Dogwood Run 115/230kV 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	292
Project title	Dogwood Run 115/230kV Transmission Project
Project description	The Dogwood Run project includes a new 115/230kV substation. This substation will include a 115kV 3-position ringbus and a 115/230kV transformer. The substation will connect via a short (~0.25 mile) 230kV line to a new line position at the nearby William Grove Substation. The Allen to Roundtop 115kV transmission line will be tied into the substation via an approximately 2 mile double circuit transmission line.
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. Dogwood Run - Allen / Roundtop 115kV Transmission Line
2. 230/115kV Dogwood Run Substation
3. 230kV Williams Grove Substation Interconnect

4. T-Line Interconnection: Dogwood Run - Allen / Roundtop 115kV Interconnec...

5. Dogwood Run - Williams Grove 230kV Transmission Line

Greenfield Transmission Line Component

Component title	Dogwood Run - Allen / Roundtop 115kV Transmission Line	
Project description	CONFIDENTIAL INFORMATION	
Point A	Dogwood Run	
Point B	Allen	
Point C	Roundtop	
	Normal ratings	**Emergency ratings**
Summer (MVA)	271.000000	336.000000
Winter (MVA)	305.000000	372.000000
Conductor size and type	Single 1033.5 "Curlew" ACSR	
Nominal voltage	AC	
Nominal voltage	115	
Line construction type	Overhead	
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, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer 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 the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer 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 features mainly farmland.	
Right-of-way width by segment	The project proposes to utilize a right-of-way width of 100 feet.	

Electrical transmission infrastructure crossings	Electrical infrastructure crossings may be required depending on final line route and substation configuration. This will be coordinated during the detailed design process with the interconnection PTO.
Civil infrastructure/major waterway facility crossing plan	No civil infrastructure or major waterway crossings.
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, 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.
Tower characteristics	The preliminary design for the transmission line utilizes tubular steel monopole structures with double circuit, single 1033.5 "Curlew" ACSR in a vertical configuration with one optical groundwire and one shieldwire.
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	$4,411,991.00
Component cost (in-service year)	$4,986,715.00

Greenfield Substation Component

Component title	230/115kV Dogwood Run Substation
Project description	CONFIDENTIAL INFORMATION
Substation name	230/115kV Dogwood Run Substation
Substation description	The new 230/115kV Dogwood Run Substation will be a 115kV three-position ring bus that will interconnect the existing Allen - Roundtop 115kV transmission line via a new ~2 mile double circuit transmission line. The new substation will include a 230/115kV transformer and a 2% series reactor. A short line will be used to connect the new sub with the existing 230kV Williams Grove Substation.
Nominal voltage	AC
Nominal voltage	230/115

Transformer Information

	Name	Capacity (MVA)
Transformer	Dogwood Run 230/115kV Transformer	350

	High Side	Low Side	Tertiary
Voltage (kV)	230	115	

Major equipment description	115kV circuit breakers (3) will have a continuous current rating of 3000A, a 598 MVA rating, and a short circuit current rating of 40kA. 115kV terminal equipment will be rated at 3000A. The 230/115kV transformer will have a capacity of 350 MVA. The substation will also include a 2% series reactor.

	Normal ratings	Emergency ratings

Summer (MVA)	598.000000	598.000000
Winter (MVA)	598.000000	598.000000
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	$7,952,512.00
Component cost (in-service year)	$9,000,118.00

Substation Upgrade Component

Component title	230kV Williams Grove Substation Interconnect
Project description	CONFIDENTIAL INFORMATION
Substation name	Williams Grove
Substation zone	237
Substation upgrade scope	The substation scope will involve adding one (1) new 4000A, 230kV circuit breaker to the open breaker and a half position to create a new line position to connect to the new 230/115kV Dogwood Run Substation. A short (~0.25 mile) line will connect the Dogwood Run Substation to the new line position at the Williams Grove Substation.

Transformer Information

None

New equipment description	230kV Circuit Breaker (1): 4000A continuous current rating, 230kV Circuit Breaker Isolation Disconnect Switches & associated jumper assemblies: 4000A continuous current rating, 1593 MVA rating, and a short circuit current rating of 63kA.
Substation assumptions	It appears that the substation can be expanded to accommodate the new 230kV interconnection.
Real-estate description	The current substation extents should be able to accommodate the new transmission line position.

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	$1,531,392.00
Component cost (in-service year)	$1,732,257.00

Transmission Line Upgrade Component

Component title	T-Line Interconnection: Dogwood Run - Allen / Roundtop 115kV Interconnection
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 mainly agricultural areas with some lightly forested areas.

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 a new double circuit dead-end tower installed to connect the new Dogwood Run - Allen / Roundtop line to the existing 115kV Allen to Roundtop line.	
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	$689,999.00
Component cost (in-service year)	$785,870.00

Greenfield Transmission Line Component

Component title	Dogwood Run - Williams Grove 230kV Transmission Line
Project description	CONFIDENTIAL INFORMATION
Point A	Dogwood Run
Point B	Williams Grove
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	798.000000	798.000000
Winter (MVA)	837.000000	837.000000

Conductor size and type	Single 1033.5 "Curlew" ACSS
Nominal voltage	AC
Nominal voltage	230
Line construction type	Overhead

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, Proposer plans to hold pre-application meetings with the regulatory agency to introduce Proposer and the Project, as well as confirm its understanding of the process. Shortly thereafter, Proposer 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 the Proposer identifies a preferred site/route and at least one viable alternative site/route, Proposer will carry out the environmental and detailed engineering work in order to establish a highly detailed Project plan to support the siting applications.
Terrain description	The terrain traversed by the project features farmland.
Right-of-way width by segment	The project proposes to utilize a right-of-way width of 125 feet.
Electrical transmission infrastructure crossings	Electrical infrastructure crossings may be required depending on final line route. This will be coordinated during the detailed design process with the interconnection PTO.
Civil infrastructure/major waterway facility crossing plan	No civil infrastructure or major waterway crossings.
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, 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.
Tower characteristics	The preliminary design for the transmission line utilizes tubular steel monopole structures with single circuit, single 1033.5 "Curlew" ACSS in a delta configuration and a single optical groundwire.
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	$512,603.00
Component cost (in-service year)	$579,378.00

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

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
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. Dogwood Run - Allen / Roundtop 115kV Transmission Line - Proposer
2. 230/115kV Dogwood Run Substation - Proposer
3. Dogwood Run - Williams Grove 230kV Transmission Line - 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