

Locks Substation 230/115 kV Transformer Upgrade

General Information

Proposing entity name	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Company proposal ID	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
PJM Proposal ID	731
Project title	Locks Substation 230/115 kV Transformer Upgrade
Project description	Locks 230/115 kV transformer TX #7 gets overloaded under Gen Deliv in RTEP 2027 HG case. Therefore, this project replaces TX #7 with new three phase transformers that have a higher rating of 224 MVA. Lead lines at the 115 kV level will be upgraded to 2000 A.
Email	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.
Project in-service date	12/2027
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Project Components

1. Locks Substation

Substation Upgrade Component

Component title	Locks Substation
Project description	The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Substation name	Locks
Substation zone	357
Substation upgrade scope	<p>SUBSTATION FACILITIES TO BE REMOVED: 1. One (1), 230/115 kV, 168 MVA Three Phase Transformers 2. Foundations, Steel Structures, and conductors as required. 3. Two (2) 115kV steel 3-pole deadend structures inside Locks Substation. 4. One (1) terminal concrete H-frame deadend structure inside Locks Substation. 5. Approximately 500 ft of 115kV 3-phase 740 8 MCM AL conductor inside Locks Substation. SUBSTATION FACILITIES TO BE MODIFIED: 1. Install three (3) 115kV strain crossing insulators (31.350) on one side of the existing A-frame backbone inside Locks substation. PERMANENT FACILITIES TO BE INSTALLED: 1. One (1), 230/115 kV, 224 MVA Three Phase Transformers 2. Foundations and Steel Structures as required. 3. Conductor, connectors, conduit, control cable, and grounding material as necessary per engineering standards. 4. Two (2) engineered 115kV SC DDE 3-pole structures (11.453) with two sets of crossing insulators (31.350). 5. One (1) engineered 115kV SC DDE 3-pole structure (11.453) with one set of crossing insulators (31.350). 6. Approximately 500 ft of 3-phase 1-1351.5 (45/7) 140°C MOT “Dipper” Conductor. RELAY MATERIALS TO BE INSTALLED: 1. One (1), SPR Relay Auxiliary Package 2. One (1), 4510 - SEL-2411 Equipment Annunciator (for Transformers) 3. One (1), 7614 – Transformer Critical Low Oil Assembly 4. One (1), 4526 – Transmission Transformer Fiber MU Box</p>

Transformer Information

	Name	Capacity (MVA)	
Transformer	TX #7	224	
	High Side	Low Side	Tertiary
Voltage (kV)	230	115	
New equipment description	<p>1. One (1), 230/115kV, 224MVA Transformer. 2. One (1), 115 kV 2000A Center Break switch. 3. One (1), SPR Relay Auxiliary Package 4. One (1), 4510 - SEL-2411 Equipment Annunciator (for Transformers) 5. One (1), 7614 – Transformer Critical Low Oil Assembly 6. One (1), 4526 – Transmission Transformer Fiber MU Box 7. Two (2) engineered 115kV SC DDE 3-pole structures (11.453) with two sets of crossing insulators (31.350). 8. One (1) engineered 115kV SC DDE 3-pole structure (11.453) with one set of crossing insulators (31.350).</p>		
Substation assumptions	<p>1. The scope of work depicted on the drawings assumes that there is no overlap with other designs and construction activities, except if mentioned in this Project Summary. 2. Relay Settings and protection & control design will be revised as part of the SPE scope of work. 3. No new ROW will need to be purchased for the transmission scope as the new structures are within the substation property.</p>		

Real-estate description

The substation will not be expanded for this project.

Construction responsibility

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Benefits/Comments

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Component Cost Details - In Current Year \$

Engineering & design

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Permitting / routing / siting

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

ROW / land acquisition

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Materials & equipment

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Construction & commissioning

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Construction management

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Overheads & miscellaneous costs

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Contingency

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Total component cost

\$7,140,500.90

Component cost (in-service year)

\$7,647,476.46

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-W124	313399	6MARS	313805	6SHELLHORN1	1	230	345	Winter Gen Deliv	Included
2022W3-N1-ST25	314004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Summer N-1	Included
2022W3-N1-ST25	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Summer N-1	Included
2022W3-GD-S169	314006	6ASHBURA	314010	6BEAMEAD	1	230	345	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-ST252	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Summer N-1	Included
2022W3-GD-W123	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W42	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W43	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-N1-ST98	314009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1658	314084	6SULLY	314035	6DISCOVR	1	230	345	Summer Gen Deliv	Included
2022W3-N1-ST89	314009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST91	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST215	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1697	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W1387	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD_118	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Light Load Gen Deliv	Included
2022W3-GD-W49	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W1388	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W822	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD_L3103	314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD-S1700	313393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W823	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD_117	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Light Load Gen Deliv	Included
2022W3-GD-S2019	314041	6GLEBE	314185	6RADNOR	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1703	313393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S1779	313393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S1780	314901	8BATH CO	314991	8VALLEY SC	1	500	345	Summer Gen Deliv	Included
2022W3-GD-W1367	314041	6GLEBE	314185	6RADNOR	1	230	345	Winter Gen Deliv	Included
2022W3-GD-W133	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-N1-ST107	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST108	313752	6TAKEOFF	313774	6LINC PRK	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST99	313399	6MARS	313746	6SOJOURNER	1	230/230	345/345	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-S1698	14290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1663	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-S1663	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-S83	314041	6GLEBE	314185	6RADNOR	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1783	14039	6GALLOWS A	314052	6IDYLWOD	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1703	14939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S1705	14072	6PL VIEW	314004	6ASHBURN	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1787	14925	8PL VIEW	314072	6PL VIEW	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S1706	14009	6BRADOCK	314052	6IDYLWOD	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S1788	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-W57	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-N1-ST233	14290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD_L3593	14041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD_L2763	14041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD-W823	14041	6GLEBE	314185	6RADNOR	1	230	345	Winter Gen Deliv	Included
2022W3-GD-S1782	14991	8VALLEY SC	314926	8VALLEY	1	500	345	Summer Gen Deliv	Included
2022W3-N1-ST233	14290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1703	14035	6DISCOVR	313774	6LINC PRK	1	230	345	Summer Gen Deliv	Included
2022W3-N1-ST110	13399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S88	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-ST113	14006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S89	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-ST112	14009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST233	14004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST114	14039	6GALLOWS A	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST115	14068	6OX	314039	6GALLOWS A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1712	14939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W59	313393	8MARS	313399	6MARS	1	500/230	345	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-S333314010		6BEAMEAD	313743	6INTERCONN	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S165314939		8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W60313393		8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-S204314939		8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S179713746		6SOJOURNER	313822	6RUNWAY	1	230	345	Summer Gen Deliv	Included
2022W3-GD_L360314041		6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-N1-ST130314006		6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W840314939		8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W137014939		8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-N1-WT13813904		6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT13913904		6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT14013752		6TAKEOFF	313774	6LINC PRK	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST121314004		6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST24213815		6SPRINGH	314079	6RESTON	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT13214006		6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST24313805		6SHELLHORN1	313841	6ENTERPRIS	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST12213815		6SPRINGH	314079	6RESTON	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S167613904		6GOOSECRK	314006	6ASHBURA	1	230	345	Summer Gen Deliv	Included
2022W3-N1-WT13313904		6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT13413399		6MARS	313746	6SOJOURNER	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST12514006		6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST12614068		6OX	314039	6GALLOWS A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S210314039		6GALLOWS A	314052	6IDYLWOD	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S180314934		8SPOTSYL	314916	8MORRSVL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-S172213399		6MARS	313805	6SHELLHORN1	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S179813859		6BELMONT	314072	6PL VIEW	1	230	345	Summer Gen Deliv	Included
2022W3-N1-ST13114006		6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST13214035		6DISCOVR	313774	6LINC PRK	1	230/230	345/345	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-WT143	313399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST137	314068	6OX	314039	6GALLOWS A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST173	314084	6SULLY	314035	6DISCOVR	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD_L2693	314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-GD_L3093	314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load Gen Deliv	Included
2022W3-N1-ST149	314009	6BRADOCK	314052	6IDYLLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST150	314009	6BRADOCK	314052	6IDYLLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT163	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST31	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1804	313393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S1725	313815	6SPRINGH	314079	6RESTON	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S3473	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Summer Gen Deliv	Included
2022W3-N1-WT160	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT403	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT153	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST26	314010	6BEAMEAD	313743	6INTERCONNEC	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST147	314068	6OX	314039	6GALLOWS A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST27	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST148	313805	6SHELLHORN1	314098	6GREENWAY1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST28	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST163	314072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST163	314072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-LLT121	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load N-1	Included
2022W3-GD-S2003	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-N1-LLT121	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-LLT121	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-ST36	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT169	314068	6OX	314039	6GALLOWS A	1	230/230	345/345	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-ST38	314084	6SULLY	314035	6DISCOVR	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1738	13399	6MARS	313746	6SOJOURNER	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S2223	13393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-N1-ST163	13399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1739	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-ST49	314035	6DISCOVR	313774	6LINC PRK	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST173	13399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST173	14039	6GALLOWS A	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST173	13743	6INTERCONNEC	313733	6NIMBUS	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST173	14039	6GALLOWS A	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-S1733	14004	6ASHBURN	314010	6BEAMEAD	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W153	13393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-N1-ST163	13399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W143	13399	6MARS	313746	6SOJOURNER	1	230	345	Winter Gen Deliv	Included
2022W3-N1-WT53	13904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W133	13440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT53	14010	6BEAMEAD	313743	6INTERCONNEC	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST48	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT173	14004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-LD-ST10	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Load Deliverability	Included
2022W3-N1-ST60	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST61	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-WT74	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-LD-ST9	314290	6EDFERRY	313911	6TWINCREEKS	1	230/230	345/345	Load Deliverability	Included
2022W3-N1-ST55	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST173	14072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W163	14004	6ASHBURN	314010	6BEAMEAD	1	230	345	Winter Gen Deliv	Included
2022W3-GD-W143	13440	8VINTHIL	314913	8LOUDOUN	1	500	345	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-N1-LLT3314820	314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-LLT3314820	314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-LLT3314820	314820	6BALLSTN	314120	6CLRNDNC	1	230/230	345/345	Light Load N-1	Included
2022W3-N1-ST66314009	314009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W991242701	242701	05LEESVI	314667	4ALTVSTA	1	138	205/345	Winter Gen Deliv	Included
2022W3-N1-ST67313904	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST68314072	314072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W991242701	242701	05LEESVI	314667	4ALTVSTA	1	138	205/345	Winter Gen Deliv	Included
2022W3-N1-WT92314072	314072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-S1811313805	313805	6SHELLHORN1	313841	6ENTERPRIS	1	230	345	Summer Gen Deliv	Included
2022W3-N1-WT94313399	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W19213805	313805	6SHELLHORN1	314098	6GREENWAY1	1	230	345	Winter Gen Deliv	Included
2022W3-GD-W88314939	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-N1-ST77313399	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W75313399	313399	6MARS	313805	6SHELLHORN1	1	230	345	Winter Gen Deliv	Included
2022W3-N1-ST78313904	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W87514939	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W18914991	314991	8VALLEY SC	314926	8VALLEY	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT89313399	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W76313904	313904	6GOOSECRK	314006	6ASHBURA	1	230	345	Winter Gen Deliv	Included
2022W3-GD-W101313440	313440	8VINTHIL	314125	6VINTHIL	2	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W77314916	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W87913393	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W15213440	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W79814290	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Winter Gen Deliv	Included
2022W3-GD-W79814290	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Winter Gen Deliv	Included
2022W3-GD-S1811314918	314918	8NO ANNA	314911	8LADYSMITH	1	500	345	Summer Gen Deliv	Included
2022W3-N1-WT97313904	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	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-WT100	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-S1817	314068	6OX	314039	6GALLOWS A	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W894	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W895	313393	8MARS	313399	6MARS	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W94	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W92	314006	6ASHBURA	314010	6BEAMEAD	1	230	345	Winter Gen Deliv	Included
2022W3-GD-S1820	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Summer Gen Deliv	Included
2022W3-N1-WT109	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT110	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-S2363	313393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S2373	313393	8MARS	313399	6MARS	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-W103	314072	6PL VIEW	314004	6ASHBURN	1	230	345	Winter Gen Deliv	Included
2022W3-N1-WT127	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-W904	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-ST185	313399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST186	313399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST187	314039	6GALLOWS A	314052	6IDYLVOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W98	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Winter Gen Deliv	Included
2022W3-N1-ST179	314039	6GALLOWS A	314052	6IDYLVOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W125	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-LD-ST24	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-W124	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W141	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-LD-ST26	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-S1763	314068	6OX	314039	6GALLOWS A	1	230	345	Summer Gen Deliv	Included
2022W3-GD-W130	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-LD-ST25	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-S1680	314925	8PL VIEW	314072	6PL VIEW	1	500/230	345	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-ST28	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-S168	313399	6MARS	313805	6SHELLHORN1	1	230	345	Summer Gen Deliv	Included
2022W3-LD-ST27	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345/345	Load Deliverability	Included
2022W3-GD-W136	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-LD-ST23	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Load Deliverability	Included
2022W3-N1-ST19	314009	6BRADOCK	314052	6IDYLWOD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST19	313746	6SOJOURNER	313822	6RUNWAY	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-GD-W78	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT24	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-S176	313805	6SHELLHORN1	314098	6GREENWAY1	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S168	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-WT25	314041	6GLEBE	314185	6RADNOR	1	230/230	345/345	Winter N-1 Thermal	Included
2022W3-GD-S121	314290	6EDFERRY	313911	6TWINCREEKS	1	230	345	Summer Gen Deliv	Included
2022W3-GD-S176	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S141	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S176	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S176	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S146	314939	8GOOSE CREEK	313904	6GOOSECRK	1	500/230	345	Summer Gen Deliv	Included
2022W3-GD-S201	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-ST20	313399	6MARS	313746	6SOJOURNER	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST85	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST20	314004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST86	313399	6MARS	313805	6SHELLHORN1	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST87	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST20	313746	6SOJOURNER	313822	6RUNWAY	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST88	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-LD-ST30	313911	6TWINCREEKS	314072	6PL VIEW	1	230/230	345/345	Load Deliverability	Included
2022W3-GD-W31	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	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-LD-ST29	314072	6PL VIEW	314004	6ASHBURN	1	230/230	345/345	Load Deliverability	Included
2022W3-LD-ST32	314006	6ASHBURA	314010	6BEAMEAD	1	230/230	345/345	Load Deliverability	Included
2022W3-LD-ST31	313911	6TWINCREEKS	314072	6PL VIEW	1	230/230	345/345	Load Deliverability	Included
2022W3-LD-ST33	314004	6ASHBURN	314010	6BEAMEAD	1	230/230	345/345	Load Deliverability	Included
2022W3-N1-ST81	314068	6OX	314039	6GALLOWS A	1	230/230	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST83	313904	6GOOSECRK	314006	6ASHBURA	1	230/230	345/345	Summer N-1 Thermal	Included

New Flowgates

The redacted information is proprietary to the Company; therefore, it is privileged and confidential.

Financial Information

Capital spend start date 06/2025

Construction start date 12/2026

Project Duration (In Months) 30

Additional Comments

None