Proposal H - Peach Bottom-Doubs 500kV (Circuits #1 and #2)

General Information

Proposing entity name	Competitive
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Competitive
Company proposal ID	Competitive
PJM Proposal ID	962
Project title	Proposal H - Peach Bottom-Doubs 500kV (Circuits #1 and #2)
Project description	500kV Greenfield line from Doubs Station to Peach Bottom Station Circuit #1. 500kV Greenfield line from Doubs Station to Peach Bottom Station Circuit #2. Reconductor 500kV Line from Doubs Station to Goose Creek Station
Email	Competitive
Project in-service date	06/2028
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Competitive

Project Components

1. New 500kV line from Doubs Station to Peach Bottom Station Circuit 1
2. Reconductor 500kV line from Doubs station to Goose Creek station
3. Reconductor Peach Bottom North to Peach Bottom South Tie #1 and #2
4. Peach Bottom 500kV Upgrade
5. Gracetone 230kV Upgrade

6. Doubs 500/230kV Upgrade
7. New 500kV line from Doubs Station to Peach Bottom Station Circuit 2
8. Conastone/Brighton 500kV Upgrade
9. Waugh Chapel/Brighton 500kV Upgrade
10. North East/Riverside 230kV Upgrades
11. Dickerson 230kV Upgrade
12. Pleasant View/Belmont 230kV Upgrade

Greenfield Transmission Line Component

Component title	New 500kV line from Doubs Station to Peach Bottom Station Circuit 1
Project description	Competitive
Point A	Doubs 500kV
Point B	Peach Bottom 500kV
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	2940.000000	3733.000000
Winter (MVA)	3618.000000	4424.000000

Conductor size and type	500-kV AC single-circuit 954 kcmil ACSR "Cardinal"
Nominal voltage	AC
Nominal voltage	500kV
Line construction type	Overhead
General route description	Each circuit is approximately 86.3 miles of greenfield transmission line

Terrain description	The Peach Bottom - Doubs Route is mostly in rural areas. Northern portion of the route is located in southern Pennsylvania with rural and farmed properties and then the route heads to the west. The route is to the north and west of Westminster and then heads in a south-westerly direction to Doubs.
Right-of-way width by segment	This project will require ROWs with widths of 150 feet.
Electrical transmission infrastructure crossings	Existing transmission line crossing between #209 and #210, Existing transmission line crossing between #214 and #215, Existing transmission line crossing between #269 and #270, Existing transmission line crossing between #301 and #302, Existing transmission line crossing between #43 and #44
Civil infrastructure/major waterway facility crossing plan	All civil infrastructure and major waterway crossings are listed on the attached crossing plan.
Environmental impacts	The Team conducted an assessment of anticipated permits associated with the proposed route and have supported the evaluation of routing and development scenarios throughout the process. The assessments included a review of Federal, state, regional, and local regulatory requirements that could potentially impact each of the individual project scenarios. The circuits and associated stations are located in Pennsylvania and Maryland. A GIS analysis was performed to route away from known public lands and no public lands will be required for this project scope. Reviews were performed using publicly available GIS data from both MD and PA sources. Upon award a detailed field based analysis will be completed. No transmission towers are located in stream crossings which will minimize stream bed impacts. NWI wetlands data, FEMA floodplain layers, and state datasets were reviewed as part of the project analysis. Known wetlands areas were used for avoidance however field analysis will confirm total proposed temporary and permanent impacts. PSE&G has been able to largely avoid permanent impacts to wetlands for overhead transmission projects and will work to shift tower foundations wherever feasible in detailed design upon confirmation of field conditions. The proposed route will intersect FEMA mapped floodplains however only the tower foundations will have assumed impacts. Field based delineations and assessments will include the above mentioned wetlands and streams delineations, habitat surveys for species identified by the records review, and cultural resource studies will be completed for the entire project (including known construction only impacts). Following field studies, data will be incorporated into the engineering model so that tower locations and applicable station location are sited to maximize avoidance of sensitive resources. Towers will be placed outside of wetlands, streams, known threatened and endangered species habitat and cultural/historical areas and floodplains to the greatest extent possible. Construction timing will be scheduled in accordance with USFWS and state agency specifications to minimize impacts to threatened and endangered habitat locations. At a minimum, approvals and permits are anticipated to be acquired from the Maryland Public Service Commission, Pennsylvania Public Utility Commission, USACE, USFWS, MDE, PADEP, MD County Soil Conservation Districts and in accordance with the standards & specifications of applicable local ordinance
Tower characteristics	H frames

Construction responsibility	Competitive
Benefits/Comments	Competitive
Component Cost Details - In Current Year $	
Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive
Materials & equipment	Competitive
Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$452,502,758.02
Component cost (in-service year)	$492,082,237.00

Transmission Line Upgrade Component

Component title	Reconductor 500kV line from Doubs station to Goose Creek station
Project description	Competitive
Impacted transmission line	Doubs-Goose Creek 500kV
Point A	Doubs 500kV station
Point B	Goose Creek 500kV station
Point C	
Terrain description	Mainly in rural areas. Existing ROWs will be used.

Existing Line Physical Characteristics

Operating voltage	500kV
Conductor size and type	N/A
Hardware plan description	Hardware is assumed to be in good shape and will be reused
Tower line characteristics	Tower structures and foundations are assumed to be in good shape and will be reused.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	500.000000	500.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	2940.000000	3733.000000
Winter (MVA)	3618.000000	4424.000000
Conductor size and type	945 kcmil ACSR "Cardinal"	
Shield wire size and type	Shield wire is assumed in good condition and will be reused	
Rebuild line length	3.2 miles	
Rebuild portion description	Approximately 3.2 miles of line will be reconductored.	
Right of way	This reconductor will use existing ROWs	
Construction responsibility	Competitive	
Benefits/Comments	Competitive	

Component Cost Details - In Current Year $

Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive

Materials & equipment	Competitive
Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$5,702,907.00
Component cost (in-service year)	$6,201,728.00

Transmission Line Upgrade Component

Component title	Reconductor Peach Bottom North to Peach Bottom South Tie #1 and #2
Project description	Competitive
Impacted transmission line	Peach Bottom North to Peach Bottom South Tie #1 and #2
Point A	Peach Bottom North
Point B	Peach Bottom South
Point C	
Terrain description	Area of less than a mile located between Peach Bottom North and Peach Bottom South.

Existing Line Physical Characteristics

Operating voltage	500kV
Conductor size and type	N/A
Hardware plan description	Existing hardware is assumed to be in good shape and will be reused
Tower line characteristics	Tower structures and foundations are assumed to be good shape and will be reused.

Proposed Line Characteristics

	Designed	**Operating**

Voltage (kV)	500.000000	500.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	2477.000000	5752.000000
Winter (MVA)	2598.000000	7463.000000
Conductor size and type	954 kcmil 54/7 ACSR "Cardinal"	
Shield wire size and type	Shield wire will be reused	
Rebuild line length	< 1 mile	
Rebuild portion description	Peach Bottom South-New breaker and a half bay. Peach Bottom North new double bus double breaker bay.	
Right of way	This reconductor will use existing ROWs	
Construction responsibility	Competitive	
Benefits/Comments	Competitive	
Component Cost Details - In Current Year $		
Engineering & design	Competitive	
Permitting / routing / siting	Competitive	
ROW / land acquisition	Competitive	
Materials & equipment	Competitive	
Construction & commissioning	Competitive	
Construction management	Competitive	
Overheads & miscellaneous costs	Competitive	
Contingency	Competitive	
Total component cost	$3,011,848.00	

Component cost (in-service year)	$3,275,288.00

Substation Upgrade Component

Component title	Peach Bottom 500kV Upgrade
Project description	Competitive
Substation name	Peach Bottom 500kV
Substation zone	PECO
Substation upgrade scope	Rebuild two (2) Peach Bottom South and two (2) Peach Bottom North main busses. Expand Peach Bottom South 500kV with one new breaker and half bay. Relocate the 500kV circuits 5012 (Peach Bottom - Conastone) & 5034 (Peach Bottom - North delta) to these new positions at Peach Bottom South 500kV Relocate the 500kV circuit 5014 (Peach Bottom - Rock Springs) to another existing position at Peach Bottom South 500kV. Connect the Peach Bottom to Doubs 500kV circuit #2 to an existing position at Peach Bottom South 500kV. Connect the Peach Bottom to Doubs 500kV circuit to an existing position at Peach Bottom South 500kV. Relocate the 500kV circuit 5014 to another existing position at Peach Bottom South 500kV. Expand Peach Bottom North 500kV with one new double bus double breaker bay. Relocate the 500kV circuit 5010 (Peach Bottom - Limerick) to this new position at Peach Bottom North 500kV.

Transformer Information

None

New equipment description	Peach Bottom South-New breaker and a half bay. Peach Bottom North new double bus double breaker bay.
Substation assumptions	This proposal assumes that all necessary outages will be available; existing AC, DC, and telecom. systems will accommodate the new equipment; geotechnical data is available; ground grid upgrades will not be needed; the existing cable trench has space for the new cables; the existing control house has space for the new relay panels; existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No station expansion is anticipated.
Construction responsibility	Competitive
Benefits/Comments	Competitive

Component Cost Details - In Current Year $

Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive
Materials & equipment	Competitive
Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$31,304,023.00
Component cost (in-service year)	$34,042,121.00

Substation Upgrade Component

Component title	Gracetone 230kV Upgrade
Project description	Competitive
Substation name	Gracetone
Substation zone	BGE
Substation upgrade scope	Expand Gracetone 230kV station with a new double bus double breaker bay, relocate the 230kV circuit 2305 to a new position

Transformer Information

None

New equipment description	New double bus double breaker bay

Substation assumptions	This proposal assumes that all necessary outages will be available; existing AC, DC, and telecom. systems will accommodate the new equipment; geotechnical data is available; the existing cable trench has space for the new cables; the existing control house has space for the new relay panels; existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No substation expansion is anticipated.
Construction responsibility	Competitive
Benefits/Comments	Competitive

Component Cost Details - In Current Year $

Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive
Materials & equipment	Competitive
Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$5,299,914.00
Component cost (in-service year)	$5,763,488.00

Substation Upgrade Component

Component title	Doubs 500/230kV Upgrade
Project description	Competitive
Substation name	Doubs
Substation zone	APS

Substation upgrade scope	Connect the new Peach Bottom to Doubs 500kV circuit #1 to an existing position at Doubs 500kV Expand Doubs 500kV station with one new double bus double breaker bay Connect the new Peach Bottom to Doubs 500kV circuit #2 to this new position at Doubs 500kV Upgrade 500/230kV transformer #01 at Doubs

Transformer Information

	Name	**Capacity (MVA)**
Transformer	01	

	High Side	**Low Side**	**Tertiary**
Voltage (kV)	500	230	

New equipment description	Upgrade 500/230kV transformer, new double bus double breaker bay.
Substation assumptions	This proposal assumes that all necessary outages will be available; existing AC, DC, and telecom. systems will accommodate the new equipment; geotechnical data is available; ground grid upgrades will not be needed; the existing cable trench has space for the new cables; the existing control house has space for the new relay panels; existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No substation expansion is anticipated.
Construction responsibility	Competitive
Benefits/Comments	Competitive

Component Cost Details - In Current Year $

Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive
Materials & equipment	Competitive
Construction & commissioning	Competitive

Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$27,389,583.00
Component cost (in-service year)	$29,785,293.00

Greenfield Transmission Line Component

Component title	New 500kV line from Doubs Station to Peach Bottom Station Circuit 2
Project description	Competitive
Point A	Doubs 500kV
Point B	Peach Bottom 500kV
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	2940.000000	3733.000000
Winter (MVA)	3618.000000	4424.000000

Conductor size and type	500-kV AC single-circuit 954 kcmil ACSR "Cardinal"
Nominal voltage	AC
Nominal voltage	500kV
Line construction type	Overhead
General route description	Each circuit is approximately 86.3 miles of greenfield transmission line
Terrain description	The Peach Bottom - Doubs Route is mostly in rural areas. Northern portion of the route is located in southern Pennsylvania with rural and farmed properties and then the route heads to the west. The route is to the north and west of Westminster and then heads in a south-westerly direction to Doubs.

Right-of-way width by segment	This project will require ROWs with widths of 150 feet
Electrical transmission infrastructure crossings	Existing transmission line crossing between #209 and #210, Existing transmission line crossing between #214 and #215, Existing transmission line crossing between #269 and #270, Existing transmission line crossing between #301 and #302, Existing transmission line crossing between #43 and #44
Civil infrastructure/major waterway facility crossing plan	All civil infrastructure and major waterway crossings are listed on the attached crossing plan.
Environmental impacts	The Team conducted an assessment of anticipated permits associated with the proposed route and have supported the evaluation of routing and development scenarios throughout the process. The assessments included a review of Federal, state, regional, and local regulatory requirements that could potentially impact each of the individual project scenarios. The circuits and associated stations are located in Pennsylvania and Maryland. A GIS analysis was performed to route away from known public lands and no public lands will be required for this project scope. Reviews were performed using publicly available GIS data from both MD and PA sources. Upon award a detailed field based analysis will be completed. No transmission towers are located in stream crossings which will minimize stream bed impacts. NWI wetlands data, FEMA floodplain layers, and state datasets were reviewed as part of the project analysis. Known wetlands areas were used for avoidance however field analysis will confirm total proposed temporary and permanent impacts. PSE&G has been able to largely avoid permanent impacts to wetlands for overhead transmission projects and will work to shift tower foundations wherever feasible in detailed design upon confirmation of field conditions. The proposed route will intersect FEMA mapped floodplains however only the tower foundations will have assumed impacts. Field based delineations and assessments will include the above mentioned wetlands and streams delineations, habitat surveys for species identified by the records review, and cultural resource studies will be completed for the entire project (including known construction only impacts). Following field studies, data will be incorporated into the engineering model so that tower locations and applicable station location are sited to maximize avoidance of sensitive resources. Towers will be placed outside of wetlands, streams, known threatened and endangered species habitat and cultural/historical areas and floodplains to the greatest extent possible. Construction timing will be scheduled in accordance with USFWS and state agency specifications to minimize impacts to threatened and endangered habitat locations. At a minimum, approvals and permits are anticipated to be acquired from the Maryland Public Service Commission, Pennsylvania Public Utility Commission, USACE, USFWS, MDE, PADEP, MD County Soil Conservation Districts and in accordance with the standards & specifications of applicable local ordinance
Tower characteristics	H frames
Construction responsibility	Competitive
Benefits/Comments	Competitive

Component Cost Details - In Current Year $

Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive
Materials & equipment	Competitive
Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$452,502,758.02
Component cost (in-service year)	$499,891,583.00

Substation Upgrade Component

Component title	Conastone/Brighton 500kV Upgrade
Project description	Competitive
Substation name	Conastone/Brighton 500kV
Substation zone	BGE/PEPCO
Substation upgrade scope	Upgrade terminal equipment of the 500kV circuit 5011 connecting Conastone & Brighton 500kV stations

Transformer Information

None

New equipment description	New terminal equipment

Substation assumptions	This proposal assumes that all necessary outages will be available; existing AC, DC, and telecom. systems will accommodate the new equipment; geotechnical data is available; ground grid upgrades will not be needed; the existing cable trench has space for the new cables; the existing control house has space for the new relay panels; existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No substation expansion is expected.
Construction responsibility	Competitive
Benefits/Comments	Competitive

Component Cost Details - In Current Year $

Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive
Materials & equipment	Competitive
Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$.00
Component cost (in-service year)	$.00

Substation Upgrade Component

Component title	Waugh Chapel/Brighton 500kV Upgrade
Project description	Competitive
Substation name	Waugh Chapel/Brighton

Substation zone	BGE/PEPCO
Substation upgrade scope	Upgrade terminal equipment of the 500kV circuit 5053 connecting Waugh Chapel & Brighton 500kV stations

Transformer Information

None

New equipment description	New terminal equipment
Substation assumptions	This proposal assumes that all necessary outages will be available; existing AC, DC, and telecom. systems will accommodate the new equipment; geotechnical data is available; ground grid upgrades will not be needed; the existing cable trench has space for the new cables; the existing control house has space for the new relay panels; existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No substation expansion is anticipated.
Construction responsibility	Competitive
Benefits/Comments	Competitive

Component Cost Details - In Current Year $

Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive
Materials & equipment	Competitive
Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$.00

Component cost (in-service year)	$.00

Substation Upgrade Component

Component title	North East/Riverside 230kV Upgrades
Project description	Competitive
Substation name	North East/Riverside 230kV
Substation zone	BGE
Substation upgrade scope	Upgrade terminal equipment of the 230kV circuit 2339 connecting North east & River side 230kV stations

Transformer Information

None

New equipment description	New terminal equipment
Substation assumptions	This proposal assumes that all necessary outages will be available; existing AC, DC, and telecom. systems will accommodate the new equipment; geotechnical data is available; ground grid upgrades will not be needed; the existing cable trench has space for the new cables; the existing control house has space for the new relay panels; existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No substation expansion is anticipated
Construction responsibility	Competitive
Benefits/Comments	Competitive

Component Cost Details - In Current Year $

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

Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$.00
Component cost (in-service year)	$.00

Substation Upgrade Component

Component title	Dickerson 230kV Upgrade
Project description	Competitive
Substation name	Dickerson 230kV station
Substation zone	PEPCO
Substation upgrade scope	Upgrade terminal equipment of the 230kV circuit connecting Dickerson & Aqueduct 230kV stations Upgrade terminal equipment of the 230kV circuit connecting Dickerson & Doubs 230kV stations

Transformer Information

None

New equipment description	New terminal equipment
Substation assumptions	This proposal assumes that all necessary outages will be available; existing AC, DC, and telecom. systems will accommodate the new equipment; geotechnical data is available; ground grid upgrades will not be needed; the existing cable trench has space for the new cables; the existing control house has space for the new relay panels; existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No substation expansion is anticipated.
Construction responsibility	Competitive
Benefits/Comments	Competitive

Component Cost Details - In Current Year $

Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive
Materials & equipment	Competitive
Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$.00
Component cost (in-service year)	$.00

Substation Upgrade Component

Component title	Pleasant View/Belmont 230kV Upgrade
Project description	Competitive
Substation name	Pleasant View/Belmont
Substation zone	DVP
Substation upgrade scope	Upgrade terminal equipment of the 230kV circuit connecting Pleasant View & Belmont 230kV stations

Transformer Information

None

New equipment description	New terminal equipment

Substation assumptions	This proposal assumes that all necessary outages will be available; existing AC, DC, and telecom. systems will accommodate the new equipment; geotechnical data is available; ground grid upgrades will not be needed; the existing cable trench has space for the new cables; the existing control house has space for the new relay panels; existing yard station equipment does not need to be replaced except for the associated line relays and existing line interchange metering exists and does not need to be replaced.
Real-estate description	No substation expansion anticipated.
Construction responsibility	Competitive
Benefits/Comments	Competitive

Component Cost Details - In Current Year $

Engineering & design	Competitive
Permitting / routing / siting	Competitive
ROW / land acquisition	Competitive
Materials & equipment	Competitive
Construction & commissioning	Competitive
Construction management	Competitive
Overheads & miscellaneous costs	Competitive
Contingency	Competitive
Total component cost	$.00
Component cost (in-service year)	$.00

Congestion Drivers

None

Existing Flowgates

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W123	204544	27LINCOLN	204538	27STRABAN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S177	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W38	213869	PCHBTMTP	214087	COOPER2	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S169	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S177	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S119	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included
2022W3-GD-S203	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W41	204544	27LINCOLN	204538	27STRABAN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S281	200065	PCHBTM2S	200064	PCHBTM1S	Z1	500	230	Summer Gen Deliv	Included
2022W3-GD-W126	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Winter Gen Deliv	Included
2022W3-GD-S125	204529	27GERMANTN	204530	27GERMANTN	1	115/138	227	Summer Gen Deliv	Included
2022W3-GD-S169	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W122	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-S779	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-N1-ST216	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST217	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-W138	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S165	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Summer Gen Deliv	Included
2022W3-GD-W29	235463	01TANEY	235450	01CARROL	1	138	201	Winter Gen Deliv	Included
2022W3-N1-ST209	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST245	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1	Included
2022W3-GD-W31	204550	27ORRTANNA	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S276	204514	27TMI	204502	27JACKSON	1	230	227	Summer Gen Deliv	Included
2022W3-GD-S176	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST211	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-ST212	221090	GLENARM2	221089	WINDYED1	1	115/115	232/232	Summer N-1 Thermal	Included
2022W3-GD-W814	204544	27LINCOLN	204538	27STRABAN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S135	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S177	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W949	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W50	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-S84	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included
2022W3-GD-S85	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Summer Gen Deliv	Included
2022W3-GD-S139	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-W132	200065	PCHBTM2S	200064	PCHBTM1S	Z2	500	230	Winter Gen Deliv	Included
2022W3-GD-S177	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S127	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S780	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-W44	204550	27ORRTANNA	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S169	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-N1-ST22	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S166	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S166	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S178	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-W831	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S147	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included
2022W3-GD-W832	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S167	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S170	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S326	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S152	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-S155	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S95	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included
2022W3-GD-W58	204538	27STRABAN	204529	27GERMANTN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S203	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-S96	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST240	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-GD-S312	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-N1-ST109	221092	FIVE.FOR	221096	ROCKRGE1	1	115/115	232/232	Summer N-1 Thermal	Included
2022W3-GD-S170	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S166	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included
2022W3-N1-ST231	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Summer N-1 Thermal	Included
2022W3-GD-S166	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-N1-ST232	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST233	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST234	208071	SAHA34TP	208069	PPL-BGE TIE	1	230/230	229/229	Summer N-1 Thermal	Included
2022W3-N1-ST236	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-ST237	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-GD-S179	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-W122	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Winter Gen Deliv	Included
2022W3-GD-S164	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S179	220962	NWEST311	220972	GRANITE1	1	230	232	Summer Gen Deliv	Included
2022W3-GD-S171	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W108	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-S171	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W105	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-W849	204538	27STRABAN	204529	27GERMANTN	1	115	227	Winter Gen Deliv	Included
2022W3-N1-ST129	221092	FIVE.FOR	221096	ROCKRGE1	1	115/115	232/232	Summer N-1 Thermal	Included
2022W3-GD-S167	242563	05BOXWD	242603	05CLIFFR	1	138	205	Summer Gen Deliv	Included
2022W3-N1-ST9	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S171	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S171	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W841	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W112	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Winter Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W842	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W128	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-S179	204515	27YORKANA	208048	OTCR	1	230	227/229	Summer Gen Deliv	Included
2022W3-N1-ST7	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST128	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S170	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-N1-ST241	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-GD-W115	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S167	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S167	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S103	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S104	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included
2022W3-GD-S204	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-S340	204515	27YORKANA	208048	OTCR	1	230	227/229	Summer Gen Deliv	Included
2022W3-GD-S180	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-W114	235463	01TANEY	235450	01CARROL	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S180	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-S205	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W112	235463	01TANEY	235450	01CARROL	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S172	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S172	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-N1-ST19	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST20	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Summer N-1 Thermal	Included
2022W3-GD-S171	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S171	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-N1-ST18	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT142	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Winter N-1 Thermal	Included
2022W3-N1-ST12	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST13	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST14	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1728	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1807	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-S1728	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1727	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1902	242563	05BOXWD	242603	05CLIFFR	1	138	205	Summer Gen Deliv	Included
2022W3-GD-S2052	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1724	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S3462	200065	PCHBTM2S	200066	PCHBTM1N	2	500	230	Summer Gen Deliv	Included
2022W3-GD-S1723	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST21	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Summer N-1 Thermal	Included
2022W3-N1-ST22	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST24	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST25	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1732	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S2012	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S2022	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-N1-ST39	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST41	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST42	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1729	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-WT43	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD_L81	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-N1-WT44	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST35	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST156	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT45	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST37	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST50	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST51	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT62	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-N1-ST53	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1734	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-WT53	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST168	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-WT58	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-WT60	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-LD-ST11	200004	CNASTONE	200064	PCHBTM1S	1	500/500	232/230	Load Deliverability	Included
2022W3-LD-ST13	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-N1-ST59	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-LD-ST12	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-N1-WT72	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W850	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-N1-ST63	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-W851	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Winter Gen Deliv	Included
2022W3-N1-LLT22	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT21	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT24	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT23	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-WT64	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W977	204515	27YORKANA	208048	OTCR	1	230	227/229	Winter Gen Deliv	Included
2022W3-N1-WT65	204550	27ORRTANNA	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-ST178	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-ST58	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST71	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W100	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Winter Gen Deliv	Included
2022W3-N1-ST72	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-W73	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W74	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-N1-ST74	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-W987	200065	PCHBTM2S	200064	PCHBTM1S	Z2	500	230	Winter Gen Deliv	Included
2022W3-GD-W63	204514	27TMI	204502	27JACKSON	1	230	227	Winter Gen Deliv	Included
2022W3-GD-W64	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Winter Gen Deliv	Included
2022W3-GD-W65	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-W68	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W995	200065	PCHBTM2S	200064	PCHBTM1S	Z1	500	230	Winter Gen Deliv	Included
2022W3-GD-W67	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W78	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-W102	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-N1-WT86	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-WT88	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-WT102	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W86	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-W88	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-N1-WT108	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W887	213869	PCHBTMTP	214087	COOPER2	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W81	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-W83	204515	27YORKANA	208048	OTCR	1	230	227/229	Winter Gen Deliv	Included
2022W3-GD-W883	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-W85	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-W93	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included
2022W3-N1-WT182	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-S206	221090	GLENARM2	221089	WINDYED1	1	115	232	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S1741	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-N1-WT1920	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Winter N-1 Thermal	Included
2022W3-GD-W95	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-W138	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W891	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-W892	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included
2022W3-GD-W1240	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-LD-ST15	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-LD-ST14	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included
2022W3-LD-ST17	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-LD-ST16	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-GD-S1643	204550	27ORRTANNA	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST184	208071	SAHA34TP	208069	PPL-BGE TIE	1	230/230	229/229	Summer N-1 Thermal	Included
2022W3-GD-S1644	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W96	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-N1-WT1921	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W900	213869	PCHBTMTP	214087	COOPER2	1	230	230	Winter Gen Deliv	Included
2022W3-N1-WT1922	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W97	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S13	235484	01MESSCK	235490	01MORGAN	1	138	201	Summer Gen Deliv	Included
2022W3-N1-WT1923	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-S14	235484	01MESSCK	235490	01MORGAN	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1642	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S1754	204529	27GERMANTN	204530	27GERMANTN	1	115/138	227	Summer Gen Deliv	Included
2022W3-GD-S1641	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S15	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W12	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-S1752	208395	FARO FF	208393	FARO DC TIE	2	69/115	229	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-W108	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S247	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S105	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Summer Gen Deliv	Included
2022W3-GD-W15	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W16	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W91	213869	PCHBTMTP	214087	COOPER2	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S249	235504	01RIDGLY	235484	01MESSCK	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S167	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S252	235504	01RIDGLY	235484	01MESSCK	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W313	235504	01RIDGLY	235484	01MESSCK	1	138	201	Winter Gen Deliv	Included
2022W3-GD-W314	235504	01RIDGLY	235484	01MESSCK	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S260	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-N1-ST194	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST196	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-LD-ST19	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-GD-S206	221090	GLENARM2	221089	WINDYED1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-W906	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included
2022W3-LD-ST18	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-GD-S175	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-S164	204550	27ORRTANNA	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-LD-ST21	200003	BRIGHTON	200004	CNASTONE	1	500/500	233/232	Load Deliverability	Included
2022W3-GD-S23	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S175	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-LD-ST20	208047	PPL-BGE TIE	220963	CONASTON	1	230/230	229/232	Load Deliverability	Included
2022W3-GD-S175	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Summer Gen Deliv	Included
2022W3-GD-S164	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST189	204538	27STRABAN	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S176	208395	FARO FF	208393	FARO DC TIE	1	69/115	229	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-LD-ST22	208048	OTCR	208047	PPL-BGE TIE	1	230/230	229/229	Load Deliverability	Included
2022W3-GD-W912	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S81N	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-N1-WT23	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Winter N-1 Thermal	Included
2022W3-GD-S1182	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1682	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-W116	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-S1682	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S1232	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-W920	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-N1-ST244	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1	Included
2022W3-GD-S1652	213844	NOTTNGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included
2022W3-GD-W114	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-N1-ST205	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST84	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1652	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W806N	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Winter Gen Deliv	Included
2022W3-N1-WT20	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Winter N-1 Thermal	Included
2022W3-GD-S1762	242563	05BOXWD	242603	05CLIFFR	1	138	205	Summer Gen Deliv	Included
2022W3-GD-S1682	204514	27TMI	204502	27JACKSON	1	230	227	Summer Gen Deliv	Included
2022W3-GD-S47	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S76N	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S262	235180	01FAYETT	235271	01WWAYNE	1	138	201	Summer Gen Deliv	Included
2022W3-N1-ST199	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST200	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-GD-S1682	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1652	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1652	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-ST202	213846	NOTTREAC	213869	PCHBTMTP	1	230/230	230/230	Summer N-1 Thermal	Included
2022W3-N1-ST203	213844	NOTTNGHM	213846	NOTTREAC	1	230/230	230/230	Summer N-1 Thermal	Included

New Flowgates

Competitive

Financial Information

Capital spend start date	01/2024
Construction start date	11/2025
Project Duration (In Months)	53

Cost Containment Commitment

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

Components covered by cost containment

1. New 500kV line from Doubs Station to Peach Bottom Station Circuit 1 - PSEG
2. New 500kV line from Doubs Station to Peach Bottom Station Circuit 2 - PSEG

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	No
AFUDC	No
Escalation	Yes
Additional Information	Competitive
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
Is the proposer offering a Debt to Equity Ratio cap?	Competitive
Additional cost containment measures not covered above	Competitive

Additional Comments

None