meetings to landowners within the Project area as required in the siting approval process.	
Land acquisition plan	The Project will be located primarily on new right-of-way to be purchased by Proposer. In addition, Proposer will procure any necessary easements required to access the site. Proposer will assign a Right-of-Way Manager to oversee all real estate related activities for the Project including appraisals, title work, surveying, land acquisition and restoration. A right-of-way agent will contact the property owner(s) in person to explain the Project and, as necessary, secure permission to conduct surveys, archaeological studies, etc. The right-of-way agent will be the primary point of contact to negotiate with the property owner to acquire the substation site and any required easements on a mutually agreeable basis. To the extent that negotiations reach an impasse, Proposer will be able to pursue eminent domain. The right-of-way agents will continue to act as a liaison with the property owners during construction and through the restoration process.	
Construction responsibility	CONFIDENTIAL INFORMATION	
Benefits/Comments	CONFIDENTIAL INFORMATION	
Component Cost Details - In Current Year $		
Engineering & design	CONFIDENTIAL INFORMATION	
Permitting / routing / siting	CONFIDENTIAL INFORMATION	
ROW / land acquisition	CONFIDENTIAL INFORMATION	

Materials & equipment	CONFIDENTIAL INFORMATION
Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$19,973,294.00
Component cost (in-service year)	$22,604,425.00

Transmission Line Upgrade Component

Component title	T-Line Interconnection: 500kV Dogwood Sprint Substation with Allen - Roundtop
Project description	CONFIDENTIAL INFORMATION
Impacted transmission line	Allen - Roundtop
Point A	Allen
Point B	Roundtop
Point C	
Terrain description	The terrain traversed by the project features farmland.

Existing Line Physical Characteristics

Operating voltage	115
Conductor size and type	N/A
Hardware plan description	N/A
Tower line characteristics	N/A

Proposed Line Characteristics

	Designed	**Operating**

Voltage (kV)	115.000000	115.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	184.000000	251.000000
Winter (MVA)	223.000000	251.000000
Conductor size and type	N/A	
Shield wire size and type	N/A	
Rebuild line length	<0.25 miles	
Rebuild portion description	The existing line will be broken and new deadend towers installed to facilitate looping into the new Dogwood Sprint 500/115kV Substation.	
Right of way	The existing right-of-way and substation easement will be reused to facilitate the transmission interconnection facilities necessary to loop the lines into the new substation.	
Construction responsibility	CONFIDENTIAL INFORMATION	
Benefits/Comments	CONFIDENTIAL INFORMATION	
Component Cost Details - In Current Year $		
Engineering & design	CONFIDENTIAL INFORMATION	
Permitting / routing / siting	CONFIDENTIAL INFORMATION	
ROW / land acquisition	CONFIDENTIAL INFORMATION	
Materials & equipment	CONFIDENTIAL INFORMATION	
Construction & commissioning	CONFIDENTIAL INFORMATION	
Construction management	CONFIDENTIAL INFORMATION	
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION	
Contingency	CONFIDENTIAL INFORMATION	
Total component cost	$460,000.00	

Component cost (in-service year)	$523,914.00

Transmission Line Upgrade Component

Component title	T-Line Interconnection: 500kV Dogwood Sprint Substation and Juniata - Three Mile Island
Project description	CONFIDENTIAL INFORMATION
Impacted transmission line	Juniata - Three Mile Island
Point A	Juniata
Point B	Three Mile Island
Point C	
Terrain description	The terrain traversed by the project features farmland.

Existing Line Physical Characteristics

Operating voltage	500
Conductor size and type	N/A
Hardware plan description	N/A
Tower line characteristics	N/A

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	500.000000	500.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	2656.000000	3450.000000
Winter (MVA)	3011.000000	3450.000000
Conductor size and type	N/A	

Shield wire size and type	N/A
Rebuild line length	<0.25 miles
Rebuild portion description	The existing line will be broken and new deadend towers installed to facilitate looping into the new Dogwood Sprint 500/115kV Substation.
Right of way	The existing right-of-way will be reused to facilitate the transmission interconnection facilities necessary to loop the lines into the new substation.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION
Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$1,150,000.00
Component cost (in-service year)	$1,309,784.00

Congestion Drivers

None

Existing Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
N2-SVM8	204520	27ALLEN	204520	27ALLEN	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM9	204520	27ALLEN	204520	27ALLEN	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM10	204526	27DILLSBRG	204526	27DILLSBRG	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM11	204526	27DILLSBRG	204526	27DILLSBRG	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM12	204528	27GARDNERS	204528	27GARDNERS	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM13	204528	27GARDNERS	204528	27GARDNERS	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM16	204546	27MOUNTAIN	204546	27MOUNTAIN	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM17	204546	27MOUNTAIN	204546	27MOUNTAIN	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM18	204552	27P.P.G.I.	204552	27P.P.G.I.	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM19	204552	27P.P.G.I.	204552	27P.P.G.I.	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM26	204556	27ROUND TP	204556	27ROUND TP	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVM27	204556	27ROUND TP	204556	27ROUND TP	0	115	227	Summer N-1-1 Voltage Magnitude	Included
N2-SVD1	200504	26CARLISLE	200504	26CARLISLE	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD2	200504	26CARLISLE	200504	26CARLISLE	0	115	226	Summer N-1-1 Voltage Drop	Included
N2-SVD3	204520	27ALLEN	204520	27ALLEN	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD4	204520	27ALLEN	204520	27ALLEN	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD5	204526	27DILLSBRG	204526	27DILLSBRG	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD6	204526	27DILLSBRG	204526	27DILLSBRG	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD7	204528	27GARDNERS	204528	27GARDNERS	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD8	204528	27GARDNERS	204528	27GARDNERS	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD9	204546	27MOUNTAIN	204546	27MOUNTAIN	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD10	204546	27MOUNTAIN	204546	27MOUNTAIN	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD11	204552	27P.P.G.I.	204552	27P.P.G.I.	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD12	204552	27P.P.G.I.	204552	27P.P.G.I.	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD15	204556	27ROUND TP	204556	27ROUND TP	0	115	227	Summer N-1-1 Voltage Drop	Included
N2-SVD16	204556	27ROUND TP	204556	27ROUND TP	0	115	227	Summer N-1-1 Voltage Drop	Included

New Flowgates

CONFIDENTIAL INFORMATION

Financial Information

Capital spend start date	03/2022
Construction start date	03/2024
Project Duration (In Months)	50

Cost Containment Commitment

Cost cap (in current year)	CONFIDENTIAL INFORMATION
Cost cap (in-service year)	CONFIDENTIAL INFORMATION

Components covered by cost containment

1. 500/115kV Dogwood Sprint Substation - Proposer

Cost elements covered by cost containment

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

AFUDC	Yes
Escalation	No
Additional Information	CONFIDENTIAL INFORMATION
Is the proposer offering a binding cap on ROE?	No
Is the proposer offering a Debt to Equity Ratio cap?	CONFIDENTIAL INFORMATION

Additional Comments

None