

Proposal G - Peach Bottom-New Brandon Shores 500kV; Peach Bottom-Doubs 500kV

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	741
Project title	Proposal G - Peach Bottom-New Brandon Shores 500kV; Peach Bottom-Doubs 500kV
Project description	500kV Greenfield line from Peach Bottom Station to Brandon Shores Station 500kV Greenfield line from Doubs Station to Peach Bottom Station Reconductor 230kV Line from Brandon Shores Station to Waugh Chapel 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 Peach Bottom station to Brandon Shores station
2. New 500kV line from Doubs Station to Peach Bottom Station
3. Reconductor 230kV line from Brandon Shores to Waugh Chapel
4. Reconductor Peach Bottom North to Peach Bottom South Tie #1 and #2
5. New Brandon Shores 500kV station

6. Peach Bottom 500kV Upgrade
7. Doubs 500/230kV Upgrade
8. Brandon Shores 230kV Upgrade
9. Conastone/Brighton 500kV Upgrade
10. Pleasant View/Belmont 230kV Upgrade

Greenfield Transmission Line Component

Component title	New 500kV line from Peach Bottom station to Brandon Shores station	
Project description	Competitive	
Point A	Peach Bottom 500kV	
Point B	Brandon Shores	
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	Approximately 56 miles between the Peach Bottom 500kV station and the new Brandon Shores 500kV station	
Terrain description	Peach Bottom to Brandon Shores route originates in Southern PA and then heads south and is routed to the east side of Baltimore. The proposed route mostly follows existing ROW.	
Right-of-way width by segment	This project will require ROWs with widths of 80-85 feet in residential areas, 125-130 feet in farmland, 150 feet in farmland, and 170 feet at the Patapsco River	

Electrical transmission infrastructure crossings	Existing transmission line crossing between #138 and #139, Existing transmission line crossing between #144 and #145, Existing transmission line crossing between #148 and #149, Existing transmission line crossing between #151 and #152, Existing transmission line crossing between #154 and #155, Existing transmission line crossing between #160 and #161, Existing transmission line crossing between #189 and #190, Multiple transmission line crossings between #248 and #249
Civil infrastructure/major waterway facility crossing plan	All civil infrastructure and major waterway crossings can be found in the attached crossing plan
Environmental impacts	<p>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</p>
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	\$433,989,612.81
Component cost (in-service year)	\$471,949,785.00

Greenfield Transmission Line Component

Component title	New 500kV line from Doubs Station to Peach Bottom Station	
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	Approximately 87 miles between the Doubs 500kV station and the Peach Bottom 500kV station
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 80-85 feet in residential areas, 125-130 feet in farmland, 150 feet in farmland, and 170 feet at the Patapsco River
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 #43 and #44
Civil infrastructure/major waterway facility crossing plan	All civil infrastructure and major waterway crossings can be found in 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	\$464,476,244.69
Component cost (in-service year)	\$513,119,005.00

Transmission Line Upgrade Component

Component title	Reconductor 230kV line from Brandon Shores to Waugh Chapel
Project description	Competitive
Impacted transmission line	Brandon Shores - Waugh Chapel 230kV
Point A	Brandon Shores 230kV
Point B	Waugh Chapel 230kV
Point C	
Terrain description	Mainly rural areas, existing ROWs will be used

Existing Line Physical Characteristics

Operating voltage	230kV
Conductor size and type	Existing conductors will be reused
Hardware plan description	Existing hardware will be reused
Tower line characteristics	Existing transmission structures and foundations will be reused and assumed in good conditions.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	230.000000	230.000000

	Normal ratings	Emergency ratings
Summer (MVA)	1000.000000	1450.000000
Winter (MVA)	1200.000000	1690.000000
Conductor size and type	2627.3 kcmil Santee/ACSS/TW	
Shield wire size and type	Shield wire will be reused	
Rebuild line length	14 miles	
Rebuild portion description	Approximately 14 miles will be reconducted.	
Right of way	This reconductor would 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	\$20,791,848.00	
Component cost (in-service year)	\$22,610,466.00	

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 1 mile located between Peach Bottom North & Peach Bottom South	
Existing Line Physical Characteristics		
Operating voltage	500kV	
Conductor size and type	N/A	
Hardware plan description	Existing hardware is assumed in good condition and will be reused.	
Tower line characteristics	Existing structures and foundations will be reused and are assumed to be in good condition.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	2477.000000	5692.000000
Winter (MVA)	2598.000000	7374.000000
Conductor size and type	954 kcmil ACSR "Cardinal"	
Shield wire size and type	Existing shield wire will be reused	

Rebuild line length	<1 mile
Rebuild portion description	A less than 1 mile span between Peach Bottom North and Peach Bottom South will be reconducted.
Right of way	This reconductor would 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

Greenfield Substation Component

Component title	New Brandon Shores 500kV station
Project description	Competitive
Substation name	Brandon Shores 500kV
Substation description	Build new 500kV four (4) breaker ring bus and two (2) new 500/230kV transformers.

Nominal voltage AC
 Nominal voltage 500kV

Transformer Information

	Name	Capacity (MVA)	
Transformer	01		
	High Side	Low Side	Tertiary
Voltage (kV)	500	230	

	Name	Capacity (MVA)	
Transformer	02		
	High Side	Low Side	Tertiary
Voltage (kV)	500	230	

Major equipment description Two (2) 500/230kV transformer, 4 breaker ring bus

	Normal ratings	Emergency ratings
Summer (MVA)	1500.000000	1875.000000
Winter (MVA)	1875.000000	2025.000000

Environmental assessment	<p>A GIS analysis was performed to locate known public lands and no public lands will be required for this project scope. Environmental reviews were performed using publicly available GIS data from Maryland sources. Upon award a detailed field based analysis will be completed. NWI wetlands data, FEMA floodplain layers, and state datasets were reviewed as part of the project analysis. Field based delineations and assessments will include 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 temporary –construction based impacts). Following field studies, data will be incorporated into the engineering model so that the station development maximizes avoidance of sensitive resources. Development 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, USACE, USFWS, MDE, MD County Soil Conservation District and in accordance with the standards and specifications of applicable local ordinances.</p>
Outreach plan	<p>PSE&G will coordinate all outreach, real estate-related requests, and efforts to identify environmental and non-environmental conditions affecting the properties along the proposed Project route. Working collaboratively with our internal Outreach Team, PSE&G will coordinate stakeholder engagement and public outreach with land acquisition planning. This level of collaboration will help to ensure proactive and cohesive stakeholder communications in order to better serve landowners and impacted individuals and entities. PSE&G contemplates the need for access roads and areas, as part of any lands to be acquired</p>
Land acquisition plan	<p>PSEG has identified several properties that are suitable for this proposed solution. The Project Team has initiated contact with the property owners and will continue to work to acquire site control in the event of award. The Project Team will work with impacted stakeholders, municipalities, and local authorities to obtain the necessary property rights to construct and maintain its facilities. While this solution is located outside of PSE&G territory, PSE&G is committed to a transparent, timely, and efficient land rights acquisition process for any site control required. PSE&G intends to utilize the same land acquisition professionals from start to finish, ensuring landowners have the same team assigned to their negotiations throughout the process.</p>
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	\$90,050,879.00
Component cost (in-service year)	\$97,927,443.00

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 Brandon Shores 500kV circuit 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 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 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	\$31,746,566.00
Component cost (in-service year)	\$34,523,372.00
Substation Upgrade Component	
Component title	Doubs 500/230kV Upgrade
Project description	Competitive
Substation name	Doubs

Substation zone	APS
Substation upgrade scope	Upgrade 500/230kV transformer #01 at Doubs station Connect the new Peach Bottom to Doubs 500kV circuit to an existing position at Doubs 500kV

Transformer Information

	Name	Capacity (MVA)	
Transformer	01		
	High Side	Low Side	Tertiary
Voltage (kV)	230	115	
New equipment description	One (1) new 500/230kV transformer		
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	\$17,942,609.00
Component cost (in-service year)	\$19,512,012.00

Substation Upgrade Component

Component title	Brandon Shores 230kV Upgrade
Project description	Competitive
Substation name	Brandon Shores
Substation zone	BGE
Substation upgrade scope	Expand Brandon Shores 230kV with one (1) new breaker and a half bay

Transformer Information

None	
New equipment description	New breaker and a half 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
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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	\$3,311,101.00
Component cost (in-service year)	\$3,600,715.00

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 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 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

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-W122	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-W4	204544	27LINCOLN	204538	27STRABAN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-W122	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Winter Gen Deliv	Included
2022W3-GD-S281	200065	PCHBTM2S	200064	PCHBTM1S	Z1	500	230	Summer 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-ST21	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST21	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-ST20	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST24	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1	Included
2022W3-GD-S276	204514	27TMI	204502	27JACKSON	1	230	227	Summer Gen Deliv	Included
2022W3-GD-S165	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S176	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST21	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-GD-S166	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST21	221090	GLENARM2	221089	WINDYED1	1	115/115	232/232	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-S1662	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W814	204544	27LINCOLN	204538	27STRABAN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S1352	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included
2022W3-GD-S1778	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W949	213844	NOTTINGHM	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	NOTTINGHM	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-S1392	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-S1778	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S1272	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-N1-ST219	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1695	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-N1-ST220	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1662	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1662	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1782	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-W831	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-S1472	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-S1671	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S1707	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S3262	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S1522	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Summer Gen Deliv	Included
2022W3-GD-S1552	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S95	213844	NOTTINGHM	213846	NOTTREAC	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-W58	204538	27STRABAN	204529	27GERMANTN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-S2038	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
2022W3-N1-ST240	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-GD-S312	2208047	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-S1702	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1668	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer Gen Deliv	Included
2022W3-N1-ST232	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Summer N-1 Thermal	Included
2022W3-GD-S1669	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-ST232	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST232	208071	SAHA34TP	208069	PPL-BGE TIE	1	230/230	229/229	Summer N-1 Thermal	Included
2022W3-N1-ST232	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-ST232	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-ST116	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Summer N-1 Thermal	Included
2022W3-GD-S1792	221092	FIVE.FOR	221096	ROCKRGE1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-W1210	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Winter Gen Deliv	Included
2022W3-GD-S1642	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S1792	220962	NWEST311	220972	GRANITE1	1	230	232	Summer Gen Deliv	Included
2022W3-GD-S1712	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W1087	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-S1712	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W1057	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Winter Gen Deliv	Included
2022W3-GD-S1797	313746	6SOJOURNER	313822	6RUNWAY	1	230	345	Summer 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-S1672	242563	05BOXWD	242603	05CLIFFR	1	138	205	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-W10	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-W99	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-N1-ST9	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S17	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-GD-S17	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W84	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W1	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Winter Gen Deliv	Included
2022W3-GD-W84	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Winter Gen Deliv	Included
2022W3-GD-W12	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-S17	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-ST12	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST8	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S17	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Summer Gen Deliv	Included
2022W3-N1-ST24	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-GD-S97	207922	BRIS	204515	27YORKANA	1	230	227/229	Summer Gen Deliv	Included
2022W3-GD-W1	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	NOTTINGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included
2022W3-N1-ST12	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST6	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	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-W1	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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-GD-S2052	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-W1123	235463	01TANEY	235450	01CARROL	1	138	201	Winter Gen Deliv	Included
2022W3-GD-S1722	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-GD-S1722	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-N1-ST132	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Summer N-1 Thermal	Included
2022W3-N1-ST142	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Summer N-1 Thermal	Included
2022W3-N1-ST20	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Summer N-1 Thermal	Included
2022W3-GD-S1717	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-GD-S1718	235463	01TANEY	235450	01CARROL	1	138	201	Summer Gen Deliv	Included
2022W3-N1-WT142	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Winter N-1 Thermal	Included
2022W3-N1-ST132	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Summer N-1 Thermal	Included
2022W3-GD-S1722	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-S1722	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-GD-S1722	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-S1722	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-S1722	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-WT152	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Winter 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

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2022W3-N1-ST40	204544	27LINCOLN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S172	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD_L81	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load Gen Deliv	Included
2022W3-N1-ST152	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST35	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-ST152	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST37	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Summer N-1 Thermal	Included
2022W3-N1-WT162	207922	BRIS	204515	27YORKANA	1	230/230	229/227	Winter 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-ST52	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer 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-S173	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-ST162	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST162	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-ST62	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer 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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2022W3-N1-LLT21	242563	05BOXWD	242603	05CLIFFR	1	138/138	205/205	Light Load N-1	Included
2022W3-N1-LLT22	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-GD-W97	204515	27YORKANA	208048	OTCR	1	230	227/229	Winter Gen Deliv	Included
2022W3-N1-ST56	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST172	208069	PPL-BGE TIE	220964	GRACETON	1	230/230	229/232	Summer N-1 Thermal	Included
2022W3-N1-ST57	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	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-ST69	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST70	205912	AD1-020 TAP	204544	27LINCOLN	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
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-N1-ST73	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	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-W63	204514	27TMI	204502	27JACKSON	1	230	227	Winter Gen Deliv	Included
2022W3-GD-W98	200065	PCHBTM2S	200064	PCHBTM1S	Z2	500	230	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-W99	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-W101	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-S181	235596	01VASC T	235173	01EDGEWT	1	138	201	Summer Gen Deliv	Included
2022W3-N1-WT86	204539	27HUNTRSTN	205912	AD1-020 TAP	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-WT8	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-N1-WT10	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-WT10	204538	27STRABAN	204529	27GERMANTN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W88	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-W88	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-WT18	235463	01TANEY	235450	01CARROL	1	138/138	201/201	Winter N-1 Thermal	Included
2022W3-GD-S20	221090	GLENARM2	221089	WINDYED1	1	115	232	Summer Gen Deliv	Included
2022W3-GD-S17	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Summer Gen Deliv	Included
2022W3-N1-WT19	204530	27GERMANTN	235463	01TANEY	1	138/138	227/201	Winter N-1 Thermal	Included
2022W3-GD-W89	207922	BRIS	204515	27YORKANA	1	230	227/229	Winter Gen Deliv	Included
2022W3-GD-W95	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Winter Gen Deliv	Included
2022W3-GD-S8	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S16	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W13	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-W89	208071	SAHA34TP	208069	PPL-BGE TIE	1	230	229	Winter Gen Deliv	Included
2022W3-GD-W89	208069	PPL-BGE TIE	220964	GRACETON	1	230	229/232	Winter Gen Deliv	Included
2022W3-GD-W12	200512	26LEWISTWN	200519	26REED TAP	1	115	226	Winter Gen Deliv	Included
2022W3-GD-W3	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-N1-WT3	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W74	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-N1-WT4	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-LD-ST15	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Load Deliverability	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
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-GD-W903	207922	BRIS	204515	27YORKANA	1	230	227/229	Winter Gen Deliv	Included
2022W3-LD-ST16	200004	CNASTONE	200003	BRIGHTON	1	500/500	232/233	Load Deliverability	Included
2022W3-N1-ST18	208071	SAHA34TP	208069	PPL-BGE TIE	1	230/230	229/229	Summer N-1 Thermal	Included
2022W3-GD-S16	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-WT19	204544	27LINCOLN	204538	27STRABAN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-W902	213869	PCHBTMTP	214087	COOPER2	1	230	230	Winter Gen Deliv	Included
2022W3-N1-WT19	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-N1-WT19	2045912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Winter N-1 Thermal	Included
2022W3-GD-S13	235484	01MESSCK	235490	01MORGAN	1	138	201	Summer Gen Deliv	Included
2022W3-N1-WT19	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-S16	204530	27GERMANTN	235463	01TANEY	1	138	227/201	Summer Gen Deliv	Included
2022W3-GD-S17	204529	27GERMANTN	204530	27GERMANTN	1	115/138	227	Summer Gen Deliv	Included
2022W3-GD-S16	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-S17	208395	FARO FF	208393	FARO DC TIE	2	69/115	229	Summer Gen Deliv	Included
2022W3-GD-W10	200004	CNASTONE	200003	BRIGHTON	1	500	233/232	Winter Gen Deliv	Included
2022W3-GD-S24	208047	PPL-BGE TIE	220963	CONASTON	1	230	229/232	Summer Gen Deliv	Included
2022W3-GD-S10	213846	NOTTREAC	213869	PCHBTMTP	1	230	230	Summer Gen Deliv	Included
2022W3-GD-W15	213844	NOTTINGHM	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-S11	207922	BRIS	204515	27YORKANA	1	230	227/229	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-S1672	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-GD-W19	207922	BRIS	204515	27YORKANA	1	230	227/229	Winter Gen Deliv	Included
2022W3-GD-S2602	208048	OTCR	208047	PPL-BGE TIE	1	230	229	Summer Gen Deliv	Included
2022W3-N1-ST192	200512	26LEWISTWN	200519	26REED TAP	1	115/115	226/226	Summer N-1 Thermal	Included
2022W3-N1-ST192	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-N1-ST192	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-S2062	21090	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-S1752	200512	26LEWISTWN	200519	26REED TAP	1	115	226	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-S1752	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-S1752	200532	26ROXBURY	235188	01GREENE	1	138	226/201	Summer Gen Deliv	Included
2022W3-GD-S1642	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST182	204538	27STRABAN	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1762	208395	FARO FF	208393	FARO DC TIE	1	69/115	229	Summer Gen Deliv	Included
2022W3-LD-ST22	208048	OTCR	208047	PPL-BGE TIE	1	230/230	229/229	Load Deliverability	Included
2022W3-N1-ST193	313746	6SOJOURNER	313822	6RUNWAY	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W91	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-W11	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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
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-ST2440	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115/115	227/227	Summer N-1	Included
2022W3-GD-S1650	213844	NOTTINGHM	213846	NOTTREAC	1	230	230	Summer Gen Deliv	Included
2022W3-GD-W28	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Winter Gen Deliv	Included
2022W3-GD-W17	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-S1655	204539	27HUNTRSTN	205912	AD1-020 TAP	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST208	313746	6SOJOURNER	313822	6RUNWAY	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W806	220047	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-S1649	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	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-S762	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-S422	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1683	204544	27LINCOLN	204538	27STRABAN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1650	204538	27STRABAN	204529	27GERMANTN	1	115	227	Summer Gen Deliv	Included
2022W3-GD-S1651	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Summer Gen Deliv	Included
2022W3-N1-ST202	213846	NOTTREAC	213869	PCHBTMTP	1	230/230	230/230	Summer N-1 Thermal	Included
2022W3-N1-ST203	213844	NOTTINGHM	213846	NOTTREAC	1	230/230	230/230	Summer N-1 Thermal	Included
2022W3-N1-ST82	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	Summer N-1 Thermal	Included
2022W3-GD-S1652	207922	BRIS	204515	27YORKANA	1	230	227/229	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-S1652	205912	AD1-020 TAP	204544	27LINCOLN	1	115	227	Summer Gen Deliv	Included
2022W3-N1-ST204	205912	AD1-020 TAP	204544	27LINCOLN	1	115/115	227/227	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 Peach Bottom station to Brandon Shores station - PSEG
2. New 500kV line from Doubs Station to Peach Bottom Station - 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