

# Yeat 500/230kV Greenfield Station

## General Information

Proposing entity name	Company confidential and proprietary information
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Company confidential and proprietary information
Company proposal ID	Company confidential and proprietary information
PJM Proposal ID	977
Project title	Yeat 500/230kV Greenfield Station
Project description	Construct new “Yeat” 500/230kV station near Bristers 500/230kV substation. This substation will have (10) 500kV breakers, (2) 500/230kV transformers, and (2) 230kV CBs. Cut in Bristers–Ox 500kV and Meadowbrook–Vint Hill 500kV lines into Yeat’s 500kV yard. The Proposing Entity installs a new 12-mile dbl ckt BOLD (Breakthrough Overhead Line Design) 230kV line from Yeat–Clover Hill. The Proposing Entity installs a new 7.5-mile dbl ckt BOLD (Breakthrough Overhead Line Design) 230kV line from Warrenton–Wheeler. Dominion to install new 0.1% reactor at Vint Hill on Vint Hill–Morrisville. Dominion to install new 0.1% reactor at Vint Hill on Vint Hill–Loudoun 1. Dominion rebuilds 1.7 miles 230kV line from Marsh Run–Remington Ct as double circuit. Dominion replaces remote end equipment to bring rating up on 230kV line from Wheeler–Linton Tap–Atlantic. Dominion rebuilds the 0.23-mile line between Bristers 500kV and Yeat 500kV. Dominion installs (2) 230kV breakers at Wheeler substation.
Email	Company confidential and proprietary information
Project in-service date	06/2027
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Company confidential and proprietary information

## Project Components

1. Yeat Greenfield Station
2. Bristers – Ox 500 kV, and Meadowbrook – Vint Hill 500 kV Tie-in Lines
3. Yeat – Clover Hill 230 kV Greenfield Transmission Line
4. Warrenton - Wheeler 230 kV Greenfield Transmission Line
5. Vint Hill - Morrisville Series Reactor
6. Vint Hill - Loudon 1 Series Reactor
7. Marsh Run – Remington Ct 230 kV Line Upgrade
8. Wheeler - Linton Tap - Atlantic - Gainesville 230 kV Line Upgrade
9. Bristers – Yeat 500 kV Line Upgrade

## Greenfield Substation Component

Component title	Yeat Greenfield Station
Project description	Company confidential and proprietary information
Substation name	Yeat
Substation description	Construct a 500/230kV station having (3) 500kV CB & a half strings; (7) 500kV, 5000A circuit breakers; (2) 500kV, 4000A transformer high side circuit breakers; (4) 500kV lines with space for one (1) future 500kV line; (3) 500kV transformer connection points (one in a future string position and one on each end bus); (2) 500/230kV auto-transformers each consisting of (3) 500MVA, 1-phase units (space made available for a switchable spare unit); (2) 230kV, 5000A line circuit breakers; (2) 230kV lines; a 16ft x 72ft DICM (drop-in control module); relay equipment; AC power system; DC system; ground grid; control cables; conduits; cable trench; power cables; foundations; steel structures; buswork; switches; arresters; PT's; CCVT's; line traps; and other associated items. This new station will be situated within a 1,010ft x 1,060ft fenced area.
Nominal voltage	AC
Nominal voltage	500/230

## Transformer Information

Name	Capacity (MVA)
------	----------------

Transformer	Transformer Bank 1	500	
	<b>High Side</b>	<b>Low Side</b>	<b>Tertiary</b>
Voltage (kV)	500	230	
	<b>Name</b>	<b>Capacity (MVA)</b>	
Transformer	Transformer Bank 2	500	
	<b>High Side</b>	<b>Low Side</b>	<b>Tertiary</b>
Voltage (kV)	500	230	
Major equipment description	Construct new "Yeat" 500/230kV station near Bristers 500/230kV substation. This substation will have: (11) 500kV breakers, (2) 500/230kV transformers, (2) 230kV CB's		
	<b>Normal ratings</b>	<b>Emergency ratings</b>	
Summer (MVA)	4224.000000	4357.000000	
Winter (MVA)	5155.000000	5155.000000	

Environmental assessment

Land use at the proposed parcel for Yeat Station is predominantly agricultural to the west and forested and forested wetlands to the east. One residence is located on the parcel. The station footprint is situated in the northwestern portion of the parcel. A National Wetlands Inventory (NWI) mapped riverine wetland is located within the station footprint. No National Hydrography Dataset (NHD) mapped streams are located on the station footprint. It is possible that regulated wetlands or streams will be affected as part of this solution. Desktop studies and record reviews will be completed for the development parcel including an environmental site assessment(s), wetland and stream delineation, threatened and endangered species review, and cultural resource study. Following these studies, the station will be sited on the property and designed to avoid impacts to sensitive features. Major regulatory approvals for the proposed solution would not be anticipated to exceed any general performance standard or require any variance to be readily permitted. Appropriate best management practices will be installed prior to construction to manage storm water runoff. Timing of construction will be executed in accordance with state and federal agencies criteria as needed. A General Virginia Pollutant Discharge Elimination System (VPDES) Permit is required for the project, and will be administered by Loudoun County, who is delegated program authority by the Virginia Department of Environmental Quality. The VPDES permit submission will include a SWPPP, erosion and sediment control plan, stormwater management plan, and pollution prevention plan. The stormwater management plan will include a narrative that describes, among other things, the proposed stormwater management facilities, the limits of clearing and grading, and the proposed drainage patterns on the site, proposed buildings, roads, parking areas, utilities, and the total disturbed acreage for the site. The proposed stormwater management facilities and all associated impacts are typical of energy infrastructure projects and would not represent a risk to the overall project schedule, cost, or ability to meet the identified requirements of the RFP.

Outreach plan

Public outreach is a critical component to the Proposing Entity's siting process, so efforts will include properly informing the public; federal, state, and local agencies; local governments; and other key stakeholders on the need for, and benefits of, this Project. The Proposing Entity's approach to public outreach is to be always candid and transparent, and to offer a variety of tools and means for directly impacted parties to engage with our staff. The Proposing Entity will provide development updates to local government officials, key stakeholders, and impacted parties as the Project progresses. Public outreach also will involve collecting information about landowner properties and communicating with directly affected landowners during the final siting process.

Land acquisition plan

The proposed Yeat station will be 20 acres in size and located on undeveloped wooded land in rural Fauquier County, Virginia. The proposed station will be purchased in fee.

Construction responsibility

Company confidential and proprietary information

Benefits/Comments

Company confidential and proprietary information

**Component Cost Details - In Current Year \$**

Engineering & design

Company confidential and proprietary information

Permitting / routing / siting	Company confidential and proprietary information
ROW / land acquisition	Company confidential and proprietary information
Materials & equipment	Company confidential and proprietary information
Construction & commissioning	Company confidential and proprietary information
Construction management	Company confidential and proprietary information
Overheads & miscellaneous costs	Company confidential and proprietary information
Contingency	Company confidential and proprietary information
Total component cost	\$122,019,834.00
Component cost (in-service year)	\$137,334,399.00

### **Greenfield Transmission Line Component**

Component title	Bristers – Ox 500 kV, and Meadowbrook – Vint Hill 500 kV Tie-in Lines	
Project description	Company confidential and proprietary information	
Point A	Bristers & Meadowbrook	
Point B	Ox & Vint hill	
Point C		

	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	4224.000000	5155.000000
Winter (MVA)	4357.000000	5155.000000
Conductor size and type	4-bundle 1351.5 kcmil Dipper ACSR	
Nominal voltage	AC	
Nominal voltage	500	

Line construction type	Overhead
General route description	The 500kV tie-ins will be approximately 1.50 miles each, leaving the proposed Yeat Station to the existing Bristers–Ox 500kV (1.03 miles) and Meadowbrook–Vint Hill 500kV (0.52-mile) lines in Fauquier County, Virginia.
Terrain description	The topography for the 500kV tie-ins is rolling hills and forested. Land use in the area encompasses mostly residential parcels in Fauquier County, Virginia. The line crosses low density developed areas, a significant amount of highly vegetated (wooded) rural land, state/county highways, railroads, and existing utilities.
Right-of-way width by segment	The 500kV greenfield tie-ins routes will be 175 feet each in width and will parallel/cross existing rights-of-way to include interstates, roads, railroads, existing transmission lines/utilities, existing pipelines and best minimizes potential impacts to the natural and human environments.
Electrical transmission infrastructure crossings	Lat: 38°34'55.60"N/Lon: 77°35'39.59"W
Civil infrastructure/major waterway facility crossing plan	The tie-ins will not impact civil infrastructure or major waterways.
Environmental impacts	The tie-ins lines have undergone a robust siting analysis.
Tower characteristics	The condition of the existing line is assumed to be in good working order based on the age determination from aerial imagery (less than 20 years). Structure loading at adjacent structures would remain unchanged due to proposing structure locations on cL and near existing tower locations. It is assumed that a total of four (4) three-pole deadend structures supported by concrete pier foundations will be utilized to turn the existing 500kV lines in/out of the proposed Yeat Station.
Construction responsibility	Company confidential and proprietary information
Benefits/Comments	Company confidential and proprietary information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Company confidential and proprietary information
Permitting / routing / siting	Company confidential and proprietary information
ROW / land acquisition	Company confidential and proprietary information
Materials & equipment	Company confidential and proprietary information
Construction & commissioning	Company confidential and proprietary information

Construction management	Company confidential and proprietary information
Overheads & miscellaneous costs	Company confidential and proprietary information
Contingency	Company confidential and proprietary information
Total component cost	\$8,600,000.00
Component cost (in-service year)	\$9,679,376.00

### Greenfield Transmission Line Component

Component title	Yeat – Clover Hill 230 kV Greenfield Transmission Line
Project description	Company confidential and proprietary information
Point A	Yeat
Point B	Clover Hill
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	1640.000000	1640.000000
Winter (MVA)	1728.000000	1728.000000
Conductor size and type	6-bundled 795 kcmil 26/7 "Drake" ACSS	
Nominal voltage	AC	
Nominal voltage	230	
Line construction type	Overhead	
General route description	The Yeat–Clover Hill 230kV line will be approximately 11.69 miles long and connect the new Yeat Substation to the existing Clover Hill Substation. The 230kV line will exit the Yeat Substation from the west, turn north, then travel in a northeast direction until it reaches the Clover Hill Substation. The line is entirely located in the state of Virginia and crosses Fauquier and Prince William counties.	

Terrain description	The topography for the Yeat–Clover Hill 230kV line is hilly. Land use in the area encompasses mostly residential/agricultural parcels in rural Virginia. The line crosses low density developed areas, a significant amount of highly vegetated (wooded) rural land, state/county roadways, water crossings, and existing utilities.
Right-of-way width by segment	The Yeat–Clover Hill 230kV greenfield route will be 120 feet in width and will parallel/cross existing rights-of-way to include interstates, roads, existing transmission lines/utilities, and best minimizes potential impacts to the natural and human environments.
Electrical transmission infrastructure crossings	-Lat: 38°35'11.09"N/Lon: 77°35'33.83"W
Civil infrastructure/major waterway facility crossing plan	The Yeat–Clover Hill 230kV line crosses and runs parallel with multiple roadways and numerous water facilities. The water facilities are on the smaller side and can be located at the following locations: -Lat: 38°37'38.75"N/Lon: 77°34'39.89"W -Lat: 38°40'5.18"N/Lon: 77°31'46.74"W -Lat: 38°41'48.82"N/Lon: 77°30'11.95"W -Lat: 38°41'52.20"N/Lon: 77°30'8.37"W
Environmental impacts	Land use along the Bid Route corridor consists of mixed agricultural and wood land uses. The route intersects numerous water features, including FEMA-mapped floodplains and/or floodway, NWI-mapped wetlands, and NHD streams (including Kettle Run and Broad Run). Based on existing aerial photography, the proposed route likely passes unmapped wetland or drainage features. Desktop studies and record reviews will be conducted for wetlands and streams, hazardous materials, and cultural resources. No major environmental impacts or concerns were identified based on a preliminary desktop review. A General Virginia Pollutant Discharge Elimination System (VPDES) Permit is required for the project, and will be administered by Loudoun County, who is delegated program authority by the Virginia Department of Environmental Quality. The VPDES permit submission will include a SWPPP, erosion and sediment control plan, stormwater management plan, and pollution prevention plan. There would be no proposed stormwater management facilities associated with the linear project and therefore the work would not represent a risk to the overall project schedule, cost, or ability to meet the identified requirements of the RFP.
Tower characteristics	This design will utilize BOLD (Breakthrough Overhead Line Design) 230kV design. This design features a monopole structure with two arched crossarm to hold two circuits. The circuit is arranged in a delta configuration.
Construction responsibility	Company confidential and proprietary information
Benefits/Comments	Company confidential and proprietary information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Company confidential and proprietary information
Permitting / routing / siting	Company confidential and proprietary information

ROW / land acquisition	Company confidential and proprietary information
Materials & equipment	Company confidential and proprietary information
Construction & commissioning	Company confidential and proprietary information
Construction management	Company confidential and proprietary information
Overheads & miscellaneous costs	Company confidential and proprietary information
Contingency	Company confidential and proprietary information
Total component cost	\$45,168,101.00
Component cost (in-service year)	\$50,837,096.00

### Greenfield Transmission Line Component

Component title	Warrenton - Wheeler 230 kV Greenfield Transmission Line
Project description	Company confidential and proprietary information
Point A	Warrenton
Point B	Wheeler
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	1640.000000	1640.000000
Winter (MVA)	1728.000000	1728.000000
Conductor size and type	6-bundled 795 kcmil 26/7 "Drake" ACSS	
Nominal voltage	AC	
Nominal voltage	230	
Line construction type	Overhead	

General route description	The Warrenton–Wheeler 230kV line will be approximately 8.8 miles long and connect the existing Warrenton Substation to the existing Wheeler Substation. The 230kV line will exit the Warrenton Substation from the northeast then travel in a northeast direction until it reaches the Wheeler Substation. The line is entirely located in the state of Virginia and crosses Fauquier and Prince William Counties.
Terrain description	The topography for the Warrenton–Wheeler 230kV line is hilly. Land use in the area encompasses mostly residential parcels in rural Virginia. The line crosses low density developed areas, a significant amount of highly vegetated (wooded) rural land, state/county roadways, and existing utilities.
Right-of-way width by segment	The Warrenton–Wheeler 230kV greenfield route will be 120 feet in width and will parallel/cross existing rights-of-way to include interstates, roads, existing transmission lines/utilities, and best minimizes potential impacts to the natural and human environments.
Electrical transmission infrastructure crossings	Based on a desktop review, it does not appear that there are any significant transmission infrastructure crossings other than those typically found along areas such as major roadways.
Civil infrastructure/major waterway facility crossing plan	The Warrenton–Wheeler 230kV line crosses and runs parallel with multiple roadways. There do not appear to be any notable water crossings or railroads along the route.
Environmental impacts	Land use along the Bid Route corridor consists of predominately wood land use, with pockets of agricultural and residential areas. The route intersects numerous water features (i.e., Cedar Run and Kettle Run), including FEMA-mapped floodplains and/or floodway, NWI-mapped wetlands, and NHD streams (including Kettle Run and Broad Run). Based on existing aerial photography, the proposed route likely passes unmapped wetland or drainage features. Desktop studies and record reviews will be conducted for wetlands and streams, hazardous materials, and cultural resources. No major environmental impacts or concerns were identified based on a preliminary desktop review. A General Virginia Pollutant Discharge Elimination System (VPDES) Permit is required for the project, and will be administered by Loudoun County, who is delegated program authority by the Virginia Department of Environmental Quality. The VPDES permit submission will include a SWPPP, erosion and sediment control plan, stormwater management plan, and pollution prevention plan. There would be no proposed stormwater management facilities associated with the linear project and therefore the work would not represent a risk to the overall project schedule, cost, or ability to meet the identified requirements of the RFP.
Tower characteristics	This design will utilize BOLD (Breakthrough Overhead Line Design) 230kV design. This design features a monopole structure with two arched crossarm to hold two circuits. The circuit is arranged in a delta configuration.
Construction responsibility	Company confidential and proprietary information
Benefits/Comments	Company confidential and proprietary information

### Component Cost Details - In Current Year \$

Engineering & design	Company confidential and proprietary information
Permitting / routing / siting	Company confidential and proprietary information
ROW / land acquisition	Company confidential and proprietary information
Materials & equipment	Company confidential and proprietary information
Construction & commissioning	Company confidential and proprietary information
Construction management	Company confidential and proprietary information
Overheads & miscellaneous costs	Company confidential and proprietary information
Contingency	Company confidential and proprietary information
Total component cost	\$34,001,652.00
Component cost (in-service year)	\$38,269,157.00

### Substation Upgrade Component

Component title	Vint Hill - Morrisville Series Reactor
Project description	Company confidential and proprietary information
Substation name	Vint Hill Station
Substation zone	Dominion
Substation upgrade scope	Install a new 0.1% reactor at Vint Hill on Vint Hill-Morrisville.

### Transformer Information

None	
New equipment description	(1) 0.1% Series Reactor.
Substation assumptions	The existing AC station service is assumed to be sufficient to accommodate the new substation equipment. The existing station control enclosure is assumed to be sufficient to accommodate the new transmission line and circuit breaker protection and control relay panels.

Real-estate description	All necessary land rights are acquired.
Construction responsibility	Company confidential and proprietary information
Benefits/Comments	Company confidential and proprietary information

**Component Cost Details - In Current Year \$**

Engineering & design	Company confidential and proprietary information
Permitting / routing / siting	Company confidential and proprietary information
ROW / land acquisition	Company confidential and proprietary information
Materials & equipment	Company confidential and proprietary information
Construction & commissioning	Company confidential and proprietary information
Construction management	Company confidential and proprietary information
Overheads & miscellaneous costs	Company confidential and proprietary information
Contingency	Company confidential and proprietary information
Total component cost	\$5,760,000.00
Component cost (in-service year)	\$6,482,931.00

**Substation Upgrade Component**

Component title	Vint Hill - Loudon 1 Series Reactor
Project description	Company confidential and proprietary information
Substation name	Vint Hill Station
Substation zone	Dominion
Substation upgrade scope	Install a new 0.1% reactor at Vint Hill on Vint Hill-Loudon 1.

**Transformer Information**

None	
New equipment description	(1) 0.1% Series Reactor.
Substation assumptions	The existing AC station service is assumed to be sufficient to accommodate the new substation equipment. The existing station control enclosure is assumed to be sufficient to accommodate the new transmission line and circuit breaker protection and control relay panels.
Real-estate description	All necessary land rights are acquired.
Construction responsibility	Company confidential and proprietary information
Benefits/Comments	Company confidential and proprietary information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Company confidential and proprietary information
Permitting / routing / siting	Company confidential and proprietary information
ROW / land acquisition	Company confidential and proprietary information
Materials & equipment	Company confidential and proprietary information
Construction & commissioning	Company confidential and proprietary information
Construction management	Company confidential and proprietary information
Overheads & miscellaneous costs	Company confidential and proprietary information
Contingency	Company confidential and proprietary information
Total component cost	\$5,760,000.00
Component cost (in-service year)	\$6,482,931.00
<b>Transmission Line Upgrade Component</b>	
Component title	Marsh Run – Remington Ct 230 kV Line Upgrade
Project description	Company confidential and proprietary information
Impacted transmission line	Marsh Run-Remington Ct

Point A	Marsh Run
Point B	Remington Ct
Point C	
Terrain description	Terrain within the Study Area crossed by the Proposed Solution is hilly to gently rolling in a mostly agricultural landscape with large, forested tracts and residential development.

**Existing Line Physical Characteristics**

Operating voltage	230
Conductor size and type	unknown
Hardware plan description	It is assumed no hardware could be reused.
Tower line characteristics	The condition of the existing line is assumed to be in good working order. Structure loading at adjacent structures would remain unchanged due to proposing structure locations on cL and near existing tower locations.

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	230.000000	230.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	1640.000000	1640.000000
Winter (MVA)	1728.000000	1728.000000
Conductor size and type	unknown	
Shield wire size and type	unknown	
Rebuild line length	1.7	
Rebuild portion description	Rebuild 1.7 miles 230kV line from Marsh Run–Remington Ct as double circuit.	

Right of way It is anticipated that the Proposed Solution would not require new ROW; however, current landowners that are crossed by the existing transmission line would need to be notified of the proposed upgrades.

Construction responsibility Company confidential and proprietary information

Benefits/Comments Company confidential and proprietary information

**Component Cost Details - In Current Year \$**

Engineering & design Company confidential and proprietary information

Permitting / routing / siting Company confidential and proprietary information

ROW / land acquisition Company confidential and proprietary information

Materials & equipment Company confidential and proprietary information

Construction & commissioning Company confidential and proprietary information

Construction management Company confidential and proprietary information

Overheads & miscellaneous costs Company confidential and proprietary information

Contingency Company confidential and proprietary information

Total component cost \$5,831,000.00

Component cost (in-service year) \$6,562,842.00

**Transmission Line Upgrade Component**

Component title Wheeler - Linton Tap - Atlantic - Gainesville 230 kV Line Upgrade

Project description Company confidential and proprietary information

Impacted transmission line Wheeler-Linton Tap-Atlantic-Gainesville 230kV

Point A Wheeler Station

Point B Linton Tap

Point C Atlantic



Construction responsibility	Company confidential and proprietary information
Benefits/Comments	Company confidential and proprietary information
<b>Component Cost Details - In Current Year \$</b>	
Engineering & design	Company confidential and proprietary information
Permitting / routing / siting	Company confidential and proprietary information
ROW / land acquisition	Company confidential and proprietary information
Materials & equipment	Company confidential and proprietary information
Construction & commissioning	Company confidential and proprietary information
Construction management	Company confidential and proprietary information
Overheads & miscellaneous costs	Company confidential and proprietary information
Contingency	Company confidential and proprietary information
Total component cost	\$1,670,000.00
Component cost (in-service year)	\$1,879,600.00
<b>Transmission Line Upgrade Component</b>	
Component title	Bristers – Yeat 500 kV Line Upgrade
Project description	Company confidential and proprietary information
Impacted transmission line	Bristers-Yeat Line
Point A	Bristers Station
Point B	Yeat Station
Point C	
Terrain description	Terrain within the Study Area, and crossed by the Proposed Solution is hilly to gently rolling in a mostly agricultural landscape with large, forested tracts and residential development.

**Existing Line Physical Characteristics**

Operating voltage	500
Conductor size and type	unknown
Hardware plan description	It is assumed no hardware could be reused.
Tower line characteristics	The condition of the existing line is assumed to be in good working order. Structure loading at adjacent structures would remain unchanged due to proposing structure locations on cL and near existing tower locations.

**Proposed Line Characteristics**

	<b>Designed</b>	<b>Operating</b>
Voltage (kV)	500.000000	500.000000
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	4224.000000	5155.000000
Winter (MVA)	4357.000000	5155.000000
Conductor size and type	unknown	
Shield wire size and type	unknown	
Rebuild line length	approximately 1 mile	
Rebuild portion description	Dominion rebuilds line between Brister and Yeat (length depends on site for Yeat, but is a short distance).	
Right of way	It is anticipated that the Proposed Solution would not require new ROW; however, current landowners that are crossed by the existing transmission line would need to be notified of the proposed upgrades.	
Construction responsibility	Company confidential and proprietary information	
Benefits/Comments	Company confidential and proprietary information	

**Component Cost Details - In Current Year \$**

Engineering & design	Company confidential and proprietary information
Permitting / routing / siting	Company confidential and proprietary information
ROW / land acquisition	Company confidential and proprietary information
Materials & equipment	Company confidential and proprietary information
Construction & commissioning	Company confidential and proprietary information
Construction management	Company confidential and proprietary information
Overheads & miscellaneous costs	Company confidential and proprietary information
Contingency	Company confidential and proprietary information
Total component cost	\$3,332,000.00
Component cost (in-service year)	\$3,750,195.00

## 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-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-GD-S1820	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Summer Gen Deliv	Included
2022W3-N1-ST134	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-GD-W1407	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W1387	313440	8VINTHIL	314913	8LOUDOUN	1	500	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-W823	314916	8MORRSVL	313440	8VINTHIL	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-GD-W904	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S347	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Summer Gen Deliv	Included
2022W3-GD-W133	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-N1-ST23	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-GD-S166	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-S166	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-WT15	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT37	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT15	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT12	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-GD-W12	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S178	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-WT15	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-GD-W12	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT16	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-WT9	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-GD-W14	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W13	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT9	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST11	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST11	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-GD-S88	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-W13	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S89	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-W10	313440	8VINTHIL	314125	6VINTHIL	2	500/230	345	Winter Gen Deliv	Included
2022W3-GD-W77	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD-W78	314916	8MORRSVL	313440	8VINTHIL	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S168	314916	8MORRSVL	313440	8VINTHIL	1	500	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-GD-S1739	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-GD-W1521	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-GD-S2018	14916	8MORRSVL	313440	8VINTHIL	1	500	345	Summer Gen Deliv	Included
2022W3-N1-WT543	14916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST165	14916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-GD-W319	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-WT563	14916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Winter N-1 Thermal	Included
2022W3-N1-ST46	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST79	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-GD-W1398	313440	8VINTHIL	314913	8LOUDOUN	1	500	345	Winter Gen Deliv	Included
2022W3-N1-ST47	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included
2022W3-N1-ST80	314916	8MORRSVL	313440	8VINTHIL	1	500/500	345/345	Summer N-1 Thermal	Included

## New Flowgates

Company confidential and proprietary information

## Financial Information

Capital spend start date 12/2023

Construction start date 11/2025

Project Duration (In Months) 42

## Cost Containment Commitment

Cost cap (in current year) Company confidential and proprietary information

Cost cap (in-service year) Company confidential and proprietary information

## Components covered by cost containment

1. Yeat Greenfield Station - Transource
2. Yeat – Clover Hill 230 kV Greenfield Transmission Line - Transource
3. Warrenton - Wheeler 230 kV Greenfield Transmission Line - Transource

### **Cost elements covered by cost containment**

Engineering & design	Yes
Permitting / routing / siting	No
ROW / land acquisition	No
Materials & equipment	Yes
Construction & commissioning	Yes
Construction management	Yes
Overheads & miscellaneous costs	No
Taxes	No
AFUDC	No
Escalation	No
Additional Information	Company confidential and proprietary information
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?	Company confidential and proprietary information

### **Additional Comments**

None