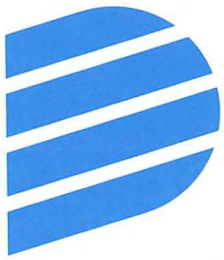

Dominion Energy®

Application, Direct Testimony, Appendices, and Schedules of Virginia Electric and Power Company

Before the State Corporation Commission of Virginia

For approval and certification of the Coastal Virginia Offshore Wind Commercial Project and Rider Offshore Wind, pursuant to § 56-585.1:11, § 56-46.1, § 56-265.1 *et seq.*, and § 56-585.1 A 6 of the Code of Virginia

Volume 5 of 11
PUBLIC ONLY VERSION

Case No. PUR-2021-00142

Filed: November 5, 2021

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TABLE OF CONTENTS

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TABLE OF CONTENTS

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TABLE OF CONTENTS

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For approval and certification of the Coastal Virginia Offshore Wind Commercial Project, and Rider Offshore Wind, pursuant to § 56-585.1:11, § 56-46.1, § 56-265.1 *et seq.*, and § 56-585.1 A 6 of the Code of Virginia
Case No. PUR-2021-00142

TABLE OF CONTENTS

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

C. Detail the nature, location, and ownership of each building that would have to be demolished or relocated if the project is built as proposed.

Response: During the initial review of the proposed right-of-way, the Company identified two buildings that will be removed along the Cable Landing to Harpers Proposed Route 1 on SMR lands and three buildings that will be removed at the proposed site of the Harpers Switching Station.

The Company, in coordination with the SMR staff, identified an alignment for the Cable Landing to Harpers Proposed Route across the SMR lands that will minimize impacts on military operations and training programs, natural and cultural resources, future planned developments on the SMR, and surrounding communities. One factor considered in the routing process is the historical significance of the base, which is listed in the NRHP as a historic district (Camp Pendleton Historic District, VDHR 134-0413). Construction along the Cable Landing to Harpers Proposed Route will require the demolition of two structures, Buildings 410 and 59, which are considered contributing elements of the Camp Pendleton Historic District. Building 410 is firehouse constructed between 1940 and 1942. Building 59 is a mess hall constructed in 1934. SMR staff preferred a route requiring the demolition of these two buildings to preserve other elements of the historic district, including trees and other landscape features also considered to be contributing elements to the historic district. The Company is consulting with SMR and VDHR to develop a treatment plan to mitigate the adverse effects of the removal of these buildings.

Through coordination with USN, a suitable location for the Harpers Switching Station was identified on Navy land at NAS Oceana. Three maintenance buildings for the Aeropines Golf Course on NAS Oceana property will be removed in order to construct the proposed Harpers Switching Station.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

D. Identify existing physical facilities that the line will parallel, if any, such as existing transmission lines, railroad tracks, highways, pipelines, etc. Describe the current use and physical appearance and characteristics of the existing ROW that would be paralleled, as well as the length of time the transmission ROW has been in use.

Response:

Onshore Export Circuits – Cable Landing to Harpers Proposed Route

On USN land within NAS Oceana, the Cable Landing to Harpers Proposed Route is parallel to the east side of Oceana Boulevard, a two-lane road, for a distance of approximately 1 mile on the east side of Oceana Boulevard. At the intersection of Oceana Boulevard and Harpers Road, the Cable Landing to Harpers Proposed Route heads west and parallels the north side of Harpers Road (a two-lane road) for about 1.0 mile. The route crosses agricultural fields, forested land, and developed land adjacent to a parking lot.

Overhead Transmission Circuits – Proposed and Alternative Routes

The proposed and alternative routes of the Overhead Transmission Circuits parallel the Company's existing overhead Line #271, Lines #2118/#147, Line #2085, and Line #2240/#I-74. The table below lists the year of structure installation.

Route	Existing Transmission Line	Installation
Harpers to Fentress Proposed Route 1 Harpers to Fentress Alternative Route 2 Harpers to Fentress Alternative Route 5 Harpers to Fentress Alternative Hybrid Route	Lines #2118/#147	1964
Harpers to Fentress Proposed Route 1 Harpers to Fentress Alternative Hybrid Route	Line #271/#I-74	1975
Harpers to Fentress Proposed Route 1 Harpers to Fentress Alternative Route 2 Harpers to Fentress Alternative Hybrid Route	Line #2240/#I-74	1975
Harpers to Fentress Alternative Route 5	Line #2085	2007

Portions of the Harpers to Fentress Proposed Route 1, Harpers to Fentress Alternative Hybrid Route, and Harpers to Fentress Alternative Route 2 parallel and overlap with Line #2118/#147 right-of-way for a distance of approximately 1.8 miles within or adjacent to the SEPG corridor.

At the Line #271 crossing, the Harpers to Fentress Proposed Route 1 and the Harpers to Fentress Alternative Hybrid Route parallel and overlap with the existing

Lines #271/#I-74 right-of-way as part of a wreck-and-rebuild. At the intersection with Line #271, the three proposed circuits would join and follow the Line #271 corridor for 6.1 miles to the south/southwest to the Company's existing Pocaty Substation in the City of Chesapeake.

The route segment along Line #271 enters the City of Chesapeake south of Indian River Farms Park. The route segment initially crosses mostly forested lands, including private land, parcels owned by the City of Chesapeake, and two tracts owned by The Nature Conservancy. This segment also crosses Corps-owned lands along the Intracoastal Waterway. South of the waterway, the route mostly crosses privately owned agricultural lands in addition to crossing Mt. Pleasant and Blue Ridge Roads.

From the Pocaty Substation, Harpers to Fentress Proposed Route 1 follows the Company's existing Lines #2240/#I-74 corridor for 0.7 mile south, crossing Whittamore Road and passing along the east side of the Battlefield Golf Club. The route then heads west for 1.1 miles along the south side of the golf club before entering Fentress Substation.

Harpers to Fentress Alternative Route 2 follows the same alignment as the Harpers to Fentress Proposed Route 1 for 1.6 miles south of the Intracoastal Waterway at the intersection with the Company's existing Line #271 right-of-way to the Pocaty Substation.

From the Pocaty Substation, the Harpers to Fentress Alternative Route 2 follows the existing Line #2240 right-of-way for about 1.9 miles before entering the existing Fentress Substation. These alternative route segments cross primarily privately owned agricultural lands.

Harpers to Fentress Alternative Route 5 parallels and overlaps on the west side of the Company's existing Line #2085 right-of-way from near Landstown Road at the Princess Anne Athletic Complex to the south for approximately 2.8 miles. This alternative route crosses privately owned agricultural lands.

Harpers to Fentress Alternative Route 5 parallels Fentress Airfield Road for 0.8 mile south of its first crossing of Blackwater Road. Additionally, Harpers to Fentress Alternative Route 5 parallels Blackwater Road for 0.8 mile from just north of Margaret Drive south to the crossing of the Pocaty River. These areas are mostly rural areas with a mix of agricultural and forested wetland adjacent to each road.

Harpers to Fentress Alternative Route 5 follows the Company's existing Line #2240 right-of-way for about 0.1 mile to Fentress Substation.

The Line #2085 Route Variation follows the west side of Line #2085 for approximately 2.8 miles to the south of the Princess Anne Sport Complex following the same alignment as Harpers to Fentress Alternative Route 5 across agricultural and forested lands on the west side of the Courthouse Woods and Courthouse Estates subdivisions.

The proposed and alternative routes are parallel to the Chesapeake & Albemarle Railroad property for approximately 0.2 mile in the area where the routes enter the Fentress Substation.

The proposed and alternative routes do not parallel pipelines.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

E. Indicate whether the Applicant has investigated land use plans in the areas of the proposed route and indicate how the building of the proposed line would affect any proposed land use.

Response: Onshore Export Circuits – Cable Landing to Harpers Proposed Route

The SMR, also referred to as Camp Pendleton, developed an Installation Master Plan for the site in 2018. This Plan identifies future needs and development, with long-term strategic goals in mind, through 2043. This Plan divides the SMR property into three planning areas—North Area Development Plan ("ADP"), South ADP, and East ADP. The Cable Landing to Harpers Proposed Route of the Onshore Export Circuits is confined to the South ADP and East ADP areas. The SMR was designated a historic district and listed on the NRHP in 2005. This designation, along with other factors, limits the development area of the SMR. Future development is limited and proposed in the western half of the SMR property. Future development plans call for some buildings to be removed, while new buildings would be constructed in areas where historic structures once stood.

Overhead Transmission Circuits – Proposed and Alternative Routes

The City of Virginia Beach Comprehensive Plan, adopted in 2016, lays out the plan for the City to grow while still maintaining the character of land use that has been prioritized. Urban development is concentrated north of an urban growth boundary known as the "Green Line." The Green Line lies about 2 miles south of NAS Oceana and divides the northern urban area from the rural southern portion of the City. The 2016 Comprehensive Plan emphasizes the importance of sustainability in energy development, including renewable energy and offshore wind.

The City of Virginia Beach maintains an urban forestry program that promotes urban forest conservation. The City's 2014 Urban Forest Management Plan established public guidance for landowners to sustain urban forest and tree canopy. According to the Urban Forest Management Plan, approximately 58,290 acres of tree cover exist within Virginia Beach (including state and federally managed land within the City boundary), accounting for an estimated 3 million trees.

The City of Virginia Beach issued the Sea Level Wise Adaptation Strategy in 2020. The Adaptation Strategy outlines the City's flood mitigation framework for responding to sea level rise. The framework consists of four complementary themes each with an approach to flood management, including natural mitigation, prepared communities, engineering defenses, and adaptive building and infrastructure systems.

Portions of the Princess Anne Commons and Transition Area lie between NAS Oceana and NALF Fentress under heavily transited airspace. This area has been designated by the Navy and the City of Virginia Beach as the ITA, which occupies

about 3,000 acres. Due to the high noise levels within the ITA, the City of Virginia Beach implements land use policies through zoning ordinances, defining zoning districts, and permitting different development densities in different parts of the City. The City of Virginia Beach developed a Master Plan for the ITA that describes land use planning and zoning within the ITA. The ITA Master Plan was updated in 2017 and identifies four main priorities for the ITA, including economic development, agricultural research, quality municipal services, and conservation. The ITA Master Plan identifies "initiative areas" for various types of development such a recreational, economic, and infrastructure improvements.

The City of Chesapeake Comprehensive Plan was adopted in 2014, and amended in 2016 and 2018. It plans for the future of the City to 2035. The plan focuses on responsible growth management, community preservation and development, and the preservation and access of natural amenities. The City of Chesapeake is committed to working with energy providers to plan for high capacity transmission lines to minimize impacts on residences and businesses.

The NALF Fentress Air Installations Compatible Use Zones ("AICUZ") Program for NAS Oceana was established in 1973 by the U.S. Department of Defense in response to increasing urban development around military airfields. At the core of the AICUZ Program is the development of land use guidelines that promote compatible uses by neighboring communities. Control over land use and development in the areas surrounding the airfields is the responsibility of local governments, including the City of Virginia Beach and the City of Chesapeake. The Navy works with neighboring communities to encourage compatible development in the accident potential zones ("APZ") and noise zones designated around the airfields. Overhead electric transmission infrastructure is prohibited in areas around the base designated as Accident Protection Zone 1 under the USN's AICUZ program.

Because the proposed Overhead Transmission Circuits would follow existing easements where the right-of-way is co-located along existing transmission lines or other linear corridors, new right-of-way would avoid or minimize impacts on the natural, cultural and built environment, and would avoid crossing Accidental Protection Zone 1 surrounding the military airfields, the Harpers to Fentress Proposed Route 1 would not materially change the character of the localities crossed by the route or significantly affect land use.

The proposed and alternative routes would cross two types of easements in the City of Chesapeake: NALF Fentress Encroachment Protection Easements and Multi-Year Encroachment Protection Easements.

For the NALF Fentress Encroachment Protection Easements, the City began coordinating with the Commonwealth of Virginia and the Navy to acquire easements on parcels not previously encumbered by the Navy's Restrictive Use Easements in the City's Fentress Airfield Overlay District. The City, Commonwealth, and Navy identified areas with no residential and commercial

development where existing or future air space requirements may impact future development. The City offered fair market value to landowners for development rights. The easements prevent encroachment and incompatible uses of parcels while preserving rural and agricultural uses in the Fentress area.

For the Multi-Year Encroachment Protection easements, the City partners with the Navy to acquire or purchase easements on lands near NALF Fentress. Open Space and Agricultural Preserve Easements restrict the development of and preserve the ecological benefits and characteristics of encumbered parcels. Once acquired, any future proposed work on encumbered parcels requires approval from both entities. One easement of this type (referred to as the Sawyer Tract) would be crossed by Harpers to Fentress Proposed Route 1. The crossing would be adjacent to the Company's existing Lines #271/#I-74 right-of-way. The affected parcel is owned in fee by the City of Chesapeake.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

F. Government Bodies

1. Indicate if the Applicant determined from the governing bodies of each county, city and town in which the proposed facilities will be located whether those bodies have designated the important farmlands within their jurisdictions, as required by § 3.2-205 B of the Code.

2. If so, and if any portion of the proposed facilities will be located on any such important farmland:

a. Include maps and other evidence showing the nature and extent of the impact on such farmlands;

b. Describe what alternatives exist to locating the proposed facilities on the affected farmlands, and why those alternatives are not suitable; and

c. Describe the Applicant's proposals to minimize the impact of the facilities on the affected farmland.

Response: (1) The City of Virginia Beach designated farmland enrolled in the Agricultural Reserve Program as the highest value. As part of the Agricultural Reserve Program, easements restrict the development of the property and promote continued agricultural use of the land. However, the proposed and alternative routes do not cross lands enrolled in the Agricultural Reserve Program.

The City of Chesapeake has no designated farmland that meets the definition provided in Va. Code § 3.2-205 B.

(2) Not applicable.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

G. Identify the following that lie within or adjacent to the proposed ROW:

1. **Any district, site, building, structure, or other object included in the National Register of Historic Places maintained by the U.S. Secretary of the Interior;**

2. **Any historic architectural, archeological, and cultural resources, such as historic landmarks, battlefields, sites, buildings, structures, districts or objects listed or determined eligible by the Virginia Department of Historic Resources ("DHR");**

3. **Any historic district designated by the governing body of any city or county;**

4. **Any state archaeological site or zone designated by the Director of the DHR, or its predecessor, and any site designated by a local archaeological commission, or similar body;**

5. **Any underwater historic assets designated by the DHR, or predecessor agency or board;**

6. **Any National Natural Landmark designated by the U.S. Secretary of the Interior;**

7. **Any area or feature included in the Virginia Registry of Natural Areas maintained by the Virginia Department of Conservation and Recreation ("DCR");**

8. **Any area accepted by the Director of the DCR for the Virginia Natural Area Preserves System;**

9. **Any conservation easement or open space easement qualifying under §§ 10.1-1009 – 1016, or §§ 10.1-1700 – 1705, of the Code (or a comparable prior or subsequent provision of the Code);**

10. **Any state scenic river;**

11. **Any lands owned by a municipality or school district; and**

12. **Any federal, state or local battlefield, park, forest, game or wildlife preserve, recreational area, or similar facility. Features, sites, and the like listed in 1 through 11 above need not be identified again.**

Response: Numerous federal, state, and local agencies were contacted to determine if any of the following sites or areas exist within the study area. See the DEQ Supplement for further description of the responses received.

(1) NRHP-listed resources in the proposed right-of-way for each route alternative are discussed below and included in a table in Attachment III.G.4. A discussion of potential impacts on these and other resources can be found in Sections 4.5 and 5.5 of the Environmental Routing Study and Section 2.F of the DEQ Supplement.

One NRHP-listed resource is adjacent to or within the right-of-way of the Cable Landing to Harpers Proposed Route of the Onshore Export Circuits: the Camp Pendleton/State Military Reservation Historic District (134-0413) is traversed by a 0.93-mile segment of the proposed right-of-way.

One NRHP-listed resource is adjacent to or within the right-of-way of Harpers to Fentress Proposed Route 1. The NRHP-listed Albemarle & Chesapeake Canal Historic District (131-5333) is traversed by a 0.43-mile segment of the right-of-way.

One NRHP-listed resource is adjacent to or within the right-of-way of Harpers to Fentress Alternative Route 2. The NRHP-listed Albemarle & Chesapeake Canal Historic District (131-5333) is traversed by a 0.58-mile segment of the right-of-way.

One NRHP-listed resource is adjacent to or within the right-of-way of Harpers to Fentress Alternative Route 5. The NRHP-listed Albemarle & Chesapeake Canal Historic District (131-5333) is traversed by a 0.58-mile segment of the right-of-way.

No NRHP-listed resources adjacent or within the right-of-way of the Dam Neck Route Variation.

One NRHP-listed resource is adjacent to or within the right-of-way of the Line #2085 Route Variation. The NRHP-listed Albemarle & Chesapeake Canal Historic District (131-5333) is traversed by a 0.46-mile segment of the right-of-way.

(2) The NRHP-eligible Bell House (134-0003) is adjacent to the Cable Landing to Harpers Proposed Route. The Camp Pendleton/State Military Reservation Historic District (134-0413), which is traversed by a 0.93-mile segment of the Cable Landing to Harpers Proposed Route, is both listed on the NRHP and included in the Virginia Landmarks Register ("VLR").

The NRHP-listed Albemarle & Chesapeake Canal Historic District (131-5333) is intersected by the Harpers to Fentress Proposed Route 1, and the Harpers to Fentress Alternative Routes 2 and 5. The resource is traversed by approximately

0.43 mile of Harpers to Fentress Proposed Route 1 and, 0.58 mile of Harpers to Fentress Alternative Routes 2 and 5. It is also intersected by an approximate 0.5-mile segment of the Line #2085 Route Variation.

No resources are associated with the Dam Neck Route Variation.

(3) Two NRHP-listed historic districts intersect the routes. No known proposed historic districts or locally designated historic districts intersect the proposed and alternative routes. The NRHP-listed Camp Pendleton/State Military Reservation Historic District (134-0413) is intersected by a 0.93-mile segment of the Cable Landing to Harpers Proposed Route.

The NRHP-listed Albemarle & Chesapeake Canal Historic District (131-5333) is intersected by the Harpers to Fentress Proposed Route 1, and the Harpers to Fentress Alternative Routes 2 and 5. The resource is traversed by approximately 0.43 mile of Harpers to Fentress Proposed Route 1 and, 0.58 mile of Harpers to Fentress Alternative Routes 2 and 5. It is also intersected by an approximate 0.5-mile segment of the Line #2085 Route Variation.

No resources are associated with the Damn Neck Route Variation.

(4) The known archaeological sites in the right-of-way for the proposed and alternative routes of the Overhead Transmission Circuits are summarized in the table provided in Attachment III.G.4. The sites are presented in the order they occur from the Cable Landing Location to Line #2085 Route Variation. Because portions of the proposed and alternative routes are coterminous, the same resources may occur in the right-of-way for more than one route. Out of 16 resources, four are potentially eligible for the NRHP, four are unevaluated, seven are ineligible, and one has been confirmed as no longer extant by VDHR. One of the seven ineligible sites is 44VB0280, a late 19th/early 20th century cemetery. This cemetery was identified on the property of the Kempsville Mennonite Church along North Landing Road in Virginia Beach. This small cemetery was recorded as an archaeological site as part of a survey completed in 1996 (Stuck and Higgins 1997). The site was defined on the basis on surface observation ("some fallen stones") and informant testimony. The cemetery reportedly contained 12 graves dating from the late 19th/early 20th centuries associated with the Bell family. The VCRIS indicates that the site was revisited in 2020, but no evidence of headstones, depressions, or other signs of burials were observed on the surface. Field survey would be required to confirm if burials are present at the site. No transmission structures would be installed within the site.

(5) None

(6) None

(7) None

(8) None

(9) Four types of easements are crossed by the proposed and alternative routes of the Onshore Export Circuits and Overhead Transmission Circuits, including: 1) City of Chesapeake Open Multi-Year Encroachment Protection Easement; 2) City of Chesapeake NALF Fentress Encroachment Protection Acquisition Program; 3) NALF Fentress Restrictive Easement; and NAS Oceana Restrictive Easement. See the table provided in Attachment III.G.9 for the types of easements crossed and the crossing length.

(10) One route, Harpers to Fentress Alternative Route 5, crosses the North Landing River at the northern extent of the state scenic river designation. Additionally, Harpers to Fentress Alternative Route 5 crosses the Pocaty River, a scenic designated tributary to the North Landing River.

(11) Lands owned by the Cities of Virginia Beach and Chesapeake are crossed by the routes listed in the table provided in Attachment III.G.11. No school district lands are crossed. Feature crossing tables in Appendix K of the Environmental Routing Study provide additional detail about the area of these lands affected within existing and new or expanded right-of-way.

(12) The routes do not cross battlefields, federal and state forests, or game and wildlife preserves. The table provided in Attachment III.G.12 lists the recreational areas crossed by the routes. Feature crossing tables in Appendix K of the Environmental Routing Study provide additional detail about the recreational areas affected within existing and new or expanded right-of-way.

Attachment III.G.4: Archaeological Sites in the Right-of-Way for the Proposed and Alternative Routes

Route Alternative	Site Number	Description	NRHP Status
Onshore Export Circuits – Cable Landing to Harpers Proposed Route	44VB0204	Historic trash scatter (Antebellum Period, Civil War, Reconstruction and Growth)	Not eligible
	44VB0361	Historic farmstead (Reconstruction and Growth, The New Dominion, World War I to World War II)	Not eligible
	44VB0389	Prehistoric lithic scatter (Pre-Contact) Historic architectural remains (The New Dominion, World War I to World War II)	Not eligible
	44VB0395	Prehistoric lithic scatter (Pre-Contact)/ Historic artifact scatter (Antebellum Period, Civil War, Reconstruction and Growth, The New Dominion, World War I to World War II)	Not eligible
	44VB0396	Historic artifact scatter (The New Dominion, World War I to World War II)	Not eligible
Harpers to Fentress Proposed Route 1 and Harpers to Fentress Alternative Hybrid Route	44CS0250	Multicomponent prehistoric camp (Middle Archaic, Late Archaic)	Not evaluated
	44VB0162	Prehistoric camp (Early Archaic, Middle Archaic, Late Archaic, Early Woodland, Middle Woodland, Late Woodland) / Historic cemetery (Antebellum Period, Civil War, Early National Period, Post-Cold War, Reconstruction and Growth, The New Dominion, World War I to World War II)	Potentially eligible
	44VB0274	Prehistoric artifact scatter (Pre-contact) / Historic farmstead (Antebellum Period, Civil War, Reconstruction and Growth)	Not eligible
	44VB0306	Salem Canal (Channelized Segment of North Landing River) (Antebellum Period, Civil War, Early National Period, Post-Cold War, Reconstruction and Growth, The New Dominion, World War I to World War II)	Not extant
	44VB0314	Historic dwelling (Antebellum Period, Civil War, Reconstruction and Growth)	Not eligible
Harpers to Fentress Alternative Route 2	44VB0274	Prehistoric artifact scatter (Pre-contact) / Historic farmstead (Antebellum Period, Civil War, Reconstruction and Growth)	Not eligible
	44VB0275	Historic trash scatter (Antebellum Period, Civil War, Reconstruction and Growth)	Potentially eligible
	44VB0314	Historic dwelling (Antebellum Period, Civil War, Reconstruction and Growth)	Not eligible
Harpers to Fentress	44CS0016	Prehistoric site (Early Archaic, Middle Archaic, Late Archaic)	Not evaluated

Route Alternative	Site Number	Description	NRHP Status
Alternative Route 5	44CS0156	Multicomponent historic artifact scatter (Colony to Nation, Contact Period, Early National Period, Post-Cold War, Reconstruction and Growth, The New Dominion, World War I to World War II)	Not evaluated
	44VB0263	Historic artifact scatter (Antebellum Period, Civil War, Early National Period, Reconstruction and Growth)	Potentially eligible
	44VB0267	Multicomponent historic trash scatter (Antebellum Period, Civil War, Reconstruction and Growth, The New Dominion, World War I to World War II)	Potentially eligible
	44VB0274	Prehistoric artifact scatter (Pre-contact) / Historic farmstead (Antebellum Period, Civil War, Reconstruction and Growth)	Not eligible
	44VB0275	Historic trash scatter (Antebellum Period, Civil War, Reconstruction and Growth)	Potentially eligible
	44VB0280	Late 19th/early 20th century cemetery	Not eligible
	44VB0314	Historic dwelling (Antebellum Period, Civil War, Reconstruction and Growth)	Not eligible
Dam Neck Route Variation	None Identified	Not Applicable	Not Applicable
Line #2085 Route Variation	44VB0263	Historic artifact scatter (Early National Period, Antebellum Period, Civil War, Reconstruction and Growth)	Potentially eligible
	44VB0267	Historic trash scatter (19th Century: 2nd half, 20th Century: 1st half)	Potentially eligible
	44VB0275	Historic trash scatter (19th Century: 1st half and 2nd half)	Potentially eligible
	44VB0280	Late 19th/early 20th century cemetery	Not eligible

Attachment III.G.9: Easements Crossed by the Proposed and Alternative Routes

Easements	Unit	CLH Proposed Route	HF Proposed Route 1	HF Alternative Route 2	HF Alternative Route 5	HF Alternative Hybrid Route	Dam Neck Route Variation	Line #2085 Route Variation
U.S. Navy Restrictive Use Easements								
Naval Air Station (NAS) Oceana	miles	<0.1	0.5	0.5	0.5	0.5	1.5	0.0
Naval Auxiliary Landing Field Fentress (NALF)	miles	0.0	1.9	4.3	5.5	1.9	0.0	1.0
City of Chesapeake Easements								
City of Chesapeake NALF Fentress Encroachment Protection Acquisition Parcels	miles	0.0	0.7	0.7	<0.1	0.7	0.0	0.0
City of Chesapeake Multi-Year Encroachment Protection Easements	miles	0.0	1.2	0.0	0.0	1.2	0.0	0.0

CLH = Cable Landing to Harpers
HF = Harpers to Fentress

Attachment III.G.11: Cities of Virginia Beach and Chesapeake Lands Crossed by the Proposed and Alternative Routes

Feature	Unit	CLH Proposed Route	HF Proposed Route 1	HF Alternative Route 2	HF Alternative Route 5	HF Alternative Hybrid Route	Dam Neck Route Variation	Line #2085 Route Variation
City of Virginia Beach Lands	miles	0.1	4.4	5.0	5.7	4.4	0.5	2.3
City of Chesapeake Lands	miles	0.0	1.9	0.7	<0.1	1.9	0.0	0.0

CLH = Cable Landing to Harpers
HF = Harpers to Fentress

Attachment III.G.12: Recreational Areas Affected by the Proposed and Alternative Routes

Recreation Areas	Unit	CLH Proposed Route	HF Proposed Route 1	HF Alternative Route 2	HF Alternative Route 5	HF Alternative Hybrid Route	Dam Neck Route Variation	Line #2085 Route Variation
Parks								
Owls Creek Preservation Area								
Crossing Length	miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Area Affected	acres	<0.1	0.0	0.0	0.0	0.0	0.0	0.0
Holland Pines Park								
Crossing Length	miles	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Area Affected	acres	0.0	0.8	0.8	0.8	1.3	7.7	0.0
Woods of Piney Grove Park								
Crossing Length	miles	0.0	<0.1	<0.1	<0.1	0.1	0.0	0.0
Area Affected	acres	0.0	0.6	0.6	0.6	0.4	0.0	0.0
Virginia Beach Sportsplex								
Crossing Length	miles	0.0	0.1	0.1	0.1	0.1	0.0	0.0
Area Affected	acres	0.0	1.7	1.7	1.7	1.7	0.0	0.0
U.S. Field Hockey Complex								
Crossing Length	miles	0.0	0.5	0.6	0.9	0.5	0.0	0.3
Area Affected	acres	0.0	8.7	10.1	15.1	8.7	0.0	5.3
Princess Anne Athletic Complex								
Crossing Length	miles	0.0	0.7	0.0	0.0	0.7	0.0	0.0
Area Affected	acres	0.0	10.9	0.0	0.0	10.9	0.0	0.0
Highland Meadows Park								
Crossing Length	miles	0.0	0.1	0.0	0.0	0.1	0.0	0.0

Recreation Areas	Unit	CLH Proposed Route	HF Proposed Route 1	HF Alternative Route 2	HF Alternative Route 5	HF Alternative Hybrid Route	Dam Neck Route Variation	Line #2085 Route Variation
Area Affected	acres	0.0	0.8	0.0	0.0	0.8	0.0	0.0
Dewberry Farms Parcel								
Crossing Length	miles	0.0	<0.1	0.0	0.0	<0.1	0.0	0.0
Area Affected	acres	0.0	0.4	0.0	0.0	0.4	0.0	0.0
Indian River Farms Park								
Crossing Length	miles	0.0	0.2	0.0	0.0	0.2	0.0	0.0
Area Affected	acres	0.0	4.2	0.0	0.0	4.2	0.0	0.0
Golf Courses								
Aeropines Golf Course								
Crossing Length	miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Area Affected [a]	acres	0.0	7.6	7.6	7.6	0.0	0.0	0.0
Virginia Beach National Golf Course								
Crossing Length	miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Area Affected	acres	0.0	<0.1	<0.1	<0.1	<0.1	0.0	0.0
Battlefield Golf Club								
Crossing Length	miles	0.0	1.2	1.2	0.0	1.2	0.0	0.0
Area Affected	acres	0.0	22.6	22.6	0.0	22.6	0.0	0.0
Trails								
Seashore to Cypress Loop of the Virginia Birding and Wildlife Coastal Trail	number	1	1	1	1	1	0	1
Rudee Inlet Water Trail	number	1	0	0	0	0	0	0
Southeast Coast Saltwater Paddling Trail	number	0	1	1	1	2	1	0

Recreation Areas	Unit	CLH Proposed Route	HF Proposed Route 1	HF Alternative Route 2	HF Alternative Route 5	HF Alternative Hybrid Route	Dam Neck Route Variation	Line #2085 Route Variation
ITA Trail Network	number	0	1	1	1	1	0	0
Other Recreational Areas								
Virginia Aquarium and Marine Sciences Center								
Crossing Length	miles	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Area Affected	acres	1.9	0.0	0.0	0.0	0.0	0.0	0.0
North Landing River	number	1	1	1	1	1	0	1
Albemarle & Chesapeake Canal	number	0	1	1	0	1	0	1

CLH = Cable Landing to Harpers

HF = Harpers to Fentress

[a] *The 7.6 acres affected would be within the Harpers Switching Station site.*

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

H. List any registered aeronautical facilities (airports, helipads) where the proposed route would place a structure or conductor within the federally-defined airspace of the facilities. Advise of contacts, and results of contacts, made with appropriate officials regarding the effect on the facilities' operations.

Response: The Federal Aviation Administration ("FAA") is responsible for overseeing air transportation in the United States. The FAA manages air traffic in the United States and evaluates physical objects that may affect the safety of aeronautical operations through an obstruction evaluation. The prime objective of the FAA in conducting an obstruction evaluation is to ensure the safety of air navigation and the efficient utilization of navigable airspace by aircraft.

The Company reviewed the FAA's website[38] to identify airports within 10 miles of the proposed and alternative routes. Based on this review, the following FAA-restricted airports were identified, as shown in the table below.

Airport Name	Approximate Distance and Direction from Proposed Dominion Energy Virginia Facility (nautical miles)	Use
NAS Oceana	o 0.4 west of Cable Landing to Harpers Proposed Route o 1.3 northwest of Harpers to Fentress Proposed Route 1 Harpers to Fentress Proposed Route 1, Harpers to Fentress Alternative Hybrid Route, and Harpers to Fentress Alternative Routes 2 and 5 o 1.3 northwest of Harpers Switching Station	Military Use
NALF Fentress	o 1.3 east of Harpers to Fentress Proposed Route 1 and Harper to Fentress Hybrid Route o 1.1 south of Harpers to Fentress Alternative Route 2 and Line #2085 Route Variation o 0.6 west of Harpers to Fentress Alternative Route 5	Military Use
Sentara Princess Anne Heliport	o 1.0 northwest of Harpers to Fentress Proposed Route 1, Harpers to Fentress Alternative Hybrid Route, and Harpers to Fentress Alternative Routes 2 and 5	Private Use

[38] *See* https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

Airport Name	Approximate Distance and Direction from Proposed Dominion Energy Virginia Facility (nautical miles)	Use
Virginia Beach Municipal Heliport	○ 1.2 south of Harpers to Fentress Proposed Route 1, Harpers to Fentress Alternative Hybrid Route, and Harpers to Fentress Alternative Routes 2 and 5	Private Use
LZ Alfa Heliport	○ 2.0 east of Cable Landing to Harpers Proposed Route	Military Use
Virginia Beach Airport	○ 3.0 east of Harpers to Fentress Alternative Route 5	Private Use
Breeden Company Heliport	○ 3.0 northwest of Cable Landing to Harpers Proposed Route	Private Use
Virginia Beach General Hospital Heliport	○ 3.0 north of Cable Landing to Harpers Proposed Route	Private Use
Chesapeake General Hospital Heliport	○ 4.3 northwest of Harpers to Fentress Proposed Route 1, Harpers to Fentress Alternative Hybrid Route, and Harpers to Fentress Alternative Routes 2 and 5	Private Use
Armada/Hoffler Business Center Heliport	○ 4.8 northwest of Harpers to Fentress Proposed Route 1 and Harpers to Fentress Alternative Hybrid Route ○ 5.1 northwest of Harpers to Fentress Alternative Route 2 ○ 6.2 north of Harpers to Fentress Alternative Route 5	Private Use
Division Five Heliport	○ 5.5 northwest of Harpers to Fentress Proposed Route 1 and Harpers to Fentress Alternative Hybrid Route ○ 5.7 northwest of Harpers to Fentress Alternative Route 2 ○ 6.8 north of Harpers to Fentress Alternative Route 5	Private Use
Chesapeake Regional Airport	○ 6.1 west of Harpers to Fentress Proposed Route 1, Harpers to Fentress Alternative Hybrid Route, and Harpers to Fentress Alternative Routes 2 and 5	Public Use
Sentara Leigh Hospital Heliport	○ 6.6 northwest of Harpers to Fentress Proposed Route 1 and Harpers to Fentress Alternative Hybrid Route ○ 7.2 northwest of Harpers to Fentress Alternative Routes 2 and 5	Private Use

Airport Name	Approximate Distance and Direction from Proposed Dominion Energy Virginia Facility (nautical miles)	Use
Norfolk International Airport	○ 8.8 northwest of Harpers to Fentress Proposed Route 1 and Harpers to Fentress Alternative Hybrid Route	Public Use
WAVY TV Heliport	○ 9.0 northwest of Harpers to Fentress Proposed Route 1 and Harpers to Fentress Alternative Hybrid Route ○ 9.1 northwest of Harpers to Fentress Alternative Route 2	Private Use

In an email dated September 27, 2021, the Virginia Department of Aviation ("DOAv") stated that a Form 7460 will need to be submitted to the FAA to initiate an aeronautical study to ensure that the proposed Virginia Facilities will not constitute a hazard to air navigation. The email is included as Attachment 2.N.1 of the DEQ Supplement. See also Section 2.N of the DEQ Supplement.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

I. Advise of any scenic byways that are in close proximity to or that will be crossed by the proposed transmission line and describe what steps will be taken to mitigate any visual impacts on such byways. Describe typical mitigation techniques for other highways' crossings.

Response: A segment of Indian River Road, a Virginia Byway, is crossed by the Harpers to Fentress Proposed Route 1, Harpers to Fentress Alternative Routes 2 and 5, and the Harpers to Fentress Alternative Hybrid Route. This designation identifies roads "having relatively high aesthetic or cultural value, leading to or within areas of historical, natural or recreational significance."[39] The designation does not carry land use or visual impact controls, but instead recognizes roads "controlled by zoning or otherwise, so as to reasonably protect the aesthetic or cultural value of the highway."[40]

The crossing of Indian River Road by both the Harpers to Fentress Proposed Route 1 and the Harpers to Fentress Alternative Hybrid Route will occur at a location where the new transmission line will be constructed along the Company's existing Line #271 corridor. In addition, the crossing of Indian River Road by Harpers to Fentress Alternative Route 5 will occur at a location where this route will be constructed adjacent to the Company's existing Line #2085. This will significantly minimize any visual impacts to Indian River Road by these routes.

The design and routing of the Onshore Export Circuits and Overhead Transmission Circuits also incorporates several features and embedded controls intended to reduce visual impacts. These controls include:

- Installation of the Onshore Export Circuits underground between the Cable Landing Location and the Harpers Switching Station; and
- Use of weathering steel materials for transmission towers, which can appear similar in character to wooden transmission and distribution poles commonly viewed in the landscape.

[39] VDOT (Virginia Department of Transportation). 2019. Virginia's Scenic Byways. Accessed: June 2021. Retrieved from: http://www.virginiadot.org/programs/prog-byways.asp.
[40] Va. Code § 33.2-406.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

J. Identify coordination with appropriate municipal, state, and federal agencies.

Response: The following is a discussion of the Company's extensive coordination with municipal, state, and federal agencies regarding the Virginia Facilities.

Agency Engagement

- Letters dated September 28, 2021, were submitted to the City of Virginia Beach and the City of Chesapeake, to describe the CVOW Project and request comment on the Virginia Facilities. See Section V.D. The Company also met with staff and leadership from the Cities to detail the routes and solicit feedback.

- Letters were submitted to the agencies listed in Section V.C on September 23 and September 30, 2021, describing the CVOW Project and requesting comment on the Virginia Facilities. See Attachment 2 of the DEQ Supplement.

- The Company submitted a GIS shapefile of the proposed and alternative routes to the DCR's Division of Natural Heritage and Virginia Outdoors Foundation ("VOF") on September 24 and October 3, 2021, respectively.

- Coordination with the Corps, DEQ, VMRC, and the City of Virginia Beach and Chesapeake transportation departments will take place as appropriate to obtain necessary approvals for the Virginia Facilities.

Tribal Engagement

Consistent with the Company's goal to continue to strengthen its relationships with tribes and to work directly with tribes to understand their concerns and determine appropriate measures to avoid or minimize our impacts where possible, the Company conducted multiple meetings with tribes known to have interests in the Hampton Roads region, or those otherwise interested in the CVOW Project. The Company anticipates that those discussions will help support the federal permitting process being led by BOEM in assessing potential impacts consistent with the requirements of Section 106 of the National Historic Preservation Act and the National Environmental Policy Act ("NEPA").

Dominion Energy Virginia is committed to creating positive ongoing relationships with Tribal Communities in its current and future geographic areas of operation. This commitment is evidenced by having a dedicated employee with the primary responsibilities to serve as a liaison with federally recognized and state recognized tribes. The Company also is committed to and practices early engagement with federally recognized, state recognized, and other tribal communities when project impacts to tribal lands, historic territory, natural or cultural resources may exist. As part of this effort, and to better inform routing considerations and ongoing tribal

engagement, the Company enlisted a study summarizing analysis of prehistoric site sensitivities based on the Virginia Facilities study area in Hampton Roads. The study focuses on understanding and identifying any documented areas of significant prehistoric sites or of potential tribal interests (i.e. large villages, locations of great houses, areas of ceremonial significance, etc.) located within the study area. Previously recorded site data, as well as tribal data and contact period maps, were consulted for this step of the analysis. See Attachment III.J.1.

2020 Tribal Outreach

Dominion Energy Virginia held a Tribal Pre-Survey meeting on March 10, 2020. Invitation letters for the Tribal Pre-Survey meeting were sent via certified mail to tribes within and outside of Virginia. Tribes included Cheroenhaka (Nottoway) Indian Tribe; Chickahominy Indian Tribe; Chickahominy Indian Tribe Eastern Division; Eastern Shawnee Tribe of Oklahoma; Lenape Tribe of Delaware; Mattaponi Tribe; Monacan Indian Nation; Nansemond Indian Nation; Narragansett Indian Tribe; Nottoway Indian Tribe of Virginia; Pamunkey Indian Tribe; Patawomeck Indian Tribe of Virginia; Rappahannock Indian Tribe; Shinnecock Indian Nation; and Upper Mattaponi Tribe.[41] See Attachment III.J.2 for a template of the invitation letters. Representatives from the Chickahominy Indian Tribe and the Pamunkey Indian Tribe attended the Tribal Pre-Survey meeting. See Attachment III.J.3 for a copy of the presentation given by the Company at that meeting.

On July 27, 2020, Dominion Energy Virginia sent a letter to same tribes identified above via certified mail providing an update on the status of surveys and an overview of next steps for the CVOW Project. See Attachment III.J.4 for a template of the letter.

2021 Tribal Outreach

Beginning in January 2021, the Company initiated individual conversations and briefings with the following tribes[42] potentially interested in the CVOW Project, as a whole, and the Virginia Facilities, specifically.

- Cheroenhaka Nottaway Nation – In late January 2021, Chief Walt Brown was provided an update on the project and offered a more detailed update for other Tribal Council members by the project team. Chief Brown was invited to another CVOW update focusing on the onshore electric transmission component of the project held on March 17, 2021.

- Chickahominy Tribe – In January 2021, Dana Adkins, Environmental Director for the Chickahominy Tribe, was provided an update and was offered a more

[41] List of organizations or individuals does not mean to infer their support or opposition of the Project, but represents the fact that the Company engaged with listed stakeholders.
[42] *See supra* n. 41.

detailed meeting with the project team. Mr. Adkins received a detailed briefing from project experts on February 24, 2021.

- Chickahominy Indians - Eastern Division - In January 2021, Jessica Phillips, Environmental Director for Chickahominy-Eastern Division was provided an update and was offered a more detailed meeting with the project team. Ms. Phillips received a second briefing from the project team on February 24, 2021.

- Mattaponi Tribe – In January 2021, Chief Mark Custalow was provided an update and was also offered a more detailed update by the project team. Chief Custalow received a second briefing on February 24, 2021. Chief Custalow was invited to another CVOW update focusing on the onshore electric transmission component of the project held on March 17, 2021.

- Monacan Indian Nation – Chief Branham was invited to the virtual CVOW briefing on the onshore electric transmission component of the project on March 17, 2021.

- Nansemond Tribe – The Company's Tribal Relation's Liaison Manager has had numerous conversations in January, February, and March 2021 with Assistant Chief Keith Anderson regarding the project.

- Nottoway Indian Tribe of Virginia – Chief Alston and Beth Roach (a tribal council member) were invited to the virtual briefing on the onshore Virginia Facilities on March 17, 2021.

- Patawomeck Indians of Virginia – Minnie Lightner, Tribal Administrator for the Patawomeck, attended a virtual update on the project on March 17, 2021. A briefing for Chief Charles Bullock of the Patawomeck Tribe and several Tribal Council Members was held on August 26, 2021, at their Tribal Center.

- Pamunkey Indian Tribe – Council Member Ashley Spivey was contacted in early February regarding interest in a detailed briefing on the project. The briefing was held on February 18, 2021.

- Rappahannock Indian Tribe – In February 2021, Chief Anne Richardson was provided a general update regarding the project and was offered a more detailed briefing with the project team. Chief Anne received the detailed briefing on April 1, 2021. On behalf of the Tribe, Ellen Chapman attended an update focusing on the onshore Virginia Facilities on March 17, 2021.

- Upper Mattaponi Tribe – In January 2021, Chief Adams was provided an update and was also offered a more detailed briefing by the project team. Chief Adams received the detailed briefing on February 17, 2021.

- On February 17, 2021, the Company sent a letter to the following tribes explaining the project and inviting them to provide us input, as well as a meeting to discuss the project. Tribes included were: Cheroenhaka (Nottoway) Indian Tribe; Chickahominy Indian Tribe; Chickahominy Indian Tribe Eastern Division; Mattaponi Tribe; Monacan Indian Nation; Nansemond Indian Nation; Nottoway Indian Tribe of Virginia; Pamunkey Indian Tribe; Patawomeck Indian Tribe of Virginia; Rappahannock Tribe; Upper Mattaponi Indian Tribe; and the Delaware Indian Tribe. A letter template is provided as Attachment III.J.5.

- On March 17, 2021, Dominion Energy Virginia hosted a virtual meeting in which a number of Native American Tribes were invited, in addition to historical, cultural, and scenic advocacy groups. During the meeting, the Company introduced the project, opened the lines of communications, described the types of feedback the Company was seeking, and answered their questions. The Company also committed to having a follow-up meeting once project planning progressed. A copy of the presentation from the March 17, 2021 meeting is provided as Attachment III.K.2.

- On April 15, 2021, the Company hosted a virtual meeting for the Virginia Tribes to provide an overall project update and to receive feedback on the Terrestrial Archeology Survey Plan for the Virginia Facilities. Letters were sent to the following tribes: Cheroenhaka (Nottoway) Indian Tribe; Chickahominy Indian Tribe; Chickahominy Indian Tribe Eastern Division; Delaware Nation; Delaware Tribe of Indians; Eastern Shawnee Tribe of Oklahoma; Lenape Tribe of Delaware; Mattaponi Tribe; Meherrin Indian Tribe; Monacan Indian Nation; Nansemond Indian Nation; Narragansett Indian Tribe; Nottoway Indian Tribe of Virginia; Pamunkey Indian Tribe; Patawomeck Indian Tribe of Virginia; Rappahannock Indian Tribe; Shinnecock Indian Nation; and Upper Mattaponi Tribe. The Nansemond, Upper Mattaponi, Rappahannock and Chickahominy Eastern Division Tribes attended the virtual briefing. See Attachment III.J.6 for a template of the letter sent to the tribes regarding the virtual meeting and a copy of the presentation given by the Company.

- On May 11, 2021, Dominion Energy Virginia hosted a virtual meeting in which a number of Native American Tribes were invited, in addition to historical, cultural, and scenic advocacy groups. During the meeting, the Company provided an update on project planning, including approach to Terrestrial Archelogy Survey Plan and a routing overview for the Virginia Facilities. See Attachment III.K.3 for a copy of the presentation given at that virtual meeting.

- An example of a general presentation used to update and engage tribal communications is provided as Attachment III.J.7.

See Attachment III.J.8 for a full listing, as of the end of September 2021, of outreach and coordination activities with appropriate municipal, state, and federal

agencies, and Attachment III.J.9 for a listing of outreach and coordination activities with Native American Tribes. Engagement is continuing and ongoing.

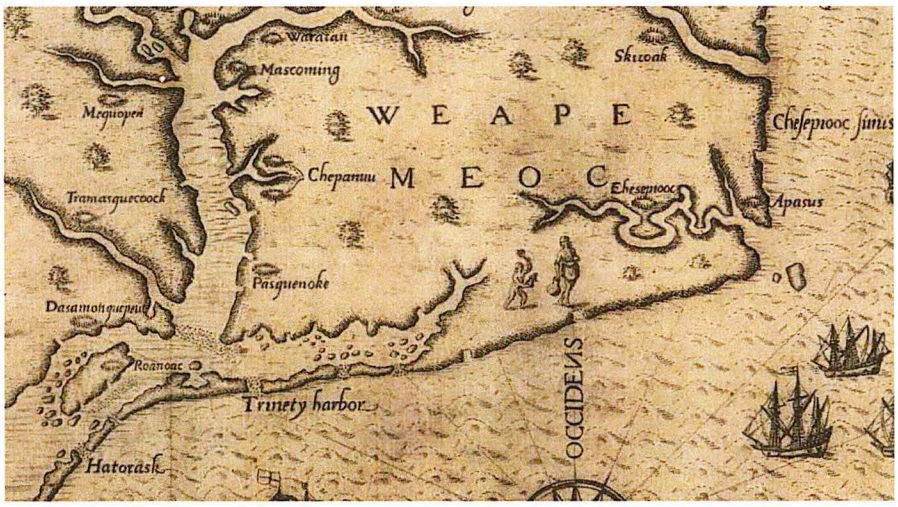
REPORT >

CVOW – Prehistoric Sites Sensitivity Report

DATE > MARCH 2021

LOCATION > Cities of Virginia Beach and Chesapeake, Virginia

PREPARED FOR >
Dominion Energy



PREPARED BY >
Dutton + Associates, LLC

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

CVOW – Prehistoric Sites Sensitivity Report

Cities of Virginia Beach and Chesapeake. Virginia

Prepared For:
Dominion Energy
600 E Canal St
Richmond, Virginia 23219

Prepared By:
Dutton + Associates, LLC
1115 Crowder Drive
Midlothian, Virginia 23113
804.897.1960

Principal Investigator
David H. Dutton, M.A.

March 2021

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

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1. INTRODUCTION

The study encompasses approximately 70,535 acres of land located within the Cities of Chesapeake and Virginia Beach, Virginia, between the shoreline of the Atlantic Ocean and the Fentress Substation in Chesapeake. The study area includes Rudee Inlet and stretches of the North Landing River, West Neck Creek, and tributaries of Shipps Bay/Back Bay. This report provides background information on the presence and history of Indigenous communities in the vicinity of the study area during the prehistoric, contact, and early colonial periods (ca. 15000 B.C.E. – 1700 C.E.). It also provides a model to predict areas within the study boundary with a high potential to contain prehistoric or contact period archaeological sites.

INDIGENOUS COMMUNITIES

During the Late Woodland and Contact periods (ca. 1000 – 1650 C.E.), the area now contained by the City of Chesapeake and the City of Virginia Beach was occupied by the Chesapeake Indians. This cultural group was a member of the Powhatan Paramount Chiefdom, a coalition of Algonquin speaking groups that controlled the southern portion of the Chesapeake Bay and its major tributaries.

Following contact with European colonizers, Indigenous communities in the Chesapeake region were among the first to experience displacement and legal pressure to assimilate into hegemonic English colonial society. Today, there is no formal tribal entity that claims the land occupied by the Chesapeake. It is hypothesized that most members of the Chesapeake adopted English names and cultural practices, willingly and unwillingly, or traveled west to assimilate into the Nansemond tribe, whose leadership was signatory to the Treaty of 1677 with the British colonial government and retained a coherent tribal identity into the present day. The Nansemond Indian Nation gained federal recognition in 2017. The ancestral lands of the Nansemond Indian Nation are located along both sides of the Nansemond River; following colonization, many Nansemond were displaced eastward toward the edge of the Great Dismal Swamp.

Although many consider the Chesapeake Indians to be lost or extinct as a cultural entity, it is probable that many descendants of the Chesapeake Indians live in the area today. In relation to cultural resources and events in the Cities of Chesapeake and Virginia Beach, the Nansemond Tribe acts as representative for the Chesapeake Indians.

PREVIOUSLY CONDUCTED SURVEYS

A total of 76 Phase I archaeological surveys have been conducted within the study area (Table 1-1, Figure 1-1). Two surveys that covered the large areas include CS-019, conducted in 1989, and VB-104, conducted in 1998. The age of these surveys disqualifies them from use for current projects according to VDHR guidelines. The remaining surveys cover small or narrow areas within the study area.

Table 1-1: Previously conducted Phase I archaeological surveys located inside the project area.

VDHR ID#	Title	Author	Year
CS-015	A Phase I Cultural Resource Survey of the Proposed Route 168 Project, City of Chesapeake, Virginia	(College of) William and Mary Center for Archaeological Research	1989
CS-017	A Phase I Cultural Resource Survey of New Alignments for the Proposed Route 168 Project, City of Chesapeake, Virginia	(College of) William and Mary Center for Archaeological Research	1989
CS-019	Phase I Cultural Resource Survey of the Proposed Build Alternatives for the Southeastern Expressway in the Cities of Chesapeake and Virginia Beach, Virginia	Mid-Atlantic Archaeological Research (MAAR) Associates, Inc.	1989
CS-023	A Phase I Cultural Resource Survey of Sections of New Alignments and Interchanges for the Proposed Route 168 Project, City of Chesapeake, Virginia	(College of) William and Mary Center for Archaeological Research	1991
CS-034	Phase I Archeological Survey of Approximately 2,000 Acres at Naval Air Station Oceana, Virginia Beach, Virginia, and Naval Auxiliary Landing Field Fentress, Chesapeake City, Virginia	R. Christopher Goodwin and Associates, Inc.	1994
CS-044	Additional Phase I Cultural Resource Survey of Revised Alignments for Proposed Southeastern Expressway, Cities of Chesapeake and Virginia Beach, Virginia	(College of) William and Mary Center for Archaeological Research	1994
CS-049	Supplemental Archaeological Investigations for Proposed Route 168 Project, City of Chesapeake, Virginia	Louis Berger Group (Louis Berger and Associates)	1999
CS-050	Supplemental Archaeological Investigations for Proposed Route 168 Project, City of Chesapeake, Virginia	Louis Berger Group (Louis Berger and Associates)	1999
CS-070	Centerville Turnpike Interceptor Force Main Phase I Intensive Cultural Resources Survey, City of Chesapeake	Browning Associates, Ltd.	1994
CS-078	Archaeological Survey, Proposed Southeastern Parkway and Greenbelt, Cities of Chesapeake and Virginia Beach, Virginia	Coastal Carolina Research	2005
CS-101	An Archaeological Survey of the Proposed Mt. Pleasant Road Project, City of Chesapeake, Virginia	(College of) William and Mary Center for Archaeological Research	2010
CS-104	Phase I Cultural Resources Survey of Greenhaven at Murray Drive Drainage Easement Acquisition From U.S. Navy, City of Chesapeake, Virginia	Circa-Cultural Resource Management, LLC	2010
CS-127	Phase I Cultural Resources Survey of Fieldstone Property, City of Chesapeake, Virginia	Circa-Cultural Resource Management, LLC	2015
CS-137	Phase I Cultural Resource Survey of the ±233-Hectare (±576-Acre) Bedford Solar Project Area, City of Chesapeake, Virginia	Dutton & Associates	2018
CS-155	Phase I Cultural Resources Survey of Camden Haven, City of Chesapeake, Virginia	Circa-Cultural Resource Management, LLC	2020
NH-003	Appendix B (Nonpublic) of the Draft Environmental Impact Statement (DEIS) for Alternative Location of a Landing Craft Air Cushion (LCAC) Operational Base on the East Coast of the United States	Water and Air Research, Inc.	1983
NR-049	Phase I Cultural Resources Survey of the Proposed Norfolk/Virginia Beach Light Rail, Cities of Norfolk and Virginia Beach, Virginia	Gray and Pape, Inc.	1998
VB-011	Draft Final Ecological Evaluation for the Fleet Combat Training Center Atlantic, Dam Neck, Virginia Beach, Virginia. Appendix A	EDAW, Inc.	1982

VDHR ID#	Title	Author	Year
VB-012	Cultural Resources Survey of the Phase I Wetlands Mitigation Site FCTC, Dam Neck, Virginia	Water and Air Research, Inc.	1984
VB-015	An Archaeological Survey of the Virginia National Guard Camp Pendleton Training Camp Site, City of Virginia Beach, Virginia	US Department of Military Affairs	1987
VB-017	A Phase I Archaeological Reconnaissance Survey of the Proposed Improvements to the Entrance to Oceana Naval Air Station, Virginia Beach, Virginia	Virginia Research Center for Archaeology	1980
VB-018	Phase I Cultural Resources Survey of Highway Improvements Along Dam Neck Road in the City of Virginia Beach, Virginia	Virginia Commonwealth University Archaeology Research Center	1987
VB-025	Review and Compliance Phase I Reconnaissance Summary: North Landing River Bridge Replacement	Virginia Research Center for Archaeology	1980
VB-032	Phase I Cultural Resource Survey, Old Landstown Road Tract, Virginia Beach, Virginia	Mid-Atlantic Archaeological Research (MAAR) Associates, Inc.	1991
VB-033	A Phase I Cultural Resource Evaluation of a Section of Route 165, Virginia Beach, Virginia	James Madison University (Archaeological Research Center/Laboratory)	1987
VB-034	A Cultural Resources Assessment of Two Areas, U. S. Navy, Fleet Combat Training Center Atlantic, Dam Neck Virginia Beach, Virginia	U.S. Army Corps of Engineers	1987
VB-035	An Archeological Survey of the Naval Amphibious Base Annex, Camp Pendleton, Virginia Beach, Virginia	U.S. Army Corps of Engineers	1987
VB-036	A Cultural Resource Survey of a Proposed Wetlands Mitigation Site, U. S. Navy Fleet Combat Training Center Atlantic, Dam Neck Virginia Beach, Virginia	U.S. Army Corps of Engineers	1987
VB-037	Phase I Cultural Resource Survey Along Proposed Improvements to Oceana Boulevard in Virginia Beach, Virginia	Virginia Commonwealth University Archaeology Research Center	1991
VB-038	Phase I Archaeological Survey of a Proposed U. S. Navy Construction Project at Owl Creek in Virginia Beach, Virginia	(The) Benham Group	1992
VB-045	Phase I Archeological Investigations for Proposed Vegetation Maintenance/ Management Areas and a Proposed Wetlands Restoration Project, Naval Air Station, Oceana, Virginia Beach, Virginia	R. Christopher Goodwin and Associates, Inc.	1993
VB-047	Phase I Cultural Resource Survey, Birdneck Road, City of Virginia Beach, Virginia	Louis Berger Group (Louis Berger and Associates)	1993
VB-050	Phase I Cultural Resources Survey of Proposed Improvements to London Bridge Road in Virginia Beach, Virginia	Virginia Commonwealth University Archaeology Research Center	1994
VB-064	Phase I Archaeological Identification Survey in Support of 1995 Base Realignment and Closure, Naval Air Station Oceana, Virginia Beach, Virginia	Ecology and Environment	1996
VB-066	An Addendum to Phase I Cultural Resource Study of Proposed Improvements to Oceana Boulevard and First Colonial Road in Virginia Beach, Virginia	Virginia Department of Transportation (Highways and Transportation)	1997
VB-069	Phase I Archaeological Survey of Proposed Landstown-West Landing, 230 KV Transmission Line, Virginia Beach, Virginia	(College of) William and Mary Center for Archaeological Research	1997

VDHR ID#	Title	Author	Year
VB-071	A Supplemental Identification Survey of Proposed Oceana Boulevard-First Colonial Road Project, City of Virginia Beach, Virginia: An Addendum to Phase I Cultural Resource Survey Along Proposed Improvements to Oceana Boulevard In Virginia Beach, Virginia	(College of) William and Mary Center for Archaeological Research	1997
VB-079	Archaeological Survey along a Portion of Holland Road (Route 410), the City of Virginia Beach, Virginia	Gray and Pape, Inc.	2000
VB-082	Archaeological Identification Survey, Princess Anne Road and Ferrell Parkway, City of Virginia Beach, Virginia	Coastal Carolina Research	2000
VB-084	Phase I Archaeological Survey of Indian River Road and Elbow Road, City of Virginia Beach, Virginia	Cultural Resources, Inc.	1998
VB-086	Archaeological Survey Associated with the Proposed Nimmo (Ferrell) Parkway Project, City of Virginia Beach, Virginia	(College of) William and Mary Center for Archaeological Research	2002
VB-087	Phase I Archeological Survey of Approximately 583 Acres at Naval Air Station Oceana, Virginia Beach, Virginia	R. Christopher Goodwin and Associates, Inc.	1996
VB-088	Archaeological Survey of Route 165 (Princess Anne Road) Between Dam Neck Road and Judicial Boulevard, Virginia Beach, Virginia: Management Summary	Louis Berger Group (Louis Berger and Associates)	2002
VB-090	An Archaeological Survey of the Proposed Wetland Mitigation Site for the Princess Anne Road/Nimmo (Ferrell) Parkway Project, City of Virginia Beach, Virginia	(College of) William and Mary Center for Archaeological Research	2003
VB-091	Phase I Archaeological Identification Survey in Support of 1995 Base Closure and Realignment, Naval Air Station Oceana, Virginia Beach, Virginia	Engineering and Environment, Inc.	1996
VB-095	Archaeological Identification Survey and Archaeological Evaluations of Nine Sites Along the Proposed Landstown-West Landing 230 KV Transmission Line, City of Virginia Beach, Virginia	Gray and Pape, Inc.	2002
VB-097	Supplemental Archaeological Survey of Two Canals within the Proposed Realignment of Elbow Road, City of Virginia Beach, Virginia	Virginia Department of Transportation (Highways and Transportation)	2003
VB-098	Phase I Archaeological Identification Survey of the Proposed 3-Module Hangar and Parking Apron Expansion, Naval Air Station Oceana, Virginia Beach, Virginia	Engineering and Environment, Inc.	1997
VB-099	Phase I Archaeological Identification Survey of the Proposed Security Improvements (P-445/P-509), NAS Oceana, Virginia Beach, Virginia	(College of) William and Mary Center for Archaeological Research	2003
VB-100	Phase I Archaeological Survey of Portions of the Highland Parish Tract, Virginia Beach, Virginia	ECS - Mid-Atlantic (Engineering Consulting Services, Ltd.)	2003
VB-102	Archaeological Survey of the Proposed Small Arms Range (MILCON P-259), NAS Oceana Annex Dam Neck, Virginia Beach, Virginia	(College of) William and Mary Center for Archaeological Research	2003
VB-104	Cultural Resources Survey, Proposed Improvements, Sandbridge Road, City of Virginia Beach, Virginia	Coastal Carolina Research	1998
VB-106	Cultural Resources Identification Survey, Atlantic Wastewater Treatment Plant, Virginia Beach, Virginia	Coastal Carolina Research	2005
VB-111	Phase I Cultural Resources Survey of 8+/- Acres for the Proposed Biznet Village, Virginia Beach, Virginia	Archaeological & Cultural Solutions, Inc.	2005

VDHR ID#	Title	Author	Year
VB-122	Reconnaissance Archaeological Survey at Various Navy Region Mid-Atlantic Family Housing Complexes in Virginia	Cultural Resources, Inc.	2003
VB-124	Phase I Cultural Resources Survey for the Proposed Realignment of West Neck Road Between North Landing Road and Indian Ridge Road in the City of Virginia Beach, Virginia	James River Institute for Archaeology	2006
VB-125	Phase I Archaeological Survey of the State Military Reservation, 83.81 ha (207 Acres) at Camp Pendleton, Virginia Beach, Virginia	Virginia Tech (Virginia Polytechnic Institute and State University)	2008
VB-129	Archaeological Characterization Study of Fleet Training Center Dam Neck, Virginia Beach, Virginia	Southeastern Archaeological Research, Inc.	2008
VB-137	Archaeological Survey of South Parcel and Evaluation of Archaeological Sites 44VB345 and 44VB346, Fleet Training Center Dam Neck, Virginia Beach, Virginia	Southeastern Archaeological Research, Inc.	2010
VB-138	Preliminary Archaeological Testing and an Assessment of the Whitehurst House (134-0042) and Yard (44VB0331) in Virginia Beach, Virginia	James River Institute for Archaeology	2005
VB-143	Phase I Archaeological Investigation of Approximately 170 Acres at Naval Air Station Oceana, Virginia Beach, Virginia	Southeastern Archaeological Research, Inc.	2011
VB-145	Survey of the Architectural and Archaeological Cultural Resources at the Virginia Air National Guard Installations at the Richmond International Airport, Henrico County and the State Military Reservation, Camp Pendleton, City of Virginia Beach, Virginia	R. Christopher Goodwin and Associates, Inc.	2007
VB-146	Phase I Cultural Resources Survey of Marine Animal Care Facility Tract, City of Virginia Beach	Circa-Cultural Resource Management, LLC	2011
VB-147	A Phase I Cultural Resources Survey of 98.664 Acres at Marshview Park in the City of Virginia Beach, Virginia	James River Institute for Archaeology	2011
VB-149	Phase I Archaeological Investigation of Approximately 174 Acres at Naval Air Station Oceana, Virginia Beach, Virginia	Southeastern Archaeological Research, Inc.	2012
VB-151	A Phase I Cultural Resources Survey of Approximately 13 Acres at 4081 Elbow Road in the City of Virginia Beach, Virginia	Cultural Resources, Inc.	2012
VB-157	Phase I Archaeological Survey of the 5 Mile Stretch Project Area and Phase II Archaeological Evaluation of Site 44VB0166, Virginia Beach, Virginia	Dutton & Associates	2014
VB-163	Phase I Archaeological Survey Report Solar Photovoltaic Array Project NAS Oceana, Virginia Beach, Virginia	A.D. Marble & Company	2015
VB-164	Phase I Cultural Resources Survey of Princess Anne Road, City of Virginia Beach, Virginia	Circa-Cultural Resource Management, LLC	2015
VB-170	Phase I Archaeological Survey of +/-1.0 Hectare (2.5 Acre) Parcel Addition to the Princess Anne Meadows Project Area, Virginia Beach, Virginia	Dutton & Associates	2016
VB-173	Phase I Cultural Resources Survey of Landstown Road Improvements, City of Virginia Beach, Virginia	Circa-Cultural Resource Management, LLC	2017
VB-174	Completion and Synthesis of Archaeological Survey, State Military Reservation Camp Pendleton, City of Virginia Beach, Virginia	(College of) William and Mary Center for Archaeological Research	2017

VDHR ID#	Title	Author	Year
VB-183	Addendum to Phase I Cultural Resources Survey of Landstown Road Improvements, City of Virginia Beach, Virginia	Circa-Cultural Resource Management, LLC	2017
VB-190	Phase I Cultural Resources Survey, Back Bay National Wildlife Refuge, Alternative Transportation Study, Back Bay Refuge Trail, City of Virginia Beach, Virginia	Circa-Cultural Resource Management, LLC	2015
VB-191	A Phase I Cultural Resources Survey of Approximately 8.5 Miles Associated with the Landstown to Thrasher Line #231 230 kV Transmission Line Rebuild, Cities of Chesapeake and Virginia Beach, Virginia	Stantec Consulting Services	2019
VB-193	Phase I Archaeological and Architectural Reconnaissance Surveys for the North Landing Bridge Replacement; Albemarle and Chesapeake Canal/State Route 165; Cities of Chesapeake and Virginia Beach, Virginia	Commonwealth Heritage Group	2019

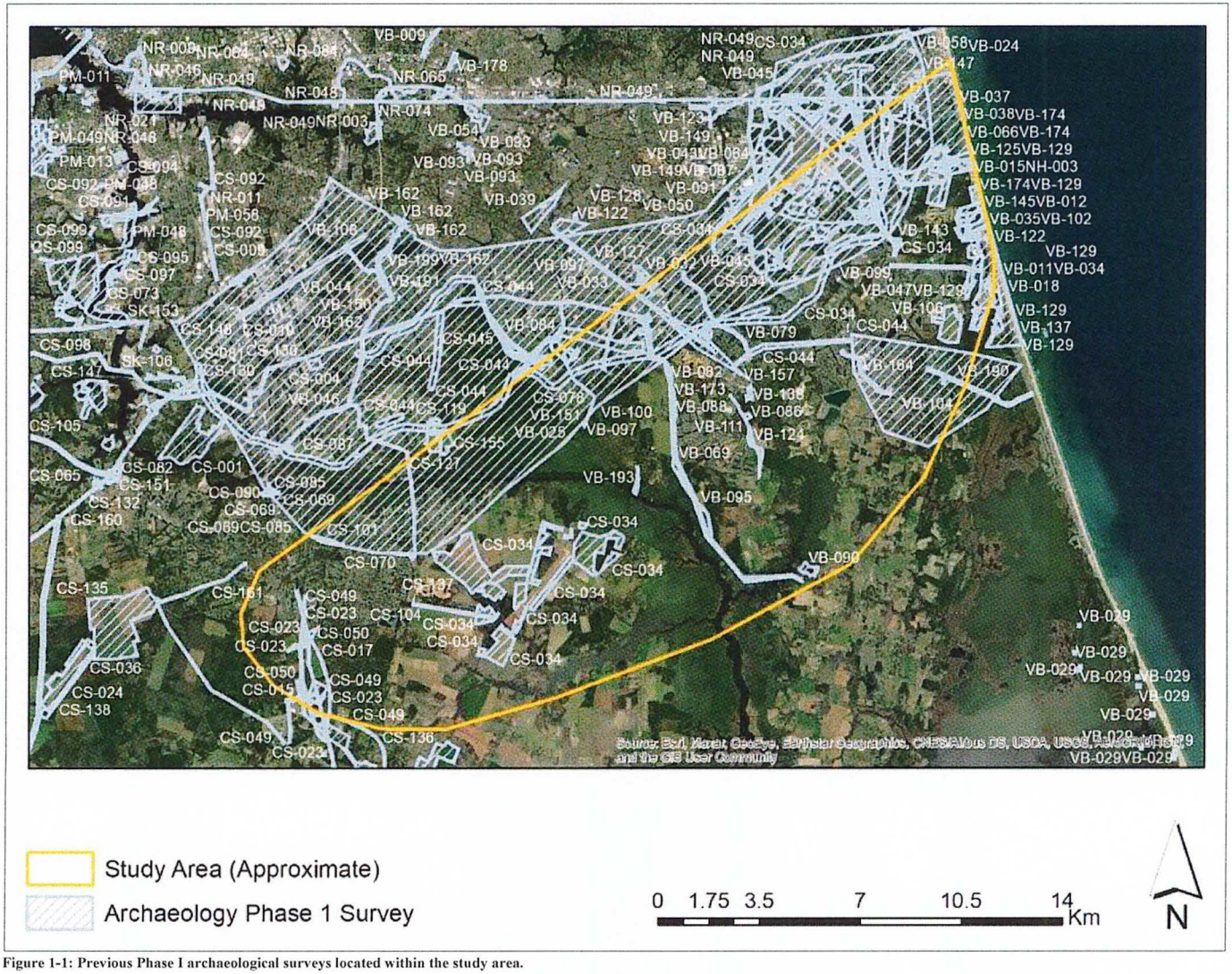

Figure 1-1: Previous Phase I archaeological surveys located within the study area.

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PREVIOUSLY RECORDED PREHISTORIC ARCHAEOLOGICAL RESOURCES

There are 75 previously recorded prehistoric archaeological sites located within the project area (Figure 1-2). Of these, eighteen are eligible or potentially eligible for listing in the NRHP (Table 1-2).

Table 1-2: Previously recorded prehistoric archaeological sites within the study area that are potentially eligible or eligible for listing in the NRHP.

VDHR ID#	Site Type	Temporal Association	NRHP Eligibility Status
44CS0116	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Potentially Eligible
44VB0162	Camp, temporary, Cemetery	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Early National Period (1790	DHR Staff: Potentially Eligible
44VB0164	Artifact scatter, Camp, temporary	Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829)	DHR Staff: Potentially Eligible
44VB0165	Artifact scatter, Camp	Paleo-Indian (15000 - 8501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E)	DHR Staff: Potentially Eligible
44VB0166	Camp, Camp, base, Dwelling, single	Middle Archaic Period (6500 - 3001 B.C.E), Early National Period (1790 - 1829)	DHR Staff: Potentially Eligible
44VB0172	Camp, temporary, Dwelling, single	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 -	DHR Staff: Potentially Eligible
44VB0173	Artifact scatter, Camp, temporary	Middle Archaic Period (6500 - 3001 B.C.E), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	DHR Staff: Potentially Eligible
44VB0174	Artifact scatter, Camp, temporary, Cemetery	Middle Archaic Period (6500 - 3001 B.C.E), Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	DHR Staff: Potentially Eligible
44VB0176	Camp, temporary, Farmstead	Late Archaic Period (3000 - 1201 B.C.E), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Potentially Eligible
44VB0179	Camp, temporary, Other	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 -	DHR Staff: Potentially Eligible

VDHR ID#	Site Type	Temporal Association	NRHP Eligibility Status
44VB0180	Artifact scatter, Camp, Cemetery, Trash scatter	Paleo-Indian (15000 - 8501 B.C.E), Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 -	DHR Staff: Potentially Eligible
44VB0191	Artifact scatter, Camp	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 -	DHR Staff: Potentially Eligible
44VB0256	Camp, temporary, Farmstead	Middle Archaic (6500 - 3001 B.C.), Woodland (1200 B.C. - 1606 A.D.), 18th Century: 2nd half (1750 - 1799), 19th Century: 1st half (1800 - 1849)	DHR Staff: Potentially Eligible
44VB0266	Artifact scatter	Pre-Contact, Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	DHR Staff: Potentially Eligible
44VB0270	Artifact scatter	Paleo-Indian (15000 - 8501 B.C.E), Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 -	DHR Staff: Potentially Eligible
44VB0277	Camp	Woodland (1200 B.C. - 1606 A.D.)	DHR Staff: Potentially Eligible
44VB0278	Farmstead	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 18th Century: 2nd half (1750 - 1799), 19th Century: 1st half (1800 - 1849)	DHR Staff: Potentially Eligible
44VB0308	Camp, temporary	Late Woodland (1000 - 1606)	DHR Staff: Eligible

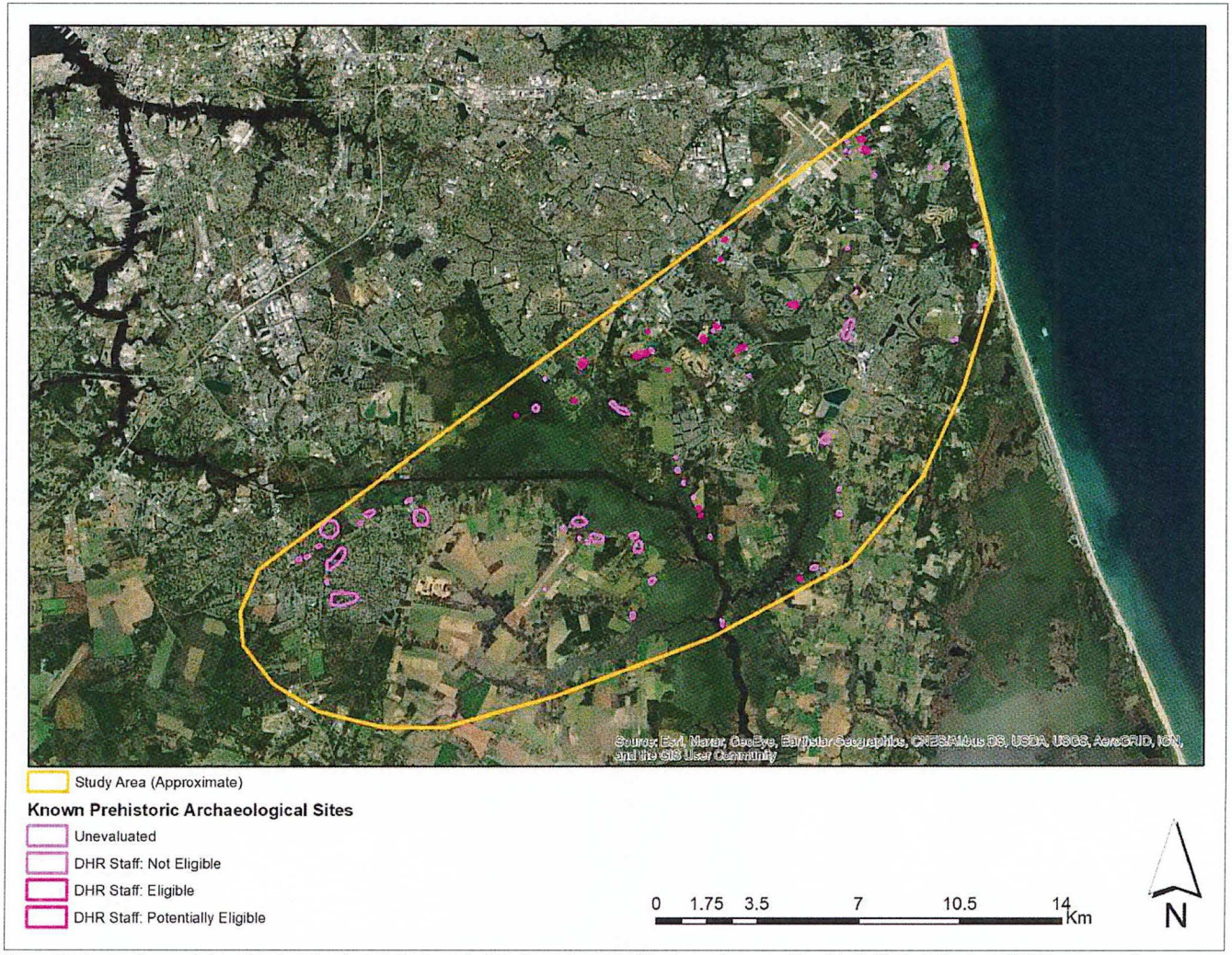

Figure 1-2: Previously recorded prehistoric archaeological sites located within the project area. Sites in purple are considered ineligible for listing in the NRHP or have not been evaluated. Sites in pink are considered eligible or potentially eligible for listing in the NRHP.

548

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2. PREDICTING AREAS OF HIGH POTENTIAL FOR PREHISTORIC SITES

Two methods were used to predict potential locations of unknown prehistoric archaeological sites within the study area. First, historic maps drawn by European navigators during the late sixteenth and early seventeenth centuries were examined for notations indicating locations of Indigenous settlements in the vicinity of the study area. The examined maps include those drawn by John White (1590), Don Pedro de Zúñiga (Ms. Chart, 1890), and John Smith (1624). Second, a set of environmental parameters considered indicative of high site probability were developed. All locations within the project area meeting these criteria were selected and mapped.

In general, predictive models use either inductive or deductive logic to predict site locations. Inductive models rely on statistical relationships between environmental variables and known site locations to develop criteria for predicted sites. Deductive models rely on field observation and theories of past human behavior to develop criteria for predicted sites. Both model types have significant limitations. The primary limitation of deductive models is that the site prediction criteria are not empirically validated. The primary limitation of inductive models is sampling bias, wherein the nonrandom and nonuniform nature of real-world archaeological survey skews the types of environments in which known sites have been found. A deductive model was used for this study. Field experiences and observations relating to past surveys and theories of site selection by Indigenous individuals and populations were the primary sources of reasoning in developing the criteria for high probability areas.

The criteria for selecting high probability areas included the following conditions: high probability areas have a slope lower than 15% grade, are within 1,500 feet of major non-artificial water sources (including swamps, marshes, foreshore, sea/ocean, streams, and rivers), and contain well drained, moderately well drained, or excessively drained soils. Data sources used to map environmental conditions include the National Elevation Dataset (10m resolution; USDA NRCS 2021), the Soil Survey Geographic (SSURGO) Database (Soil Survey Staff, USDA NRCS, 2021), and the National Hydrography Dataset Plus (USGS, 2021).

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3. RESULTS

HISTORIC MAP EXAMINATION

The historic maps examined revealed limited information regarding the project area. As is typical of many early colonial maps, the knowledge of the mapmakers was spatially limited to areas along major navigable waterways. In relation to the study area, these major waterways included the Currituck Sound, the Chesapeake Bay, the Lynnhaven River, the Elizabeth River, and the Nansemond River. It should be noted that the maps recorded at the time of contact represent a mere snapshot of time in the Chesapeake Region cultural landscape. The historical maps examined for this study cannot be used to qualify or disqualify the presence of Archaic, Early Woodand, or Middle Woodland sites.

DON PEDRO DE ZÚÑIGA MAP

The map with the least amount of information regarding the study area is that drawn by Don Pedro de Zúñiga as part of correspondence with the King of Spain (Ms. Chart, 1890; Figure 3-1). This map was not intended to chart the region with significant accuracy, but was a sketch for the purpose of annotating events relevant to Zúñiga's letter to the King. The map clearly locates the James Fort along the James River, as well as the Albemarle Sound and the Chesapeake Bay. The location of Cape Henry is ambiguous, and may be interpreted as one of two general locations. One possible location of Cape Henry on this map is directly south from the known settlement of Kegoughtan on the eastern point of the Lower Peninsula, where Zúñiga marked the word Chysapeak. In this case, the river that Zúñiga marked farther south most likely represents the Currituck Sound, with an Indigenous settlement on the southern or western bank. This interpretation is likely correct given the clear marking of Roanoke Island in relation to the Albemarle Sound. The second interpretation is this river is not the Currituck Sound but is the Lynnhaven River or the Elizabeth River, with an indigenous settlement on the southern or eastern bank. In either scenario, no settlement information is indicated regarding the study area. For the purposes of this effort the first scenario is presumed correct and the study area is placed north of the Currituck Sound and south of Cape Henry. This map is evidence that the area was populated by the Chesapeake cultural group in a general sense, although no villages are clearly marked in the vicinity of Cape Henry.

JOHN SMITH MAP

John Smith's map shows a moderate level of detail in the vicinity of the study area (Smith, 1624; Figure 3-2). Smith used a cross symbol to indicate the limits of his knowledge at the time the map was made, as noted in the upper left corner of his map. The study area is in the vicinity of one such cross on Smith's map; the nearest Indigenous settlement that Smith indicates is Chesapeack, which Smith locates on the eastern bank of the Elizabeth River. Smith used a "King's House" symbol for Chesapeack, indicating a prominent village where a regional leader(s) likely resided. While Smith places no village markers in the vicinity of the study area, the limits of his landscape knowledge and the nearby presence of a major village suggest that the presence of other villages in this region cannot be ruled out. Indeed, two known Late Woodland domestic archaeological

sites located on the eastern and western branches of the Lynnhaven River (a navigable channel included in Smith's map) were missed by Smith.

JOHN WHITE MAP

The historical map with the highest level of detail was drawn by John White in 1590 (Figure 3-3). White clearly delineates the Outer Banks, the Albemarle Sound, the Currituck Sound, and the beginning of the North Landing River, although it appears that the North Landing River was not explored by White past its meeting point with the Currituck Sound. The areas around the Chesapeake Bay are somewhat ambiguous, with two scenarios possible. The commonly accepted scenario and the scenario assumed for this study is that the Lower Peninsula is the landform covered by White's inscription in the upper left corner of his map, with the Elizabeth and Lynnhaven rivers clearly delineated; the second scenario is that the first major river off of the Chesapeake Bay after passing Cape Henry is the Elizabeth and James rivers, while the landmass to the north of this river is the entire Lower Peninsula. The northernmost inlet off the Atlantic Ocean south of Chesapeake Bay is identified for this study as Rudee Inlet, which is included in the study area. The nearest villages identified by White are located on the banks of the presumed Lynnhaven and Elizabeth Rivers. These include Chesopeoc, Apasus, and Skicoak; the first two of these names may correspond to known Late Woodland domestic archaeological sites located along the Lynnhaven River. Although White did not identify settlements within the study area, he did include an illustration of a Chesapeake woman and child. This gesture as well as the indication that White did not explore the remainder of the North Landing River suggests that the vicinity was populated but undocumented by Europeans at the time of contact.

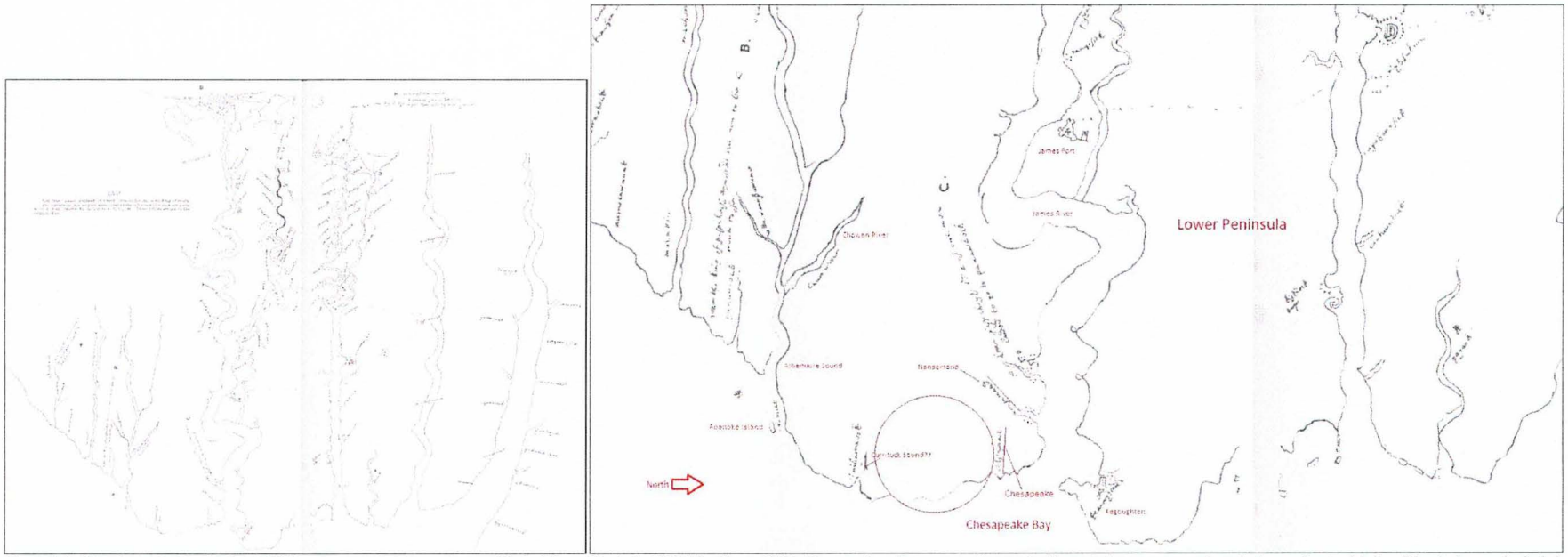

Figure 3-1: Map drawn by Don Pedro de Zúñiga as part of correspondence with the King of Spain in 1608 (Ms. Chart, 1890). Presumed modern names of water bodies and place names are in red. Approximate vicinity of the study area is circled in red.

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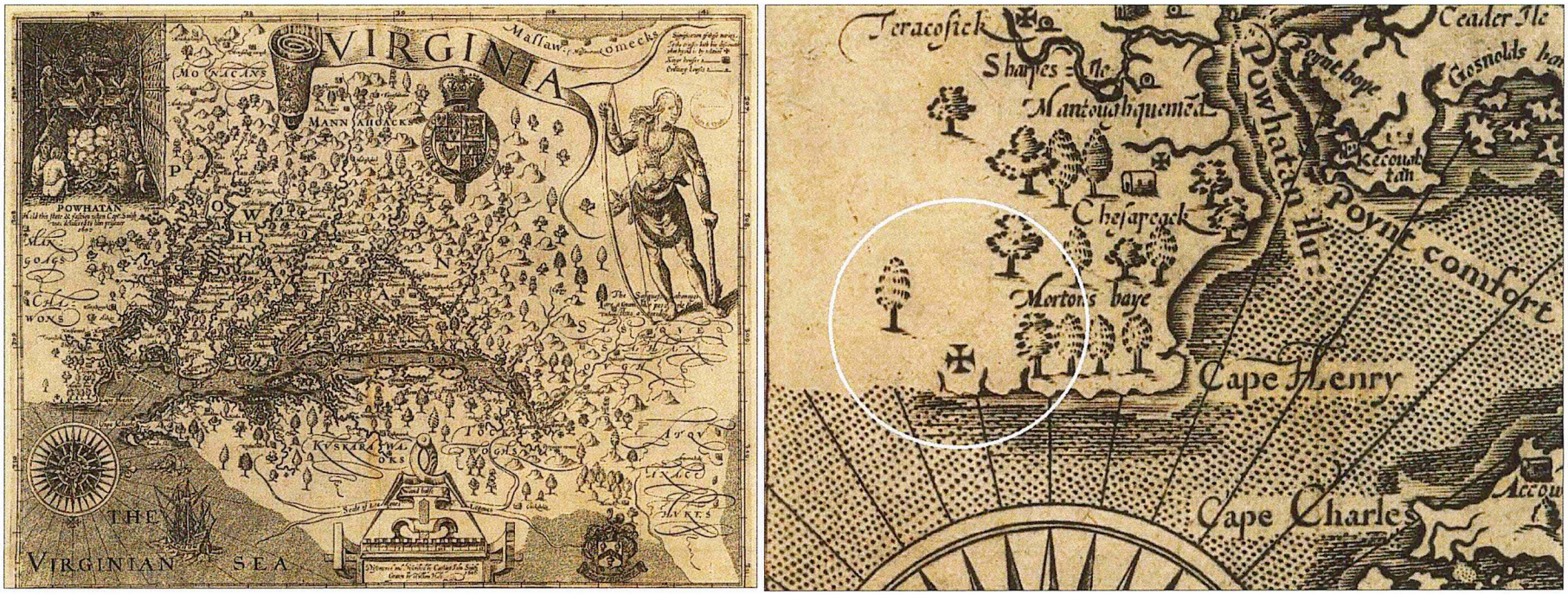

Figure 3-2: Map drawn by John Smith (Smith, 1624). Approximate vicinity of the study area is circled in white. Note Smith's symbol legend in the upper right corner. Text for the cross symbol reads "To the crosses hath bin discovered / what beyond is by relation."

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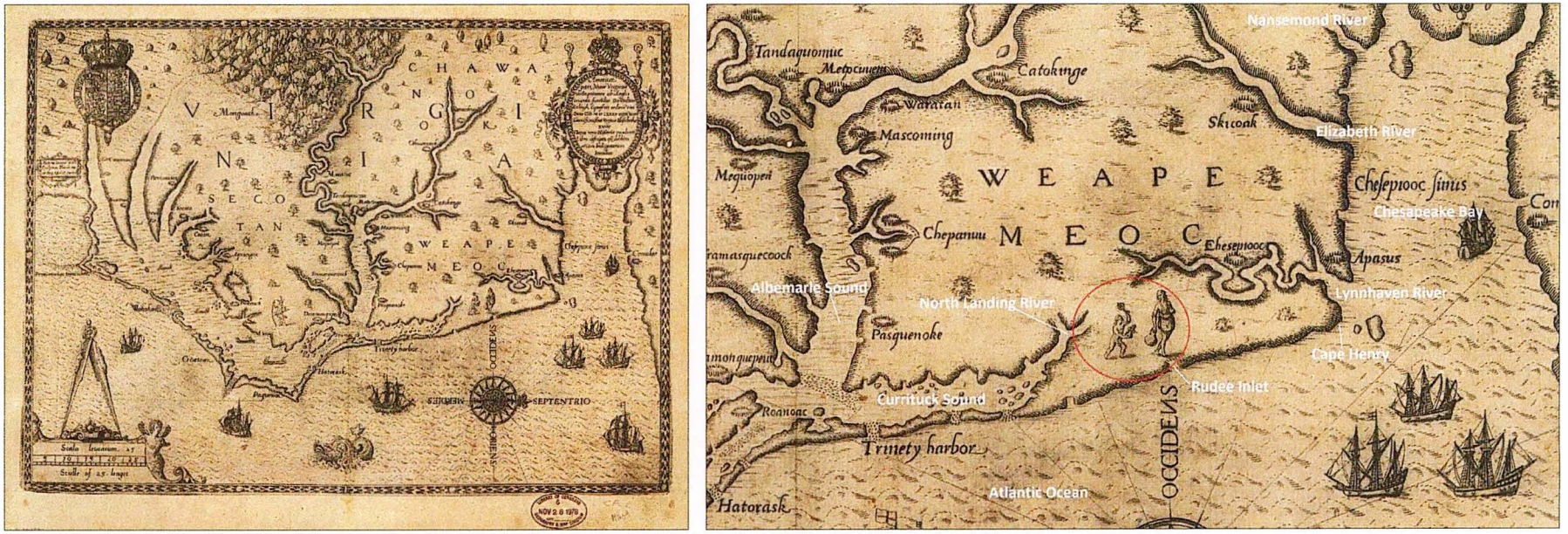

Figure 3-3: Map drawn by John White (White, 1590). Annotations with present day place names are in white. Approximate vicinity of the study area is circled in red.

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SITE PREDICTION MODEL

Within the project area, there are 1,976 acres of land meeting the site prediction criteria (Figure 3-4). The model output area captures 44% of the previously recorded archaeological sites within the study area that have at least one prehistoric component. The site prediction performed well for the City of Chesapeake, where known prehistoric sites are located primarily in the well-drained areas adjacent to wetlands associated with the North Landing River and its tributaries. The prediction performed less effectively for the City of Virginia Beach. The areas considered highly probable to contain prehistoric sites are clustered around Rudee Inlet, the peripheral tributaries of Back Bay, the North Landing River, and especially West Neck Creek.

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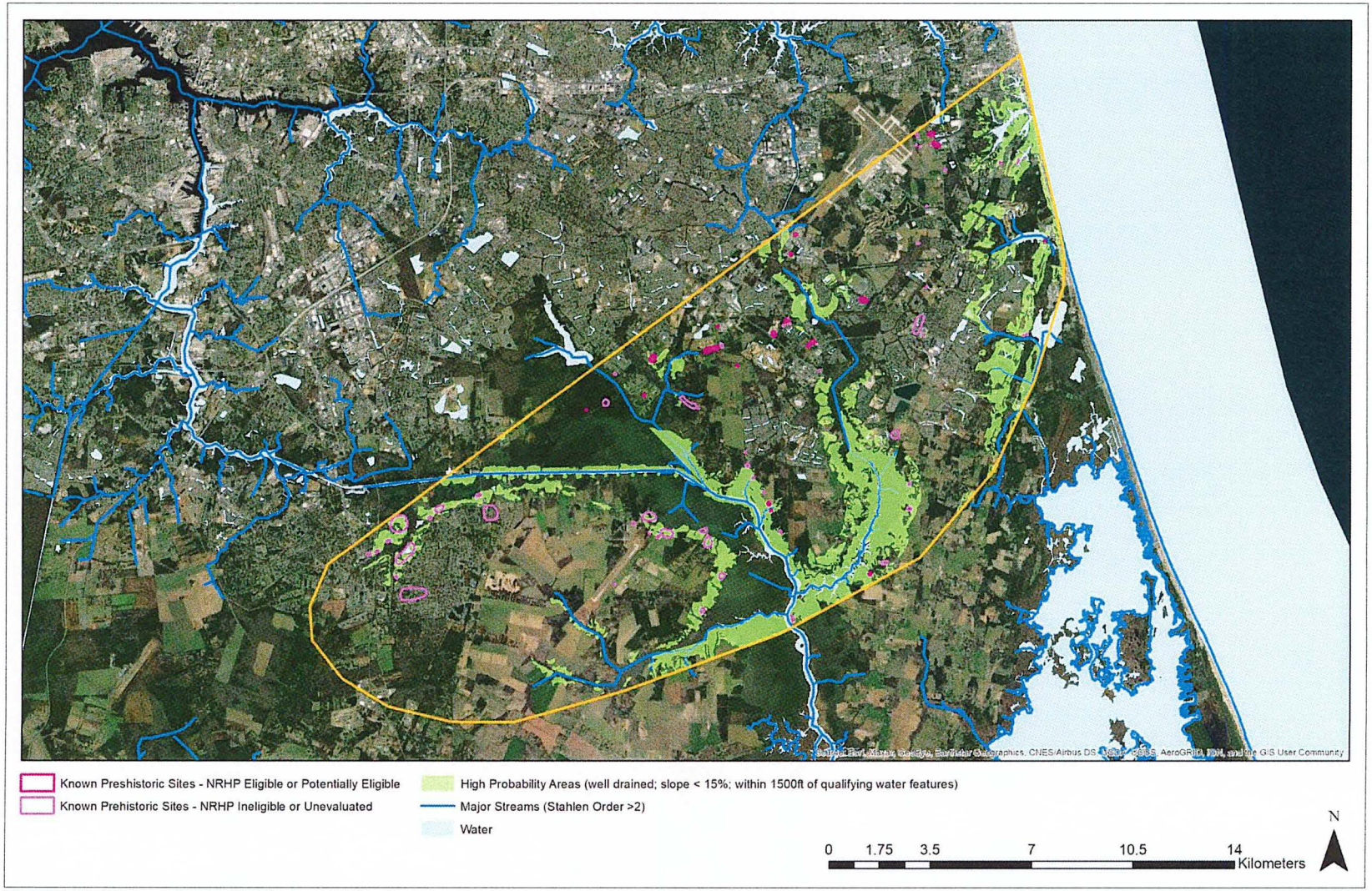

Figure 3-4: Model output with high probability areas highlighted.

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4. REFERENCES

1890 Ms. Chart of Virginia, "Sent from London, England, 10th Sept., 1608, by Zuñiga, to the King of Spain." First published in Alexander Brown's *The Genesis of the United States*, Vol. I. Available online at https://she-philosopher.com/gallery/1608Zuniga.html.

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2021 National Hydrography Dataset Plus (NHDPlus) for Hydrologic Unit Codes 0301 and 0208. Available online at https://usgs.maps.arcgis.com/apps/MapTools/index.html?appid=41a5c2ca49bd4a83b239450e61022d5. Accessed February 25, 2021.

White, John, Theodor De Bry, and Thomas Harriot

1590 *Americæ pars, nunc Virginia dicta: primum ab Anglis inuenta, sumtibus Dn. Walteri Raleigh, Equestris ordinis Viri, Anno Dñi. MDLXXXV regni Vero Sereniss. nostræ Reginæ Elisabethæ XXVII, hujus vero Historia peculiari Libro descripta est, additis etiam Indigenarum Iconibus*. De Brÿ, Francofurtum ad Mænum. Map retrieved from the Library of Congress. https://www.loc.gov/item/78694920/.

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Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominioEnergy.com

February 24, 2020

[Recipient/Address]

RE Coastal Virginia Offshore Wind (CVOW) Commercial Project
Tribal Pre-Survey Meeting Invitation

Dear _____:

Virginia Electric and Power Company, d/b/a Dominion Energy Virginia (Dominion Energy) would like to invite you to an upcoming Construction and Operations Plan (COP) Tribal Pre-Survey Meeting to provide input on the upcoming geophysical survey, geotechnical investigations for the Coastal Virginia Offshore Wind Commercial Project (the Project).

Dominion Energy is in the process of developing the Project under the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS-A 0500) (Lease). Dominion Energy currently intends to submit a COP to the Bureau of Ocean Energy Management (BOEM) in December 2020. Assessments of marine archaeological resources, as well as other cultural resources, are required to support BOEM's National Environmental Policy Act (NEPA) review process.

The Tribal Pre-Survey Meeting is designed to ensure that the COP surveys and studies adhere to an appropriate methodology for acquiring and processing site-specific data to support BOEM's review of the COP under NEPA and to address other agency and stakeholder concerns. Dominion Energy understands that BOEM's action to review the COP requires review under Section 106 of the National Historic Preservation Act (NHPA) and NEPA, but we do not intend for any discussions between the tribes and Dominion Energy to take the place of any official Section 106 consultation that has or will be conducted by BOEM, the lead federal agency, or any representatives.

This letter provides a Project description, a map of the Lease area, and details about the Tribal Pre-Survey Meeting.

Project Description

The Lease Area is defined in Addendum A of BOEM Lease No. OCS-A 0483, Section II. Description of the Lease Area, and is shown in Figure 1. The Lease Area is located approximately 26.5 statute miles (mi) (23 nautical miles [nm]) off the coast of Virginia. The total acreage of the Lease Area is approximately 112,799 acres (176 square miles).

The export cable route will begin at the western side of the Lease Area and extends southwest toward the coast of Virginia for approximately 31 mi (27 nm). The export cable corridor will range from 600 m (1968 ft) to 900 m (2953 ft) wide and terminate at a proposed cable landing location along the Virginia Beach coastline (the exact landing location between downtown Virginia Beach and Sandbridge is yet to be determined).

Dominion Energy is proposing to develop the Lease Area over a 3-year period with construction scheduled to start in 2024. Construction would consist of offshore activities and infrastructure (i.e., wind turbine generators [WTGs], marine cables, and offshore substations) to be deployed within the Lease Area. Onshore activities and infrastructure would include Onshore Transmission Cables and new onshore interconnection facilities to support the proposed connection to the Virginia electrical grid.

Tribal Pre-Survey Meeting

Dominion Energy will conduct a Tribal Pre-Survey Meeting on March 10, 2020 prior to the initiation of the geophysical survey and geotechnical investigations that serve to support the archaeological assessments for the Project. The goal of this meeting will be to provide an overview of the Project, survey methodologies, schedule, and to afford an opportunity for tribes to offer input to the Project to ensure that the protection of sacred areas and traditional cultural properties are considered.

The proposed meeting details are as follows:

- Date: Tuesday March 10, 2020
- Time: 10:00 am to 12:00 pm (eastern standard time)
- Location: 5000 Dominion Boulevard
  Glen Allen, VA 23060
  Innsbrook Ground Private Dining Room
- RSVP to Scott Lawton (contact information below)

If we can answer any questions, provide additional information, and/or discuss any concerns about the Project prior to the upcoming Tribal Pre-Survey Meeting, please contact Scott Lawton at (804) 273-2600 or via e-mail at Scott.lawton@dominionenergy.com. We look forward to meeting and discussing the Project with you in the near future.

Sincerely,

Grant T. Hollett

Grant T. Hollett
Director of Generation Projects
Dominion Energy

Cc: Casey Reeves, BOEM
Scott Lawton, Dominion Energy
Lloyd Eley, Dominion Energy
Richard Gangle, Dominion Energy
Darrell Shier, Dominion Energy
Mark Mitchell, Dominion Energy
Janelle Lavallee, Tetra Tech
Steve Schmidt, R Christopher Goodwin & Associates

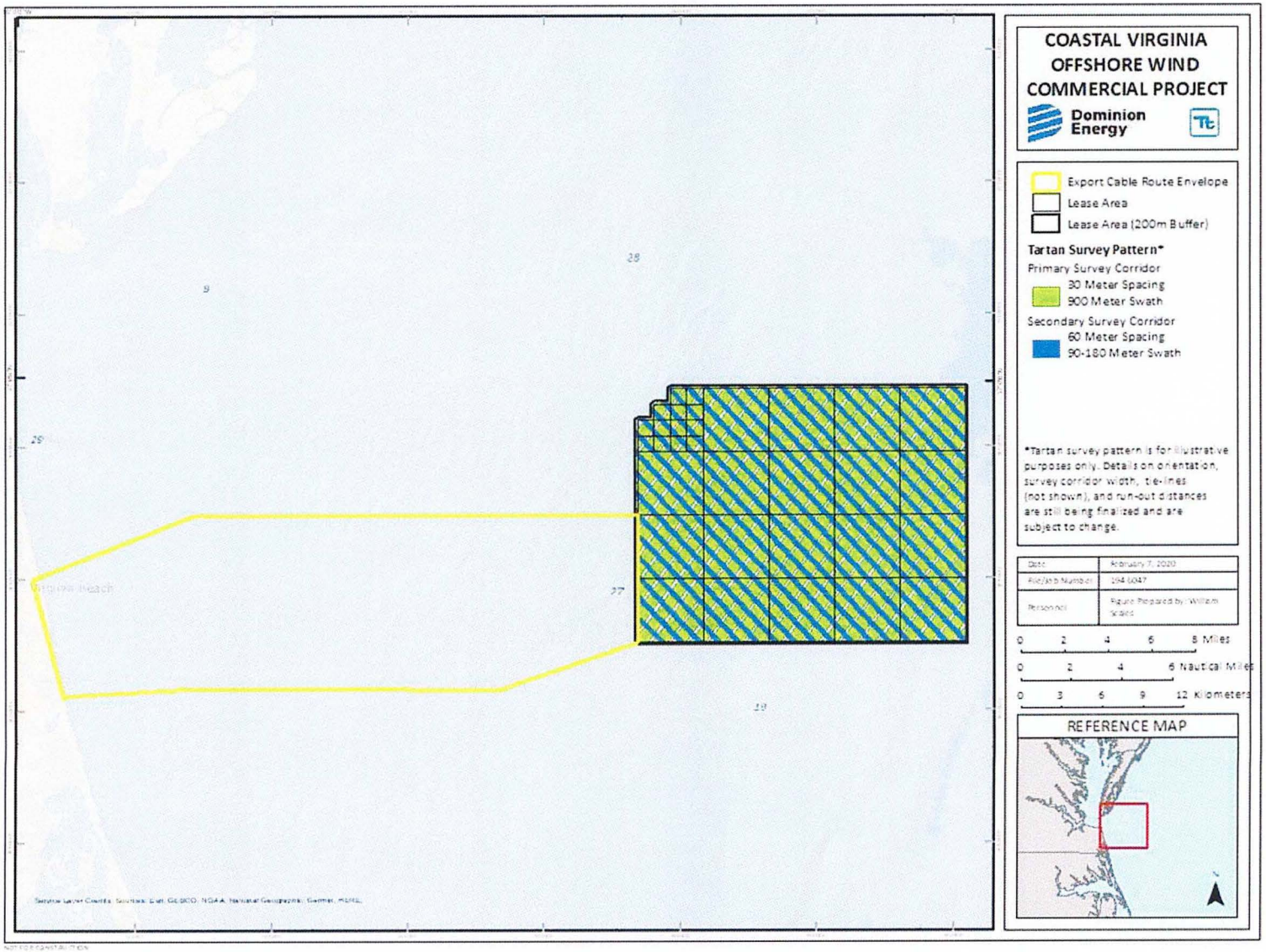
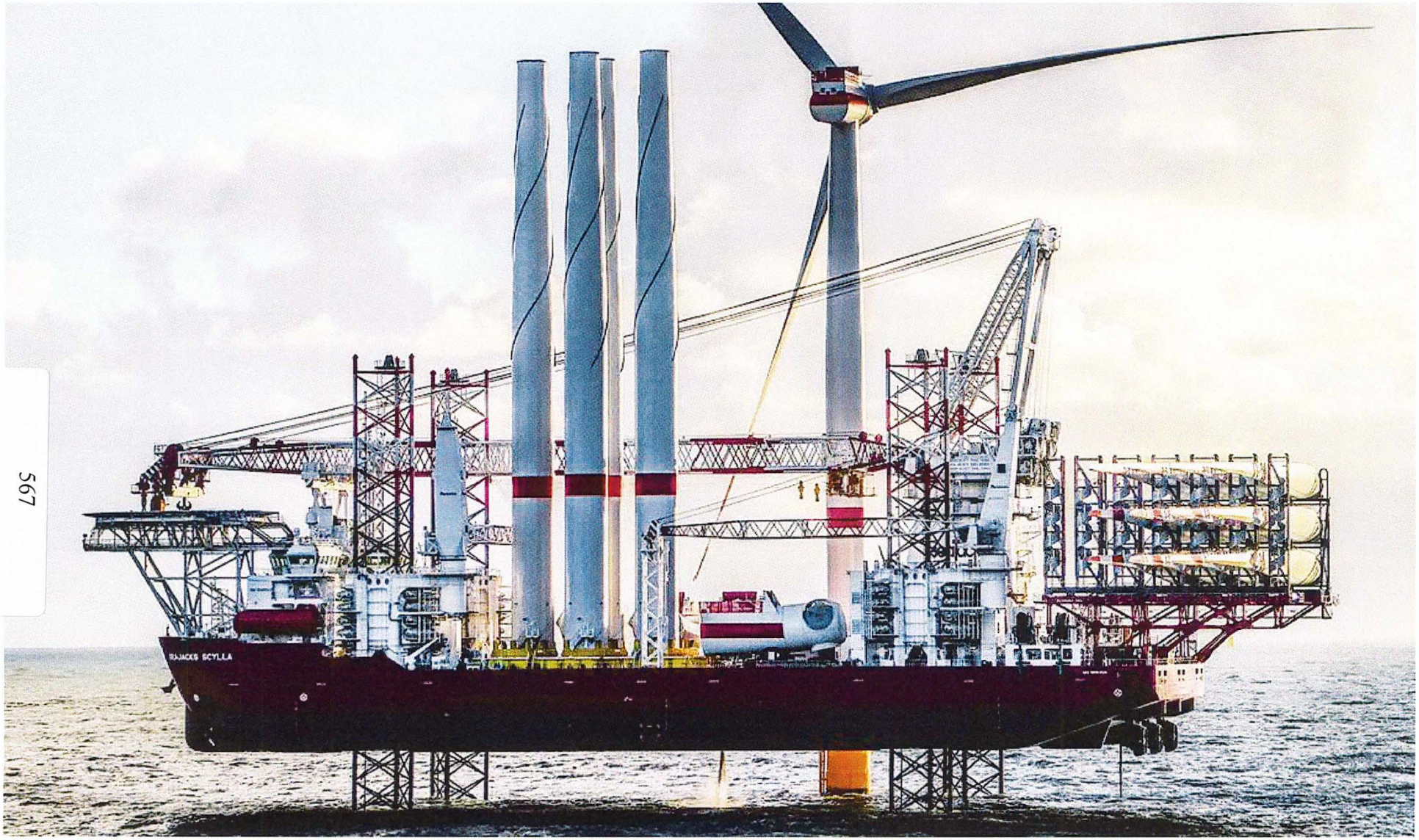


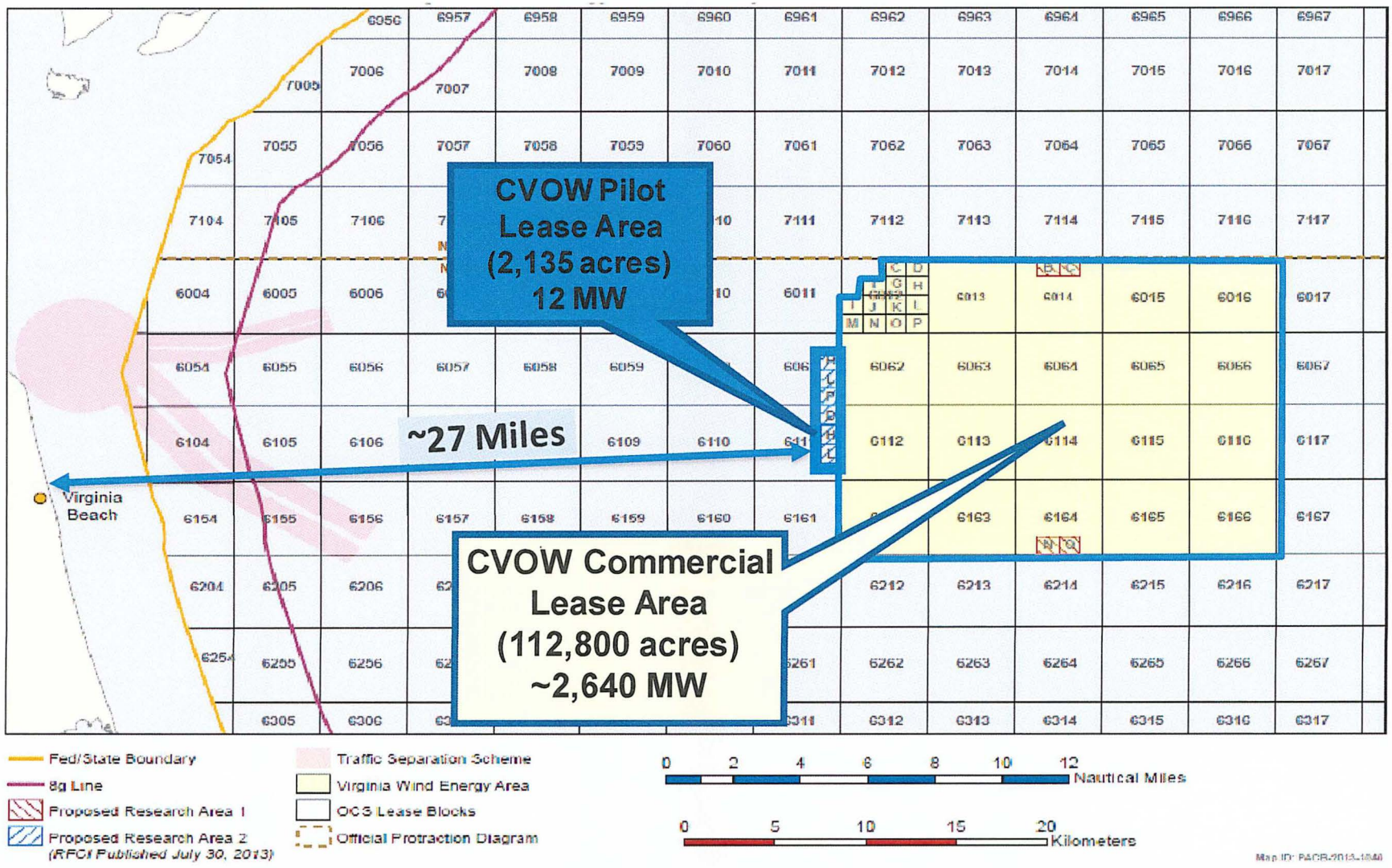
Figure 1. Lease and Survey Area



Coastal Virginia Offshore Wind (CVOW)
Commercial Project
Tribal Pre-Survey Meeting
March 10, 2020

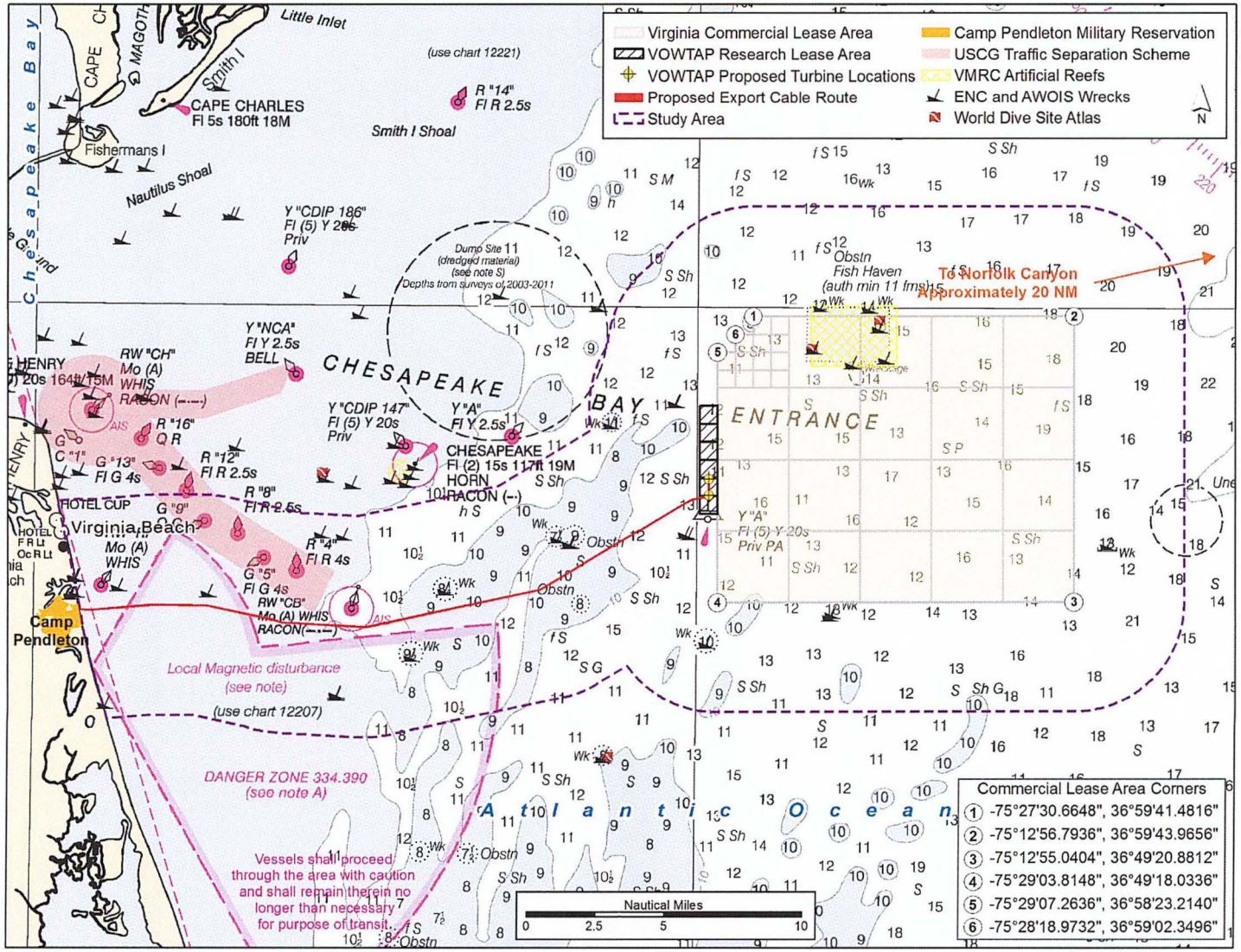
Dominion Energy®

Coastal Virginia Offshore Wind (CVOW) Projects



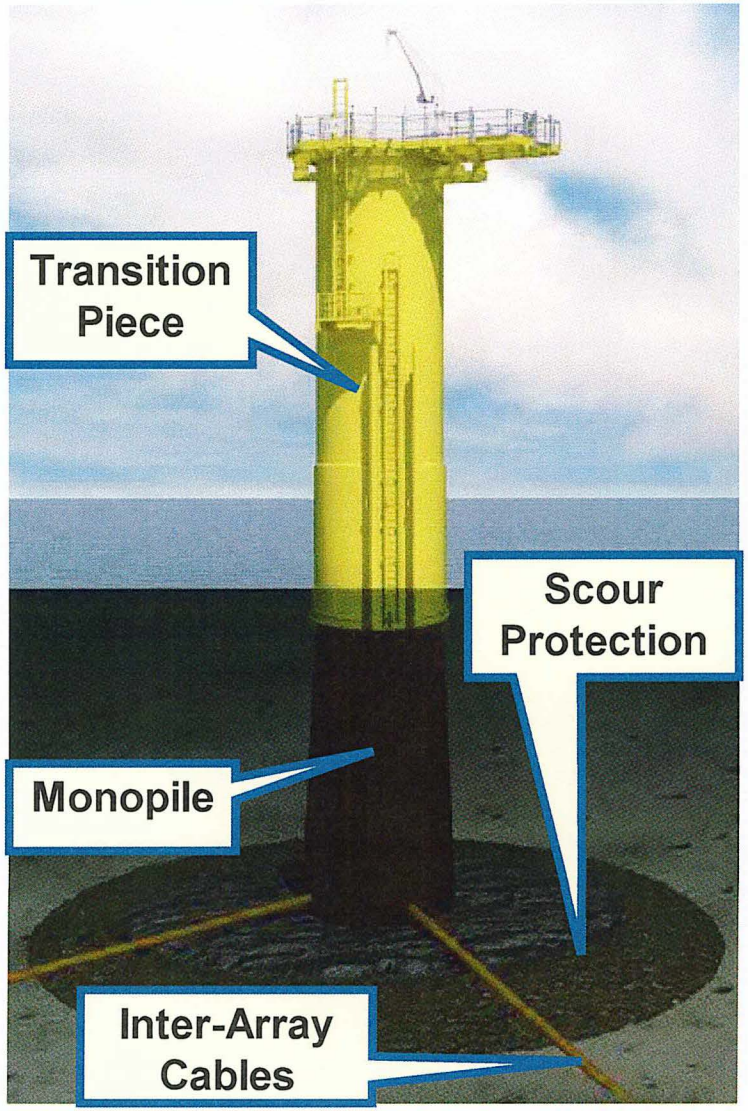
Dominion Energy

Coastal Virginia Offshore Wind (CVOW) Projects

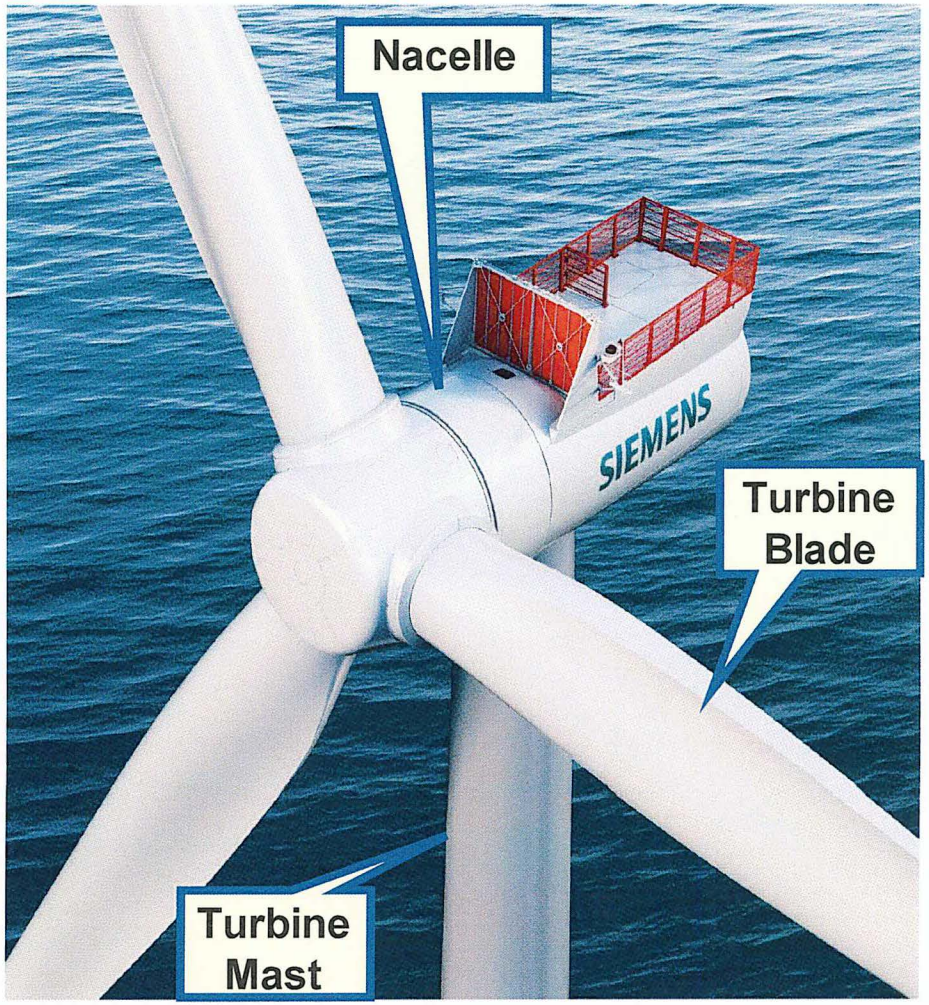


Dominion Energy

Wind Turbine Components



Foundation



Wind Turbine Generator

570

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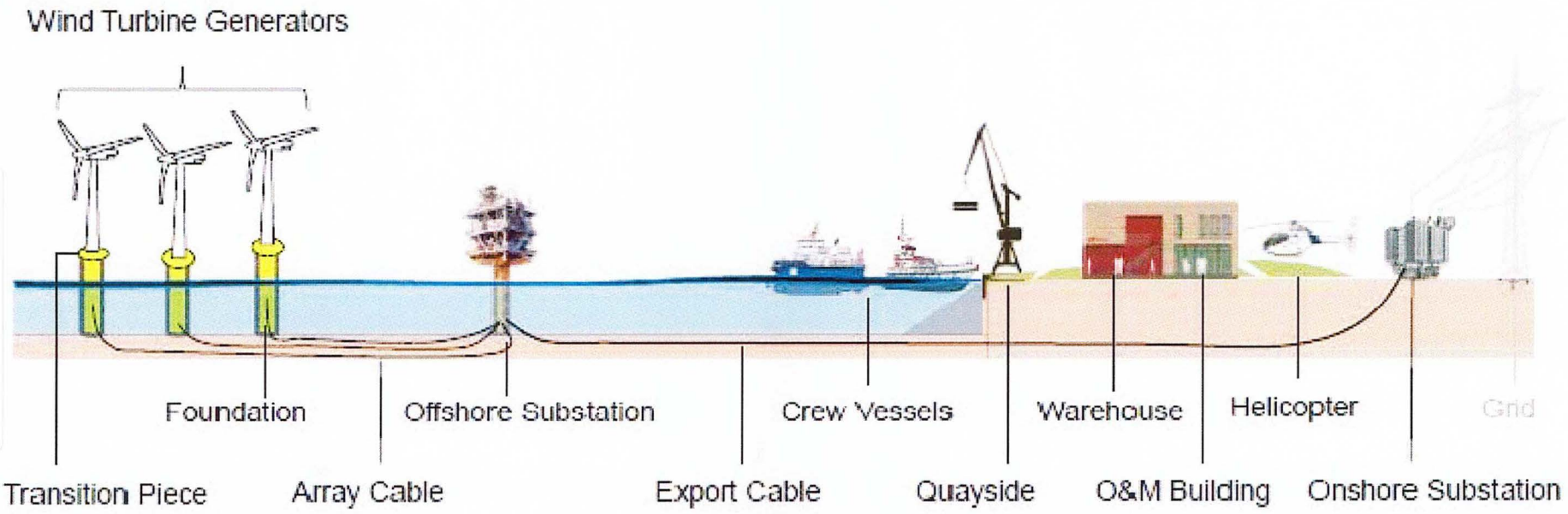
Anatomy of an Offshore Wind Energy Project



S71

Dominion Energy

CVOW Pilot

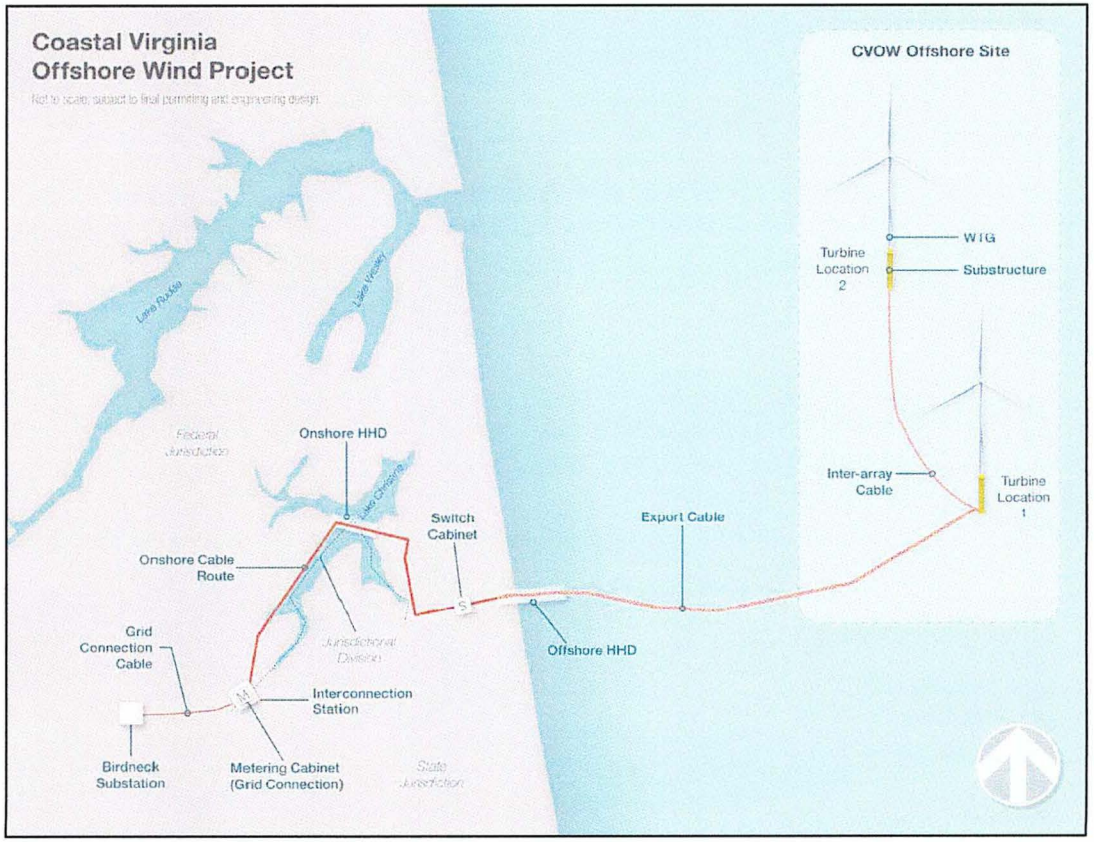
In Construction with Completion expected in 2020

Pilot Project Details

- Two 6-MW Wind Turbines
- Located 27 miles off Virginia Beach
- Capital Cost: $300 million
- Major Participants
  - Ørsted = Offshore Installation
  - L.E. Meyers = Onshore Installation

Pilot Project Benefits

- First Offshore Wind Turbines to be Installed in US Federal Waters
- Permit, design, installation & operations experience
- Refine BOEM approval process
- Inform larger commercial wind project



Construction commenced June 2019

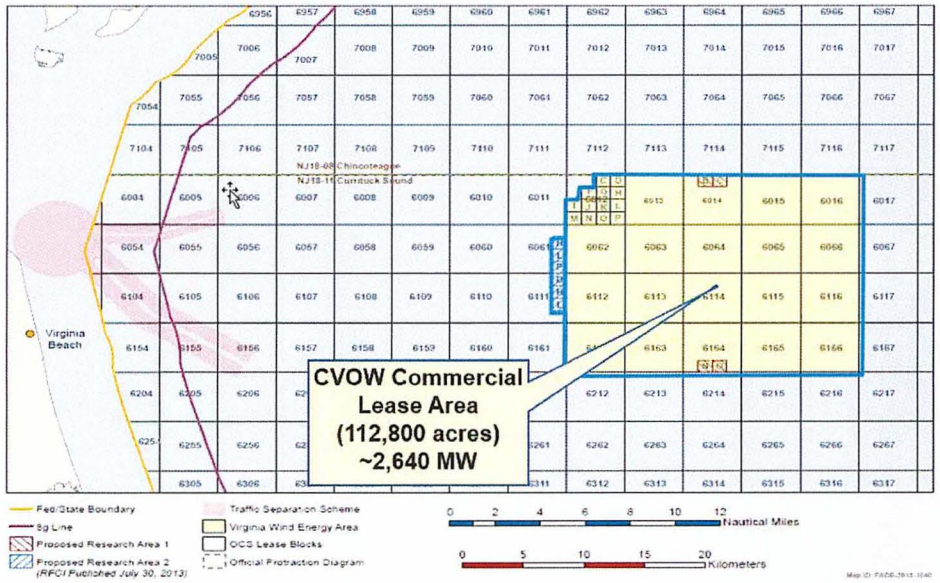
Offshore construction will begin in Q2 2020

572

Dominion Energy

CVOW Commercial

Project Summary



Commercial Offshore Wind Lease Area

- 112,800 acre lease area 27 miles off Virginia Beach
- Interconnect filed for 2,640 MWs
- Governor issued Executive Order 43 supporting 2,500 MWs of OSW in service by 2026
- Data from Pilot will inform design of Commercial project
- Selected Siemens Gamesa as Preferred Turbine Supplier

Executed Lease with BOEM	2013
Site Assessment Plan Approved by BOEM	2016
File Interconnect	2019
Ocean survey work Submit Construction & Operations Plan	2020
Construction and Commissioning	2024 to 2026

573

*BOEM = Bureau of Ocean Energy Management

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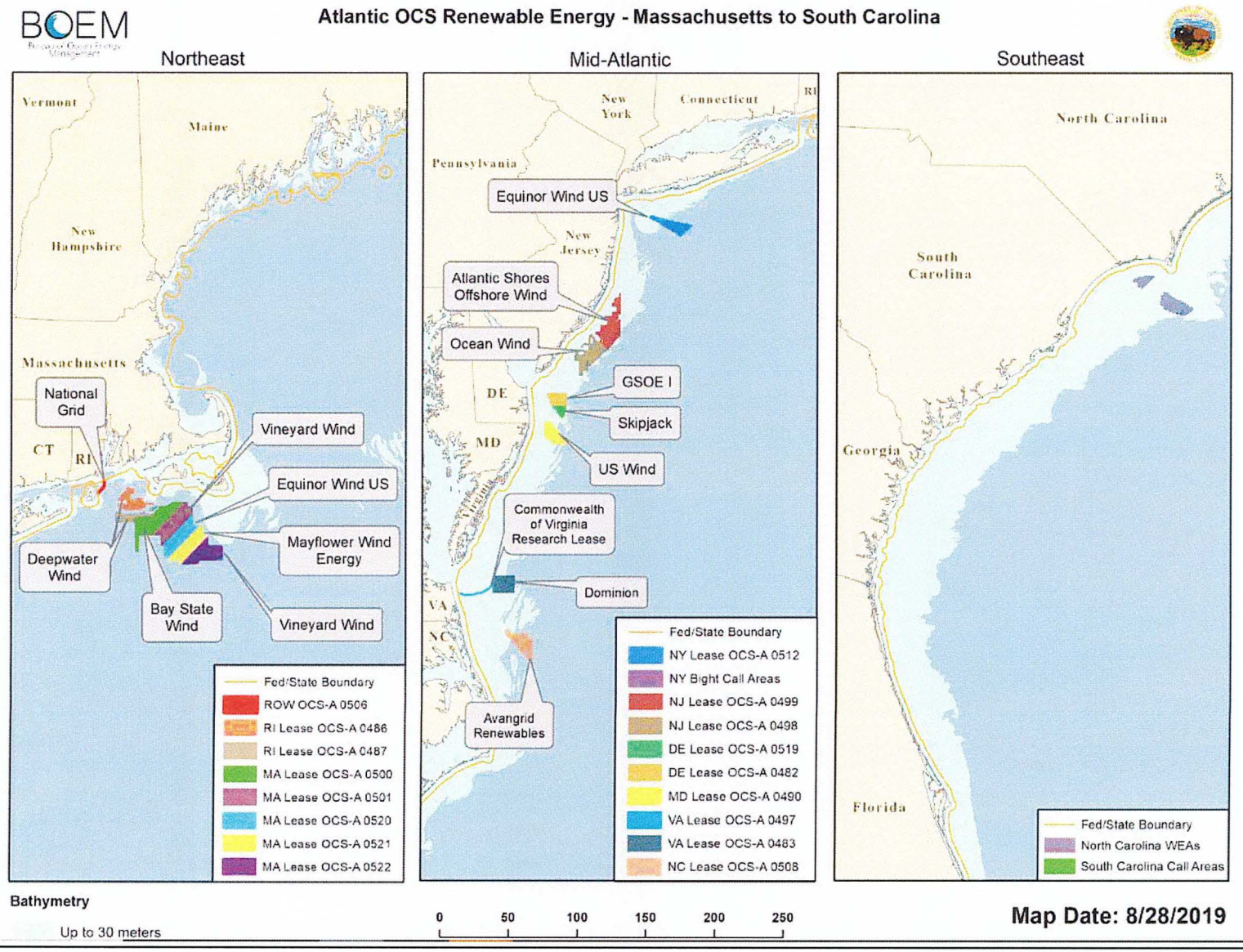
Off-Shore Wind Siting



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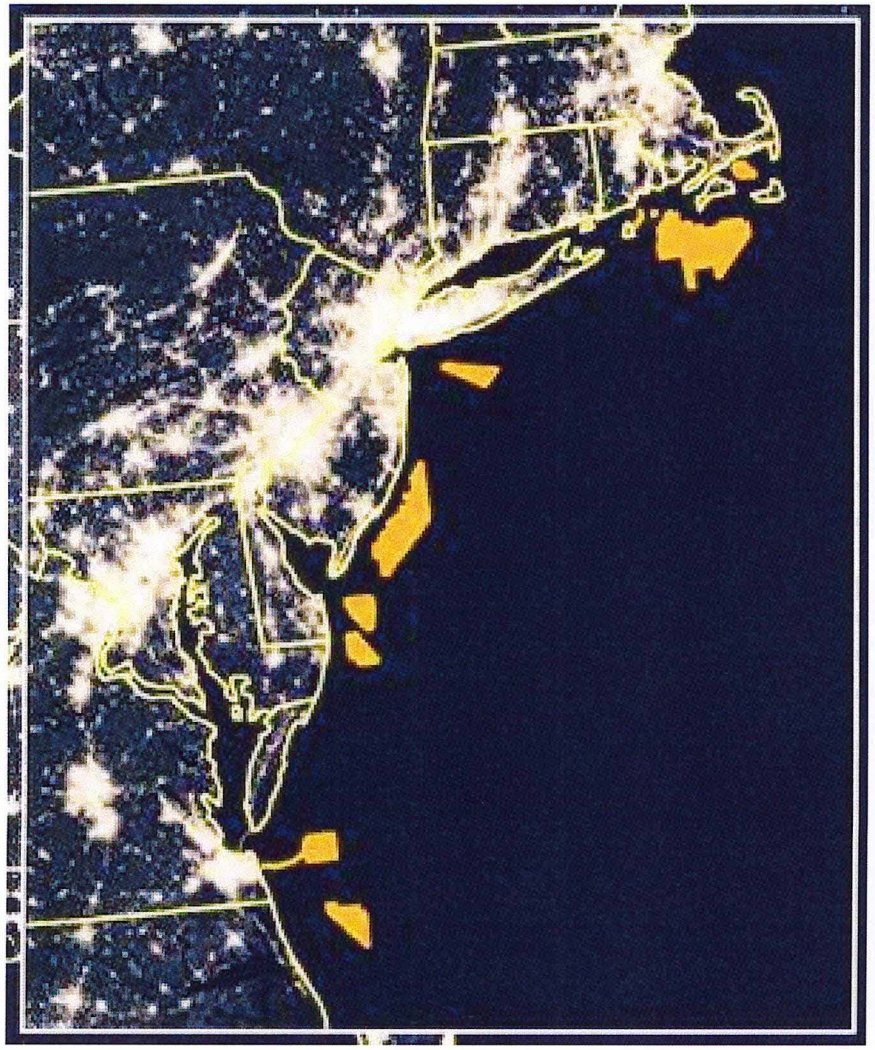
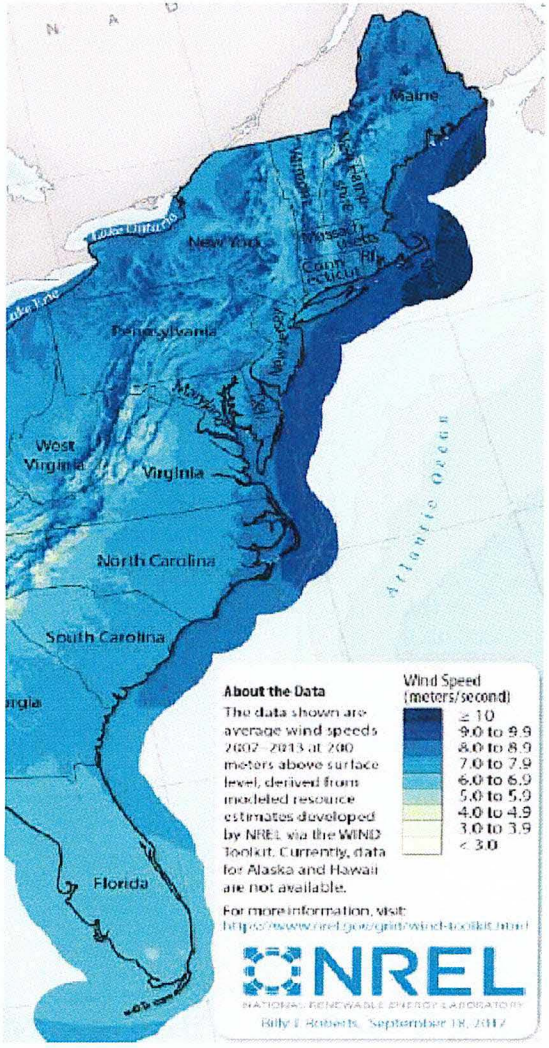
Off-Shore Wind Siting



Customers



Wind Resource at 200m

575

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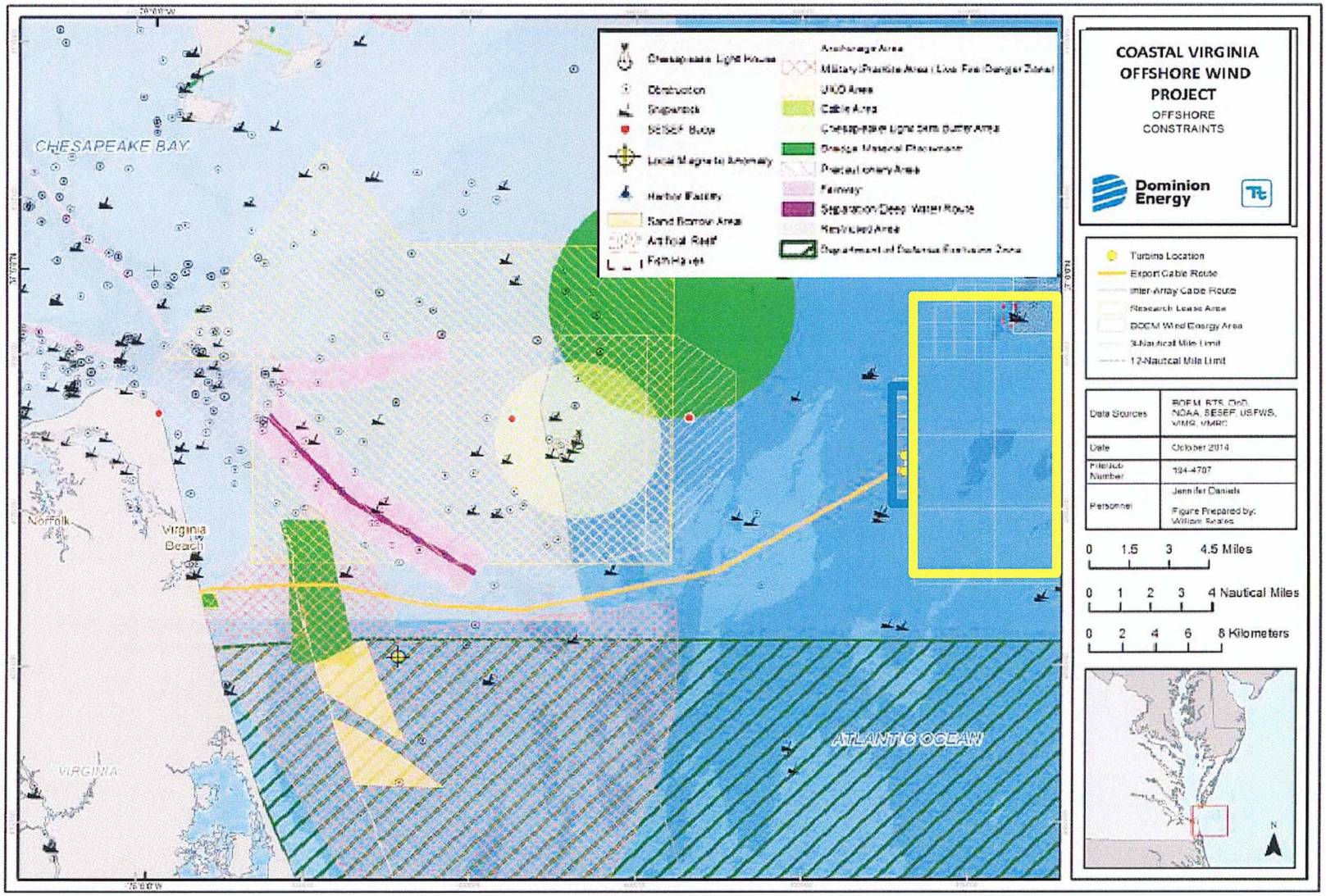
Off-Shore Constraints



576

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Project Regulatory Involvement

- **Federal**
  - Bureau of Ocean and Energy Management (BOEM)
  - NOAA Fisheries (NMFS)
  - Marine Mammal Commission (MMC)
  - US Fish and Wildlife Service (USFW)
  - US Army Corps of Engineers (USACE)
  - US Coast Guard (USCG)
  - US Fleet Forces (USFF)
  - Magnuson-Stevens Fisheries Conservation & Management Act
- **State**
  - Virginia Department of Historic Resources (VDHR)
  - Virginia Department of Environmental Quality (VADEQ) stormwater permit
  - Virginia Department of Environmental Quality (VADEQ) Outer Continental Shelf (OCS) air permit
  - Virginia Department of Environmental Quality (VADEQ) water permit
  - Virginia Marine Resources Commission (VMRC)

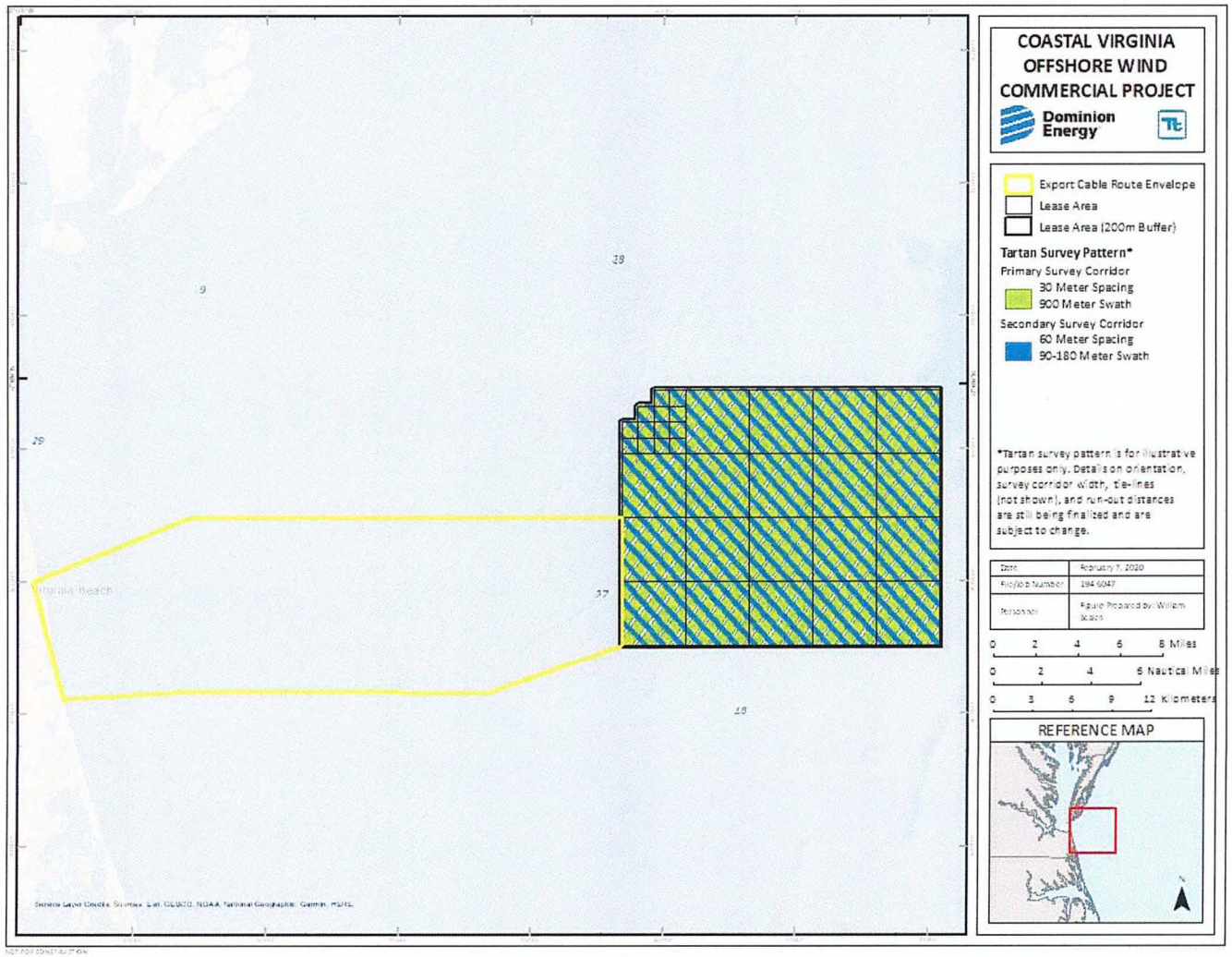
S77

G&G Survey Regulatory Context

- BOEM's site characterization requirements under CFR §585
  - *Guidelines for Providing Geophysical, Geotechnical, and Geohazard Information Pursuant to 30 CFR Part 585* (as per 2015 updates)
  - *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585*

578

Survey Area



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G&G Survey Existing Data

- Bathymetry and seabed conditions within the Project area were initially assessed using the Marine Cadastre Viewer (NOAA and BOEM 2019), the Mid-Atlantic Ocean Data Portal and existing data from NOAA charting expeditions between 2011-2012 and 2013.
- Water depths within the Lease Area range from approximately 59 to 135 ft (18 to 41 m) and within the Export Cable Route Envelope range from 0 to 85 ft (0 to 26 m).
- Historic marine archaeological resources within the Project area were initially assessed using the NOAA Wrecks and Obstructions Database. 152 wrecks and obstructions were identified in the proposed area of potential effect, to be confirmed with ground truthing.
- An Archaeological assessment was completed in 2013 (updated in 2015) by R. Christopher Goodwin & Associates of OCS Block 6112, Aliquot 1 of the Lease Area which resulted in identifying 50m avoidance buffers around two potential cultural resources.

G&G Survey Objectives

1. Provide adequate data for Site Assessment Plan
   - ❑ Shallow Geologic Hazard
   - ❑ Marine Cultural Resource
   - ❑ Benthic Habitat
2. Obtain HRG Survey Data required for COP
   - ❑ Wind Turbine Array
   - ❑ Export Cable Route(s)
3. Preliminary Geotechnical Sampling

581

G&G Survey Approach

- Utilize extensive existing data to provide baseline understanding of geologic and marine archaeologic resources in the Project area
- HRG surveys will consist of collecting the following data types on board the M/V Gerry Bordelon and the M/V Sarah Bordelon:
  - Multibeam Bathymetry data
  - Sidescan Sonar System data
  - Subbottom Profiler data
  - Gradiometer with either 2 or 4 Magnetometers; and
  - Single-channel or multi-channel seismic reflection data
- HRG survey will inform the geotechnical sampling locations
- Geotechnical surveys will consist of deep geotechnical borings with seismic tested borings and/or Piezometric Cone Penetration Test (CPTu)

582

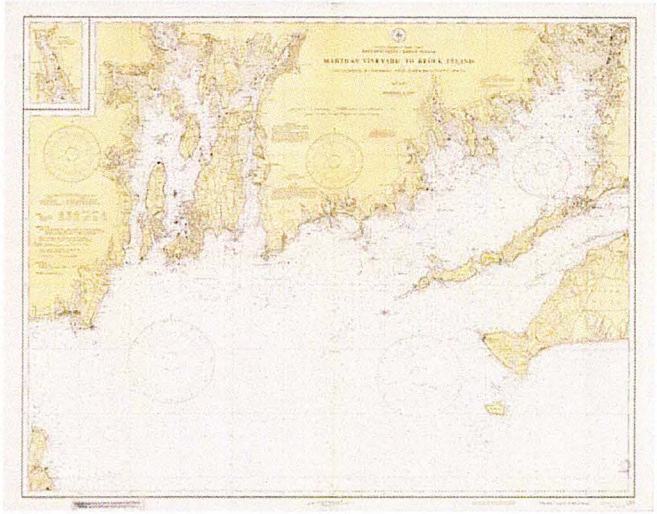
Marine Archaeology

- R. Christopher Goodwin & Associates, Inc. (RCG&A) will serve as the Project's cultural resources specialist and their Nautical Division will provide QMAs to support all Project phases.
- All work will be conducted under the direct supervision a QMA who exceeds BOEM's and the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-44739) and has experience in collecting and analyzing high-resolution marine geophysical survey data.
- The QMA will coordinate with the Project team in order to:
  - Assist with the development of the SAP, COP and Survey Plans to ensure that the geophysical/geotechnical data and subsequent archaeological analyses conform spatially to the Project Design Envelope (PDE);
  - Develop data transfer protocols to establish processes for transferring large geophysical datasets and geotechnical products, which will result in a streamlined, efficient, and cost-effective workflow process; and,
  - Support all HRG surveys as well as the shallow and deep geotechnical site investigations.

583

Cultural Context

- To support SAP and COP reporting requirements, RCG&A's Nautical Archaeology Division will develop environmental and cultural contexts for the Project.
- To support development or refinement of the environmental and cultural contexts, a QMA will assist in characterizing the environmental setting of the Project by researching the geological history of the region, the processes that created present-day coastal and offshore morphology and conditions, and by determining the area's potential to contain submerged and preserved cultural resources.
- Research will entail review of published literature and publicly available data from both state and federal agencies (USGS, BOEM, and NOAA) and will synopsize the data on historic sea-level rise and provide up-to-date interpretations of dynamic offshore environments.
- The Nautical Division's Historian will liaise with the VDHR and the USACE, and consult the Virginia Cultural Resource Information System to obtain information on known historic properties, and to identify relevant previous cultural resources surveys.



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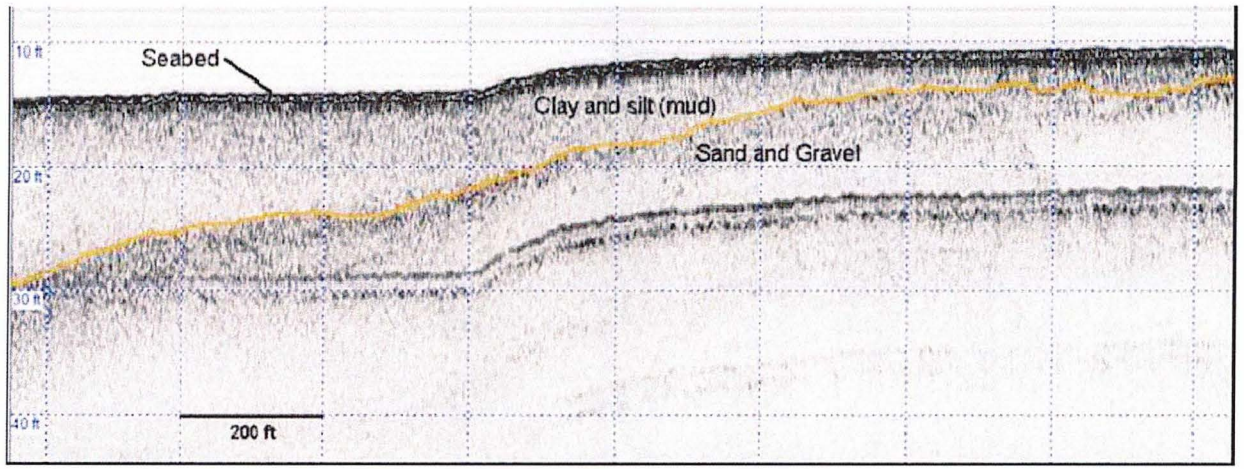
Geophysical and Geotechnical Data Analysis

- The Nautical Division has a comprehensive understanding of the specific survey, evaluation, and reporting requirements for cultural/archeological data analyses on the OCS, as the result of recent marine cultural resource evaluations conducted in support of commercial leases for renewable energy development in the States of Virginia, Maryland, Delaware, New Jersey, New York, Massachusetts and Rhode Island.
- The QMAs will review and interpret the geophysical data collected during the 2020 and 2021 field programs to identify potential submerged archaeological resources.
- QMAs will analyze HRG data using industry standard scientific methodologies and a variety of software programs, including Kingdom Suite (IHS Markit), SonarWiz 6 and 7 (Chesapeake Technologies, Inc.), HYPACK (Xylem), and ArcGIS (ESRI). This suite enables us to make interpretations within the programs in which data are processed initially, speeding analyses, greatly lessening chances for data corruption or loss, and providing conclusions coherent to team members.



585

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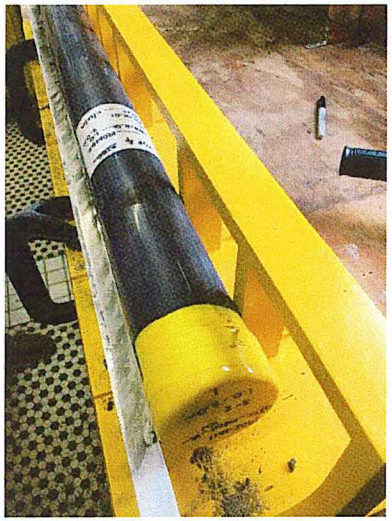
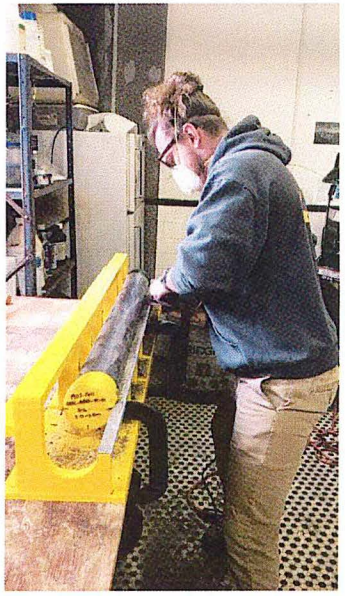
Geotechnical Investigations

- Prior to any geotechnical sampling, the QMA will certify core locations are clear of potential cultural resources by conducting line-by-line analyses of the geophysical survey data.
- The QMAs will work with the Project team to develop an analytical area surrounding each proposed geotechnical sampling location; typically, the analytical area is defined to accommodate vessel maneuverability, variations in sampling, or refusal.
- If our study determines that geotechnical operations will not impact any areas of potential cultural significance, the QMAs will provide documentation of *no adverse effect*. If areas of potential cultural significance are discovered at any potential geotechnical locations, the QMAs will provide the geotechnical contractor with suggested avoidance buffers consistent with the nature of the resource to facilitate relocation of the proposed sampling activity.
- Documentation clearing the geotechnical sampling locations will be provided to the appropriate agencies and appended to the archaeological resources report.
- Should geotechnical sampling encounter a buried cultural resource, RCG&A will coordinate with the appropriate agencies to determine mitigation protocols.
- Paleolandscape reconstruction will be developed by incorporating all sub-bottom (CHIRP) and UHRS data and geotechnical investigations. The reconstruction will be reviewed to identify broad geological trends that could potentially help determine probable areas of buried, preserved landforms that could have supported human habitation. Sample collection serves as "ground truthing" of the archaeological interpretation of sub-bottom records.



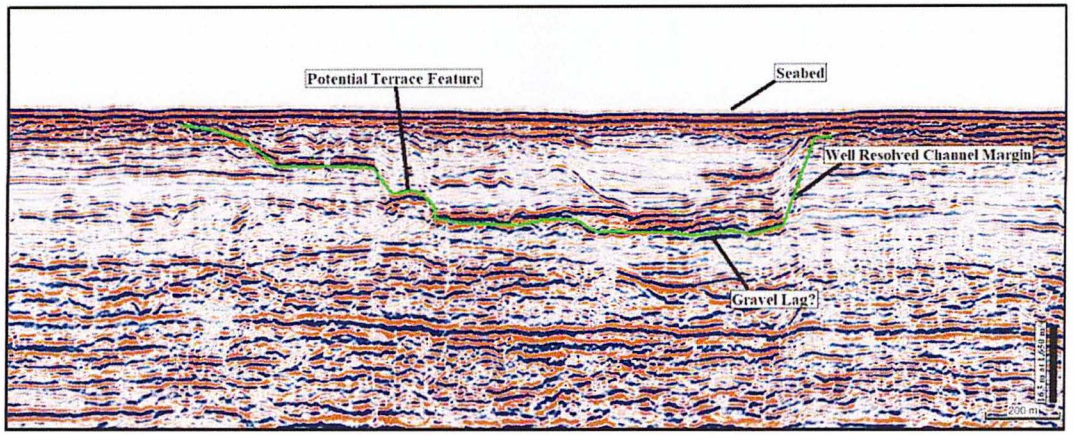


Core Cultural Campaign

- Additional core locations may be required to support the archaeological interpretation of shallow subsurface sediments. Geotechnical activities at these locations will consist of vibratory cores tactically placed to provide samples of significant paleofeatures and/or stratigraphic units of interest. Following collection, the cores will be transferred to an onshore laboratory facility. A QMA will collect subsamples from each core to be radiocarbon dated to establish the geochronology of subsurface sediments. Age estimation results will be provided in a technical memorandum.

Marine Archaeological Resources Report

- Following cultural resources analyses, to support the COP and any supplemental filings, technical reports will be prepared that detail the results of the geophysical data analyses and provides recommendations concerning any potential cultural resources.
- The content of these reports and data products will comport with BOEM and SHPO guidelines and include the following:
  - field and processing methodology;
  - cultural and environmental context and synopsize the data on historic sea-level rise and provide up-to-date interpretations of dynamic offshore environments pertinent to the Project area;
  - results of the archaeological data review (including a discussion and inventory of all magnetic anomalies, seabed contacts, and maps showing channel beacons, buoys, channel alignments, cables, pipelines, paleolandscape features, etc., recorded in and adjacent to the survey area); and,
  - develop a paleolandscape reconstruction (based on the geological ground model and geotechnical sampling) along with a discussion of the preservation potential of buried paleo-landforms across the Project area.



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Marine Life Mitigation Measures

- Monopile installation typically requires less than 4 hours of pile driving per monopile. Other foundation types require up to a week of pile driving per foundation. The reduced pile driving minimizes potential fishery and marine mammal impacts.
- Array and export cables will initially be laid on the seafloor. Cable burial will be done by trenching or jetting with minimal impacts to marine life. Once complete, cable will be 3-6 feet below the seafloor.
- Scour protection at base of each monopile and the foundation structure have been shown to provide positive marine habitat for small species of fish and crustaceans.

588

Marine Mammal Mitigation Measures

The Project will have an Incidental Harassment Authorization (IHA) from National Marine Fisheries Service which will include the following protections for marine mammals and sea turtles:

- ❑ Big Double Bubble Curtain mitigation for pile driving.
- ❑ Vessel strike avoidance measures
- ❑ Seasonal Operating requirements (Northern Right whale migration)
- ❑ Implement exclusion and monitoring zones
- ❑ Visual Monitoring program
  - Protected Species Observers (PSO) will be used during all pile driving activities.
  - Environmental Compliance Monitors (ECM) will be used for cable laying and survey activities.
- ❑ Pre-clearance of the exclusion zones
- ❑ Soft start and shutdown procedures

589

Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219

July 27, 2020

[Recipient/Address]

RE: Coastal Virginia Offshore Wind (CVOW) Commercial Project
Status Update

Dear _____:

Virginia Electric and Power Company, d/b/a Dominion Energy Virginia (Dominion Energy) would like to provide an update for the Coastal Virginia Offshore Wind Commercial Project (CVOW Commercial, the Project).

To date, our Project Archaeologists have reviewed high-resolution offshore geophysical data and certified that a total of 99 geotechnical sampling locations within Lease Area Survey Corridors will not impact potential submerged cultural resources; along the export cable route, 92 additional geotechnical locations have been cleared. Through these efforts all identified paleochannels and other landforms that may have supported human occupation during the Late Pleistocene and Early Holocene Periods are being mapped and marked for avoidance or placement of cultural cores to obtain additional archaeological information. Dominion Energy will seek the Tribes input prior to the collection of cultural cores. Currently the Project is working in accordance with a 50-percent ground model format; this approach allows our subject matter experts to strategically begin the interpretations needed to support the completion of the larger ground model. Offshore survey continues along the export cable corridor and within the Lease Area.

Our team of cultural resources specialists will be meeting soon to discuss the next steps for marine archaeology, terrestrial archaeology, historic architectural assessments, and sensitive viewshed evaluations. Coordination with the Virginia Department of Historic Resources and the Bureau of Ocean Energy Management will be initiated once these next steps have been finalized. Throughout the Project, your input is considered invaluable to help us ensure that Traditional Cultural Properties and your undocumented sacred sites are taken into careful consideration and avoided by potential impacts.

Prior to undertaking offshore cultural cores we plan to have a Tribal meeting to review the proposed core locations and solicit your input. Given the current COVID-19 situation, we understand travel for an in-person meeting maybe difficult. We are assessing options for a teleconference or video conference meeting. In the meantime, if you have a preferred meeting method that would be helpful for us to know for planning purposes. Also, if you prefer, we can send updates such as this via another address or method.

We are pleased to have the opportunity to support Virginia's offshore wind energy development goals while helping to ensure that its unique array of cultural resource sites is protected for the benefit of future generations.

If you have any questions or require additional information, please do not hesitate to contact Scott Lawton at (804) 273-2600 or via email at scott.lawton@dominionenergy.com.

Sincerely,

Grant T. Hollett
Director - Generation Projects

Cc: Casey Reeves, BOEM
GT Hollett, Dominion Energy
Lloyd Eley, Dominion Energy
Richard Gangle, Dominion Energy
Darrell Shier, Dominion Energy
Mark Mitchell, Dominion Energy
Ken Custalow, Dominion Energy
Katie MacCormick, Dominion Energy
Janelle Lavallee, Tetra Tech
Alex Gibson, Tetra Tech
Owen Wright, R. Christopher Goodwin & Associates, Inc.
Steve Schmidt, R Christopher Goodwin & Associates, Inc.

February 17, 2021

ADDRESS

Dear ,

Coastal Virginia Offshore Wind Project

At Dominion Energy, we are committed to providing our customers with affordable, reliable and clean energy. Our Coastal Virginia Offshore Wind (CVOW) project demonstrates how we work to meet our commitment. It will be the largest offshore wind farm in the Americas and positions Hampton Roads as a leader in this burgeoning industry. Although the turbines will be 27 miles off the coast, we will need to get that energy onshore to power homes and businesses. It is an exciting project for our customers and the communities we serve.

Ken Custalow, Dominion Energy's Tribal Liaison, has either spoken to you or left a message regarding the CVOW Project. Because you are a valued leader in the community, we would like your input as we move along the planning process and invite you to join us in two immediate events.

First, we are hosting a public meeting held over four different times on March 2 and 4, which you are invited to attend. Additional details on the meetings can be found at https://coastalvawind.com/learn/community-support.aspx. They will be held **at 8:00am and Noon on Tuesday, March 2 and at 11:00am and 6:00pm on Thursday, March 4.** Hopefully one of the options will accommodate your schedule.

Second, our goal is to convene the Cultural Advocacy Stakeholder group to discuss our project planning. Be on the lookout for an email to select preferred days and times. Our hope is to meet as a group virtually as soon as possible, given we didn't meet in 2020. However, this meeting is not the only time we invite you to provide us your input during the project planning phase.

Hearing your insights and perspectives, along with local voices, will be invaluable as we plan the development of this transformational project.

We have begun the process of studying how best to connect the offshore wind turbines to the onshore electric grid. Building a reliable, strong, and resilient connection to the energy grid will help ensure that the renewable energy generated by the wind turbines will be delivered to homes and businesses in the Commonwealth. Enclosed is a map of the project study area which will help orient you. To deliver the energy generated by the offshore wind turbines to our customers' homes and businesses, undersea cables will come ashore at the State Military Reservation in Virginia Beach. Transmission lines will then carry the renewable energy to a proposed substation near Naval Air Station Oceana and then to the existing Fentress substation in Chesapeake

As with all of our projects, we will work to minimize impacts on the community, the environment and historic places. We also are committed to maximizing the local benefits, such as workforce development

and jumpstarting the supply chain needs. Your feedback will help us achieve that and together, we'll make offshore wind a part of Virginia's future.

We look forward to discussing this important project with you. However, if you would like any additional information, have any questions or to meet individually to discuss the project, please do not hesitate to contact Ken Custalow, our Tribal Liaison. He can be reached by sending an email to ken.custalow@dominionenergy.com or by calling 804-837-2067. You may also reach out to me by email (robert.e.richardson@dominionenergy.com) or phone (804) 248-1698.

Sincerely,

Robert E. Richardson

Rob Richardson
Coastal Virginia Offshore Wind Project Team

Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219

April 1, 2021

[Recipient/Address]

RE: Coastal Virginia Offshore Wind (CVOW) Commercial Project
Status Update and Tribal Engagement Meeting

Dear _____:

Virginia Electric and Power Company, doing business as Dominion Energy Virginia (Dominion Energy), would like to provide an update of ongoing cultural resources assessments for the Coastal Virginia Offshore Wind Commercial Project (CVOW Commercial, the Project) and an invitation for an upcoming Tribal Engagement Meeting.

As you likely know, Ken Custalow is serving as Dominion Energy's Tribal Engagement Manager and has been engaged with our tribal contacts for the Project, in addition to other meetings and communications. Currently, Dominion Energy is seeking to discuss and receive input on the survey plans developed for the historic properties and terrestrial archaeology surveys that will take place in the spring – summer this year.

Geophysical survey, geotechnical investigations, and archaeological data analysis to support the Marine Archaeological Investigation have been ongoing since we last provided a survey update in July 2020. These investigations and analysis will be ongoing throughout the spring and summer of 2021.

Currently our team of cultural resources specialists are planning field surveys for historic properties and terrestrial archaeology. Historic Properties Investigations will serve to assess potential effects of both the Offshore and Onshore Project Components to historic properties, including cultural landscapes. Two survey plans have been developed for the Historic Properties Investigations, an offshore survey plan to assess potential impacts from Offshore Project Components and an onshore survey plan to assess potential impacts from Onshore Project Components. The Terrestrial Archaeology Investigation will serve to assess potential effects of the Onshore Project Components to archaeological resources. Survey plans for both the Historic Properties and Terrestrial Archaeology Investigations have been developed and are currently being reviewed by the Bureau of Ocean Energy Management, the Virginia Department of Historic Resources, and the North Carolina State Historic Preservation Office (historic properties only).

Concurrently, Dominion Energy is in the process of gathering public input from a variety of community members, landowners and other interested parties to aid in the identification and development of a well-informed preferred route and routing alternatives for transmission lines. The Virginia State Corporation Commission has jurisdictional oversight for review and approval of the transmission line route through the Certificate of Public Convenience and Necessity process.

Dominion Energy will host a virtual Tribal Engagement Meeting prior to the initiation of the Historic Properties and Terrestrial Archaeology Investigation field surveys. The goal of this meeting will be to

provide an overview of the survey methodologies, schedule, and to afford an opportunity for tribes to offer input to the Project to ensure that the protection of cultural resources including sacred areas and traditional cultural properties will be considered.

The proposed meeting details are as follows:

- Thursday, April 15, 2021
- 3:00pm EST
- WebEx Virtual Meeting, https://tetratecharg.my.webex.com/tetratecharg.my/j.php?MTID=ma6d8edbf9be00e539afc92fed0149372
- RSVP to Scott Lawton (contact information below)

We are pleased to have the opportunity to support Virginia's offshore wind energy development goals while helping to ensure that its unique array of cultural resource sites is protected for the benefit of future generations. Additional information on the Project can be found at https://coastalvawind.com.

If you have any questions or require additional information, please do not hesitate to contact either Scott Lawton at (804) 205-6077 or via email at scott.lawton@dominionenergy.com, or Ken Custalow at (804) 837-2067or via email at ken.custalow@dominionenergy.com.

Sincerely,

Grant T. Hollett
Director - Generation Projects

Cc: Casey Reeves, BOEM
Justin Bedard, BOEM
Connie Barnett, BOEM
Joshua Bennett, Dominion Energy
Jason Meidinger, Dominion Energy
Jason Ericson, Dominion Energy
Darrell Shier, Dominion Energy
Scott Lawton, Dominion Energy
Mitchell Jabs, Dominion Energy
Ken Custalow, Dominion Energy
Kathryn MacCormick, Dominion Energy
Lane Carr, Dominion Energy
Bob Bisha, Dominion Energy
Susan King, Dominion Energy
Janelle Lavallee, Tetra Tech
Kate Karanda, R. Christopher Goodwin & Associates, Inc.

Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219

Welcome to the Coastal Virginia Offshore Wind (CVOW) Commercial Project Tribal Groups Meeting

Dominion Energy®

- **This meeting will start at 3:00 PM EST**
- Please reference the following prior to participation in the meeting:
  - Everyone except the presenter should mute their lines.
  - Use the "chat" function (bottom right of WebEx window) to ask questions during the presentation. A Dominion representative will address any questions during the Q&A session at the end of the meeting.
  - Use the "hand raise" function during the presentation to ask a question, at which point you will be unmuted.
  - At the bottom right of the WebEx window, you can click "participants" to see a list of participants and to access the hand raise function.
  - If you are accessing via phone only, we will specifically ask for comments from participants on the phone.
  - Copies of the presentation will be sent to participants following the meeting.


Coastal
Virginia
Offshore Wind
Dominion Energy
Actions Speak Louder
Tribal Groups Meeting
April 15, 2021

Introductions

- **Dominion Energy** – Project Developer
- **Tetra Tech** – Permitting, Environmental and Cultural Resources
- **R. Christopher Goodwin & Associates** – Offshore Historic Properties
- **ERM** – Engineering, Onshore Historic Properties

- **Introductions**
- **Goals and Objectives**
- **Project Overview**
- **Purpose of Cultural Resources Assessments**
- **Offshore Assessment**
- **Onshore Assessment**
- **Next Steps**
- **Questions and Discussion**

Goals & Objectives

Dominion Energy®

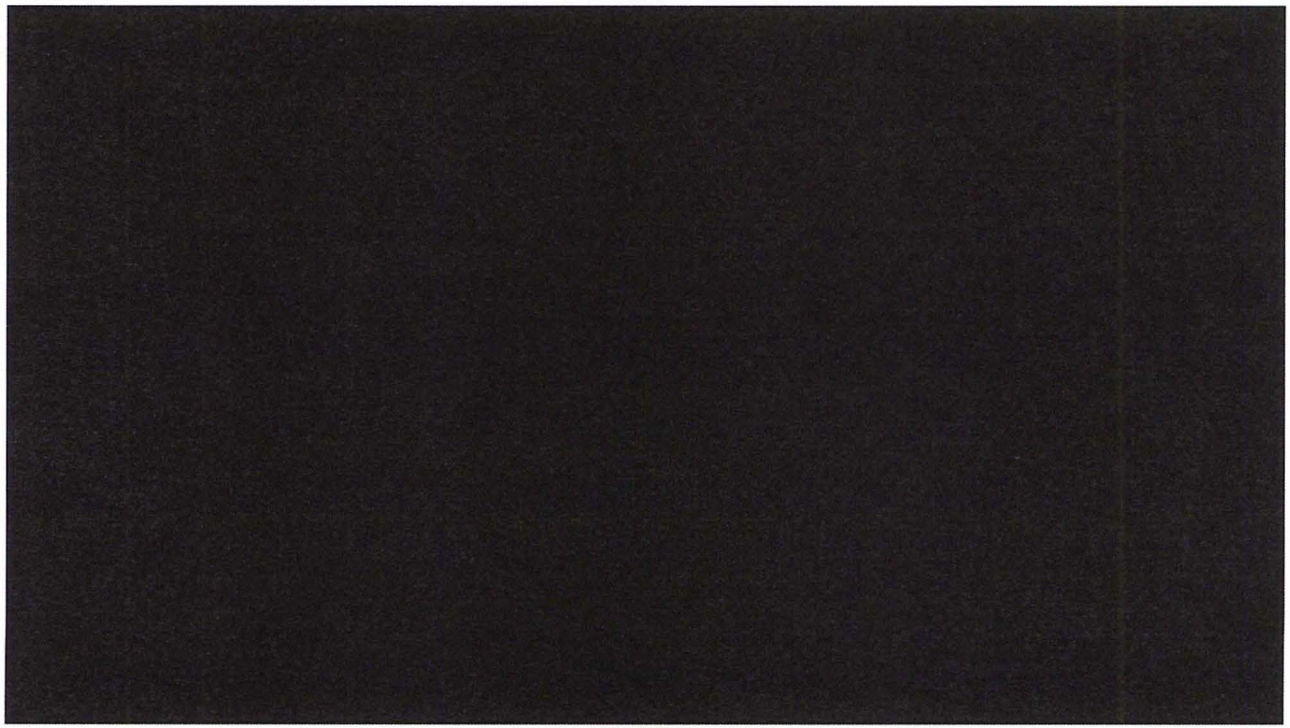
- Provide overview of the Project
- Provide overview of cultural resources considerations
- Request assistance with input regarding potentially unidentified areas of cultural importance
  - Early engagement vs. Section 106 consultation

CVOW Pilot

- Two 6 MW wind turbines; approximately 600 feet tall
- 12-megawatt total capacity; enough to power up to 3,000 homes
- Located within a 2,135-acre research lease area, 27 miles (24 NM) off the coast of Virginia Beach
- First offshore wind project installed in federal waters and first owned by an electric utility
- Designed to inform development of commercial project and the offshore wind industry as a whole

Why Offshore Wind?

Dominion Energy®



602

Why Offshore Wind?

Dominion Energy®

Clean Air
Generates enough energy to power up to 660,000 homes with zero emissions and fuel costs

Clean Energy Diversity
Complementary resource with solar since both generate energy at different times

Clean Energy Economy
Foundation that can develop into a Virginia supply chain hub to stimulate economic growth and drive down costs

Clean Energy Jobs
Creates clean energy and manufacturing jobs throughout the Commonwealth as well as a talent pipeline through workforce development partnerships

Clean Energy Goals
Critical resource for meeting the Commonwealth's objective of carbon-free energy by 2045

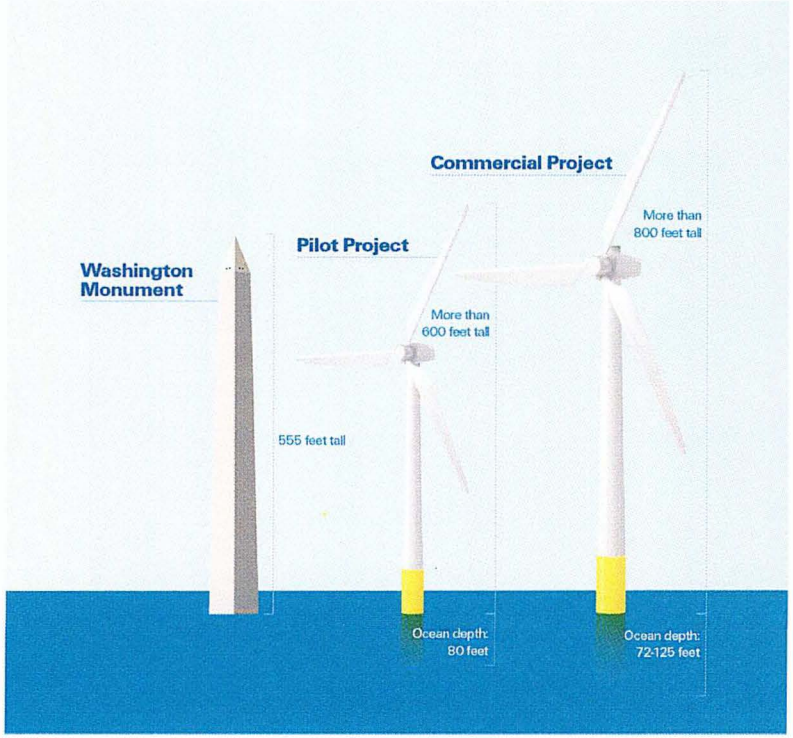
Clean Energy Research
Continue to support the advancement of offshore wind technology and environmental sustainability for marine, avian and terrestrial habitats

603

CVOW Commercial

Dominion Energy®

- Approximately 188 wind turbines; 14 MW each
- More than 800 feet tall, 200 feet taller than the pilot
- 2,640-megawatt total capacity
- Enough to power up to 660,000 homes
- Located within a 112,800-acre lease area east of the pilot project
- Once complete, it will be the largest offshore wind project in United States
- Critical resource for meeting clean energy goals



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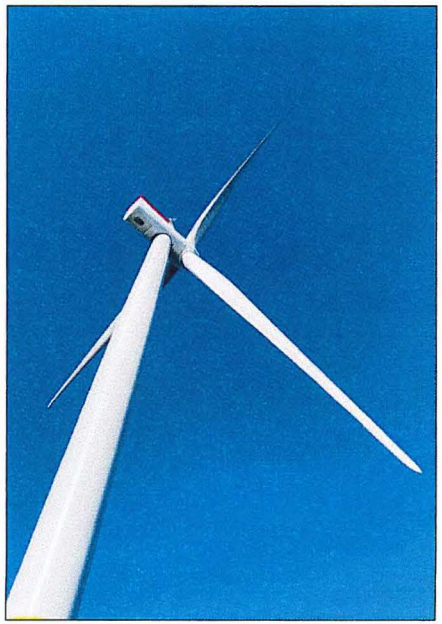
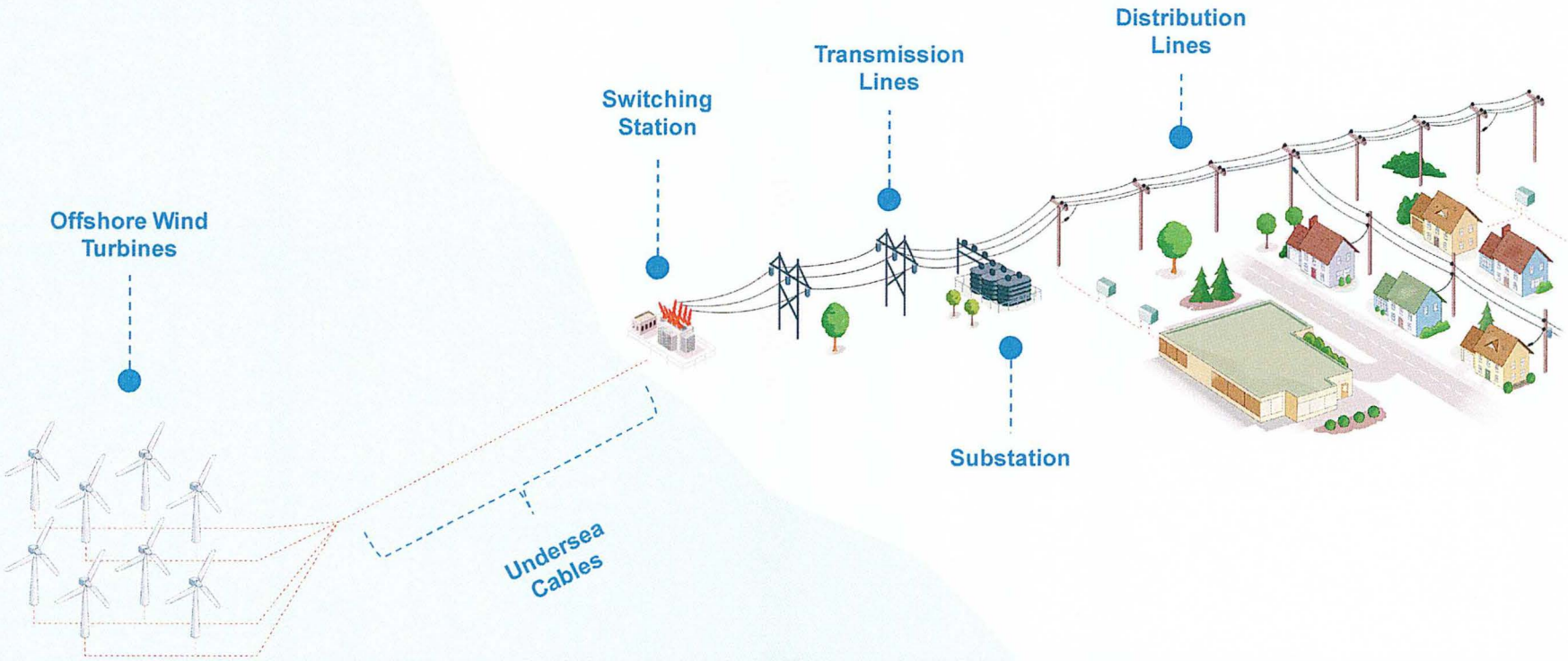
CVOW Timeline



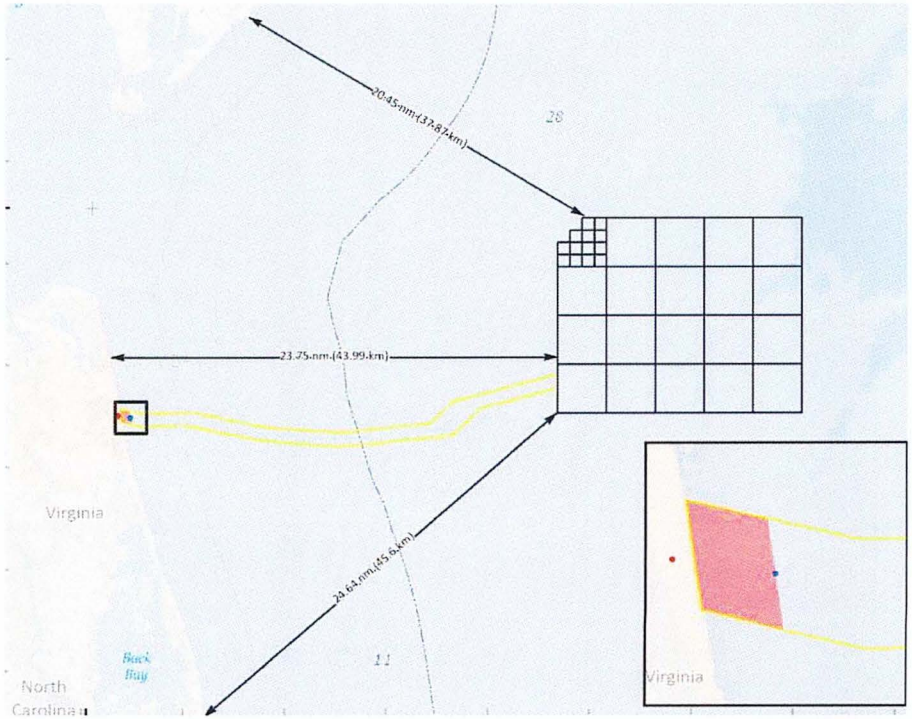
✓	Sep. 2019	2.6GW project announced
✓	Dec. 2020	Construction & Operation Plan (COP) submitted to Bureau of Ocean Energy Management
✓	March 2021	First set of virtual public meetings
	March – Mid 2021	Continue public meetings and conduct surveys
	Mid 2021	COP updated from public input and routing considerations
	Mid to Late 2021	Begin filing for other necessary permits / approvals
	Late 2021	State Corporation Commission (SCC) Filing
	Late 2022 – Mid 2023	Final decisions for necessary permits / approvals
	2023 – Early 2024	Begin construction of onshore transmission infrastructure
	2024 – 2026	Construction of offshore components and remaining onshore infrastructure

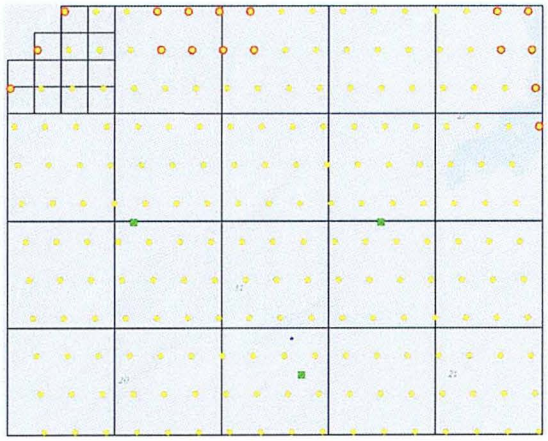
Moving Offshore Energy Onshore

Dominion Energy®



CVOW Offshore Area

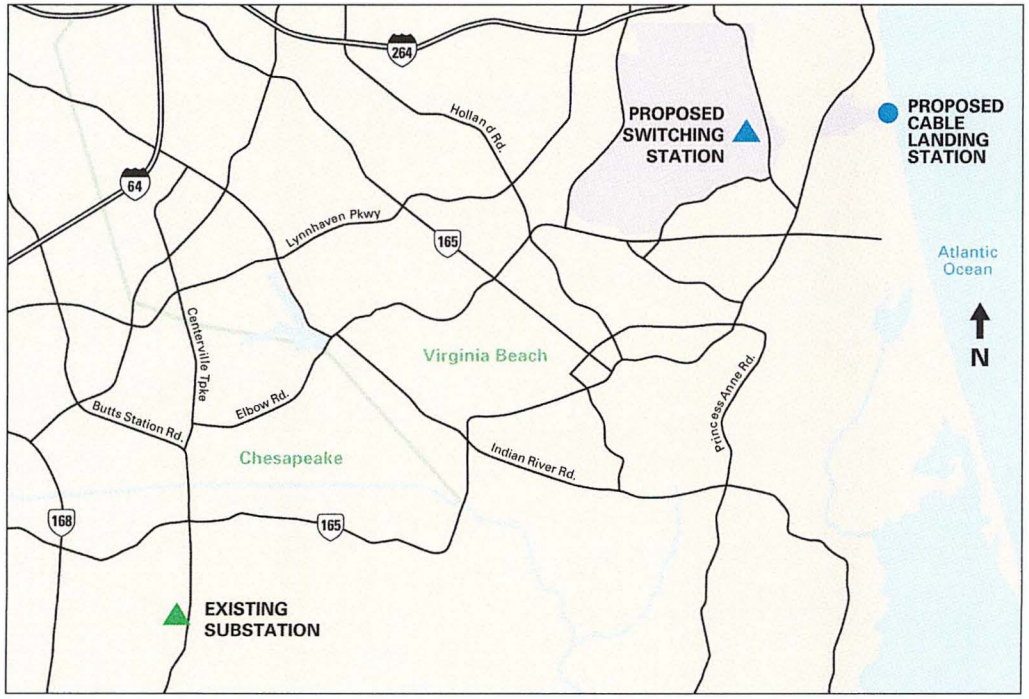




- Proposed WTG locations (188)
- Spare WTG Locations (17)
- Proposed Offshore Substations (3)
- WTG Spacing (0.93 nm x 0.75 nm)

607

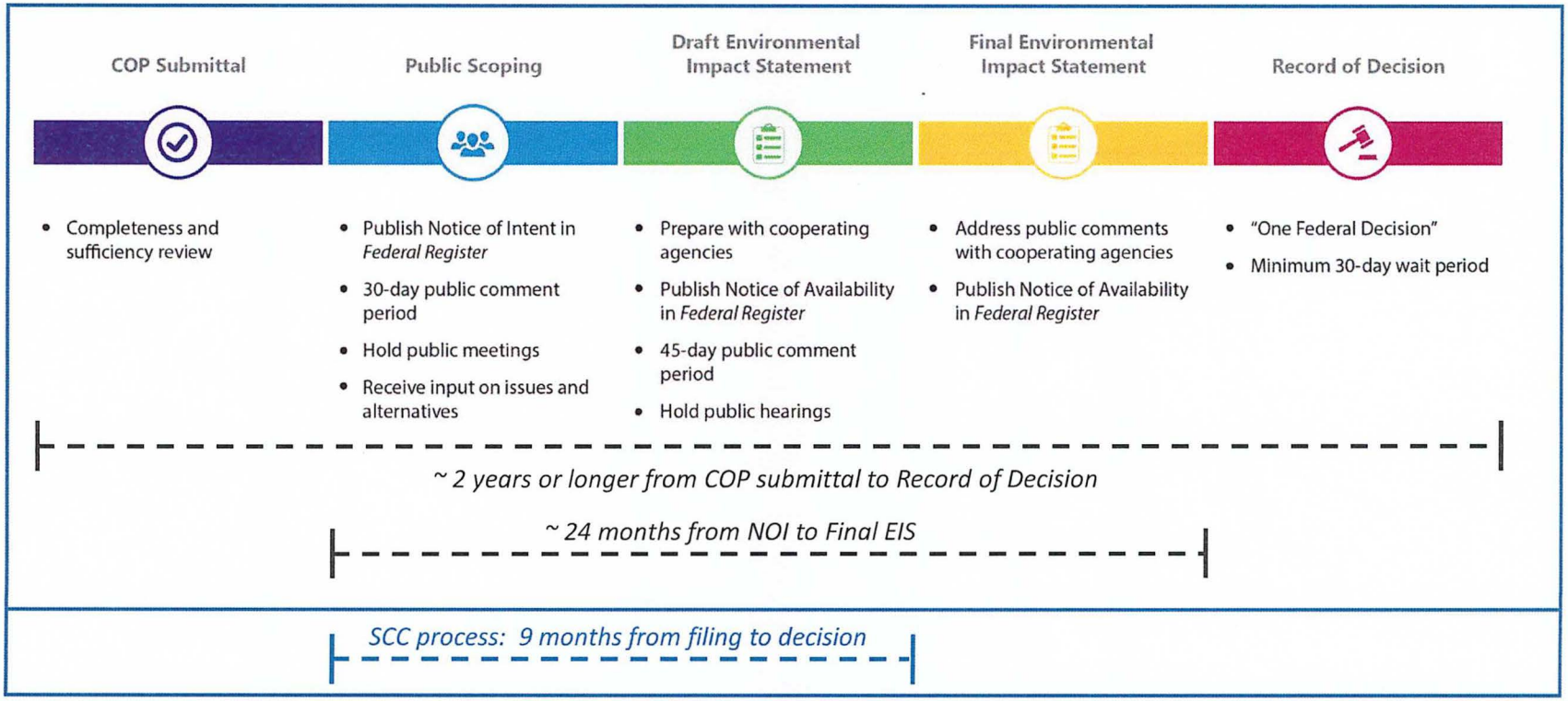
Onshore Project Summary



- Dominion Energy is exploring all electrical solutions for transmission routes
- Undersea cables are proposed to come ashore at State Military Reservation (SMR) in Virginia Beach
- Transmission lines will interconnect SMR to a proposed switching station located near Naval Air Station Oceana
- Transmission lines will then interconnect from the switching station to Dominion Energy's existing Fentress Substation in Chesapeake
- Approximately 13 miles from the proposed switching station to the substation

NEPA and SCC Alignment

Dominion Energy®



609

Permitting and Regulatory Agencies

Dominion Energy®

BOEM
Bureau of Ocean Energy Management

Virginia DWR

DHR
Virginia Department Of Historic Resources

EPA

NOAA
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Virginia Marine Resources Commission

United States Coast Guard 1790

State Corporation Commission Virginia 1903

U.S. Fish & Wildlife Service
Department of the Interior

US Army Corps of Engineers®

DEQ
Virginia Department of Environmental Quality

NC Department of Natural and Cultural Resources

DMME
Virginia Department of Mines Minerals and Energy

Marine Mammal Commission

North Carolina Environmental Quality

Required Plans and Studies

- Acoustics
- Air Emissions
- Avian and Bat
- Aviation Impacts
- Electric and Magnetic Fields
- Fisheries
- Marine Mammals and Sea Turtles
- Sediment Transport
- Terrestrial Biological Resources
- Visual Impacts
- Oil Spill Response Plan
- Cultural Resource Protections
- Marine Debris Prevention Plan
- Geophysical, Geotechnical, and Benthic
- Historic Architecture
- Marine and Terrestrial Archaeology
- Navigational Safety Risk

Cultural Resources Regulatory Context

~ By complying with both the federal and state regulatory process, a rigorous review process is ensured ~

State Agencies:

Virginia Department of Historic Resources (VDHR)

North Carolina Historic Preservation Office (NCHPO)

Federal Agency:

Bureau of Ocean Energy Management (BOEM)

- The SCC's review of the Project will occur concurrently with and in some instances following key milestones in BOEM's NEPA review process.
- BOEM's NEPA review schedule for the Project precedes Dominion's public input process as well as the SCC review and approval of a route for the onshore transmission line.
- The survey is anticipated to encompass all of the routes eventually formally noticed to the public as required by the SCC for inclusion in the Certificate of Public Convenience and Necessity (CPCN) review process.

Offshore Project Components
Historic Properties Survey Plan

Dominion Energy®

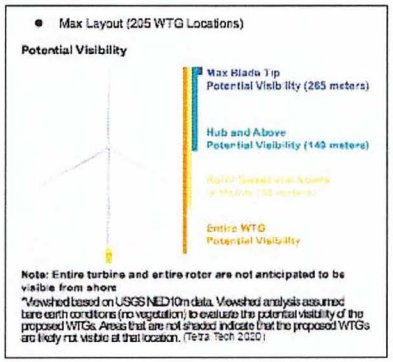
- Definition of the Study Area and Preliminary Area of Potential Effects (PAPE)
- Research
- Outreach and engagement
- Data analysis
- Virtual and reconnaissance-level field verification
- Development of recommendations
- Preparation of draft and final reports

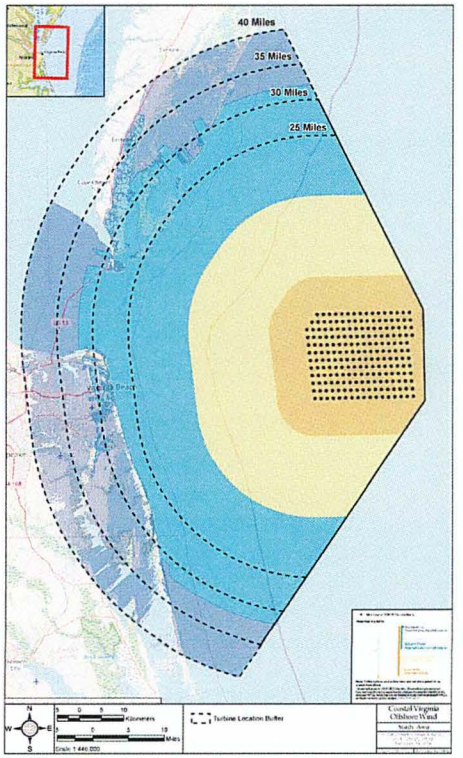
612

Offshore Project Components
Historic Properties Study Area

Dominion Energy®

- 40-mile buffer around Wind Turbine Generators (WTGs)
- Bare earth model incorporating:
  - Location of WTGs
  - Curvature of the earth
  - Topography



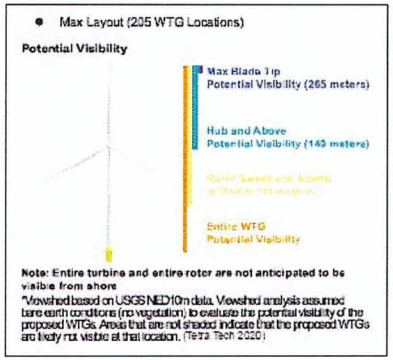


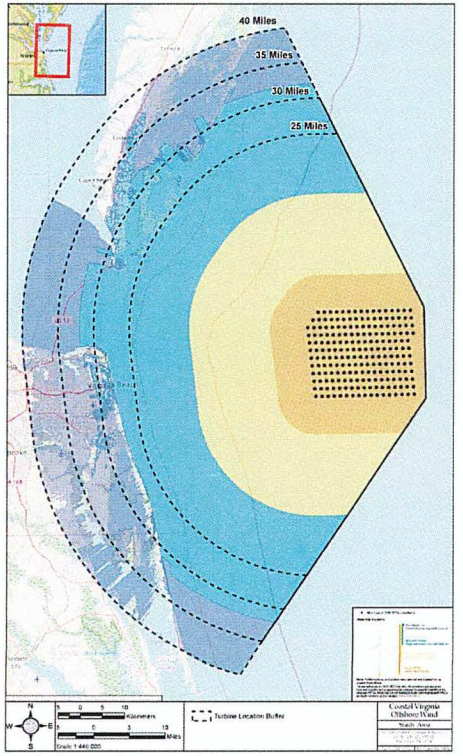
Offshore Project Components

Historic Properties Preliminary Area of Potential Effects (PAPE)

Dominion Energy®

- Further refinement of the Study Area
- Applying data sets:
  - Land cover for areas of tall vegetation
  - Building footprints and height





614

Offshore Project Components
Historic Properties Research

Dominion Energy®

- Comprehensive inventory of previously identified historic properties within the Study Area will be compiled. Sources will include:
  - VDHR's V-CRIS
  - NCHPO's HPOWEB
  - BOEM's Evaluation of Visual Impact on Cultural Resources/Historic Properties: North Atlantic, Mid-Atlantic, South Atlantic, and Florida Straights Volumes I and II
- Study list will be refined to identify historic properties in the Preliminary Area of Potential Effects (PAPE)
  - Preliminary analysis of the PAPE:
    - 1,255 previously identified properties
    - Additional 514 properties in historic districts
- Identify:
  - Properties eligible or listed in State/National Register of Historic Places
  - National Historic Landmarks
  - Historic properties in V-CRIS and HPOWEB
  - Properties of interest to Tribes and Engagement Groups

615

Offshore Project Components
Historic Properties Data Analysis

Dominion Energy®

- Four-step process:
  - Step One: Historic property data will be analyzed, and attribute tables created for all documented historic properties within the Preliminary Area of Potential Effects (PAPE)
    - Classification by period and theme
    - Anticipated: recreation, maritime, TCPs, residential, military
    - Character-defining features associated with property types will be identified
  - Step Two: Property data will be reviewed to identify character defining views and relationships to the ocean; data gaps will be noted and addressed
    - Coordination on visual simulations for historic properties
  - Step Three: Elements that may potentially affect historic properties from the offshore Components will be identified and defined
  - Step Four: Project data and character defining elements of historic properties will be analyzed to identify properties potentially affected by the Project

Offshore Project Components

Historic Properties Field Verification and Reporting

Dominion Energy®

- Virtual field verification will be undertaken to preliminarily assess potential visibility of historic properties
- Reconnaissance field investigations will be undertaken to verify findings after initial analysis
  - Field verification of data on historic properties will be undertaken for properties where aspects of integrity are not discussed in detail
- Properties within the vicinity of visual simulations will be verified
- Technical report will be prepared documenting purpose, analysis, and conclusion following BOEM standards

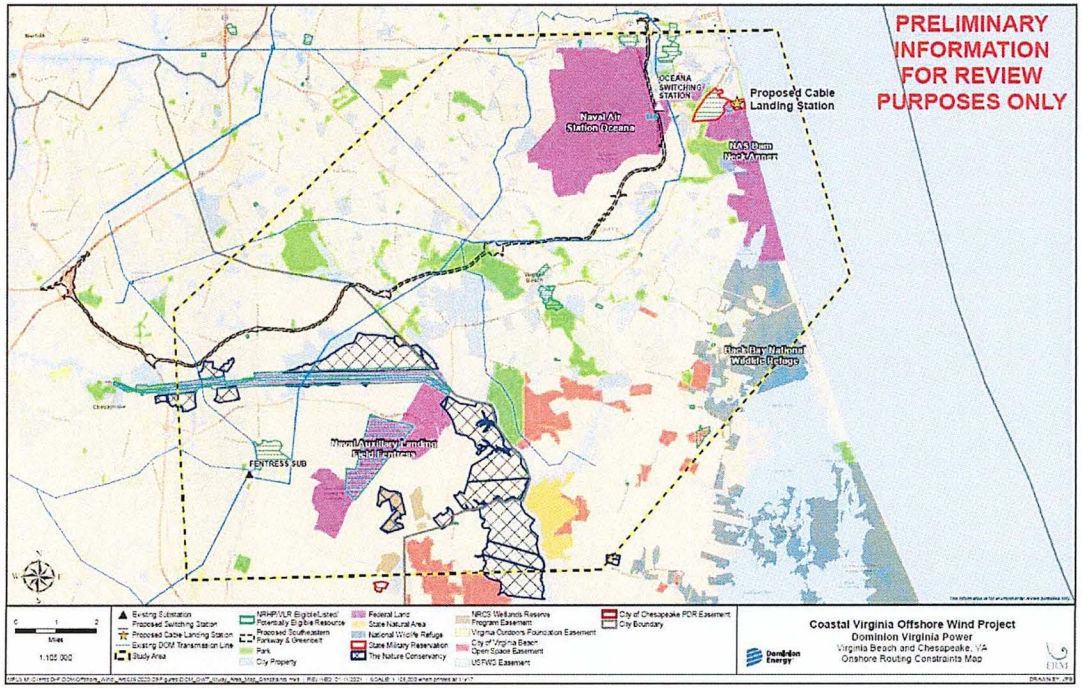
617

Onshore Project Components

Historic Properties Survey Plan

Dominion Energy®

- Study Area
- Stage 1 Pre-application Analysis
- Stage 2 Survey



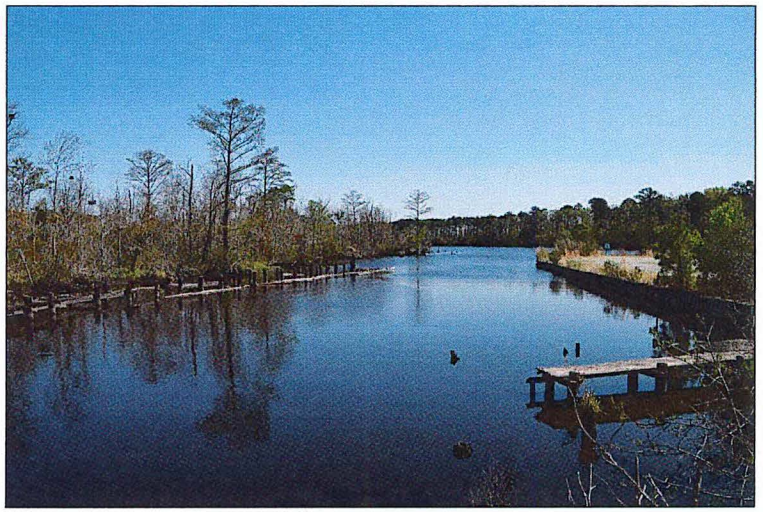
618

Onshore Project Components
Historic Properties Stage 1 Study Area

Dominion Energy®

Study area for Stage 1 analysis is defined by VDHR

- Guidelines include four study tiers
- Each study tier specifies cultural resources to consider



619

Onshore Project Components
Historic Properties Stage 1 Survey

Dominion Energy®

Assessment and preparation of photosimulations to analyze the potential severity of impacts to considered resources

620

Onshore Project Components
Historic Properties Stage 1 Analysis

Dominion Energy®

Using the ground-level photography from the considered resources toward the proposed route along with the photosimulations, an assessment of the potential impacts on historic resources from each proposed route will be made using categories of severity defined by VDHR

- None
- Minimal
- Moderate
- Severe

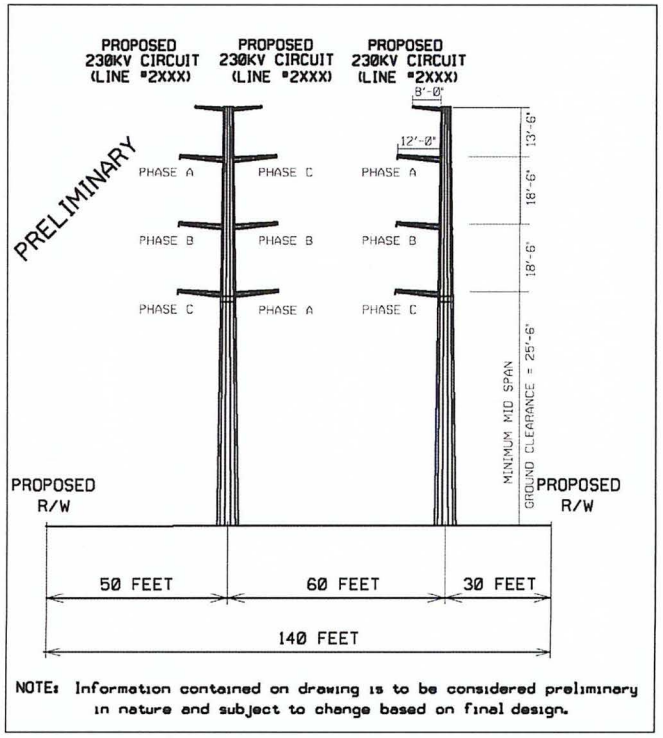
621

Onshore Project Components
Historic Properties Stage 2 Study Area

Dominion Energy®

Findings of the pre-application analysis and other data gathered on potential environmental and land use impacts and engineering constraints will influence how the originally proposed routes are evaluated

- Some routes will be removed from consideration along the way
- The Stage 2 survey will likely focus on a smaller number of route options

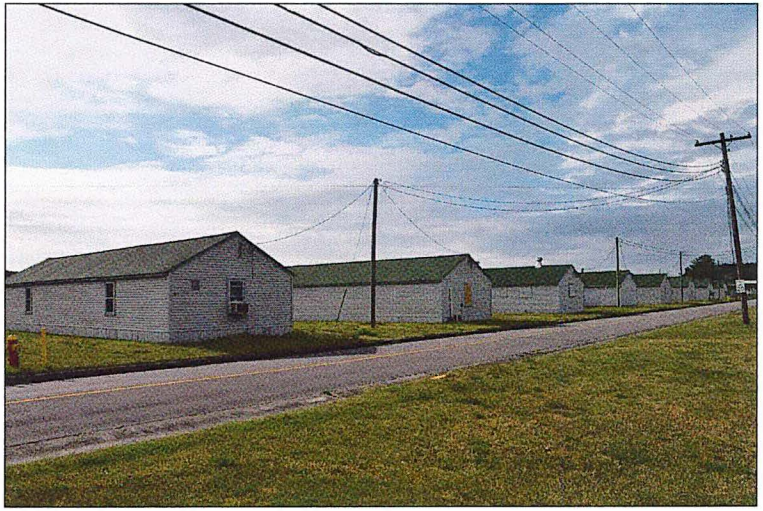


Onshore Project Components
Historic Properties Stage 2 Survey

Dominion Energy®

The Stage 2 survey will follow and include:

- A full survey of aboveground historic resources
- The Stage 2 field survey will involve more intensive data collection
- The intensive data collection will also include high resolution photography and the preparation of site sketch maps
- V-CRIS data entry



623

Onshore Project Components
Historic Properties Stage 2 Analysis

Dominion Energy®

- The assessment of impacts will use the same categories of severity relevant to the pre-application analysis

- Findings will be presented in a separate report, subsequent to the survey report, that will include select photosimulations as part of the impact assessment

- The survey and impact assessment report prepared as part of Stage 2 will provide BOEM complete, intensive-level identification of historic properties in the study area and evaluation of Project effects

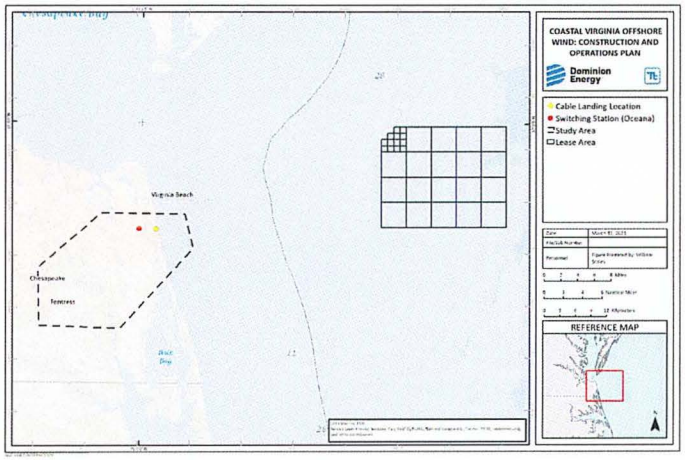
624

Terrestrial Archaeological Resources Investigation

Area of Potential Effect

Dominion Energy®

- Definition of the Area of Potential Effect (APE) for the Project
  - Maximum footprint of direct impacts from Project construction and staging
  - APE will include the Cable Landing Location, the Onshore Export Cable, a Switching Station, an Interconnection Cable, an Onshore Substation, and an Operations & Maintenance Facility
  - Currently multiple route options and locations under consideration, and are anticipated to be further refined prior to the initiation of field surveys



625

Terrestrial Archaeological Resources Investigation

Background Research

Dominion Energy®

- Background research will be undertaken to assess the archaeological sensitivity of the APE
- Sources will include:
  - The Virginia Department of Historic Resources (VDHR)
  - Military Installations, Cultural Resources Management Documents
  - Local Historic Societies and Preservation Groups
  - Environmental data
  - Historic maps and aerial imagery
  - Pre-Historic Sites Sensitivity Analysis for Onshore Project Area

626

Terrestrial Archaeological Resources Investigation
Survey Methodology

Dominion Energy®

- Terrestrial Archaeology Survey Methodology
  - Pedestrian survey of the entire Project area (Phase IA)
  - Phase IB subsurface testing within undisturbed portions of the Project area
    - Typically cylindrical shovel tests 15 inches in diameter placed at 50-foot intervals
    - May be augmented by judgmental testing in areas of high sensitivity
    - Deep testing of alluvial sediments, hand or mechanical testing, typically 3.3 foot by 3.3-foot squares or trenches
  - Subsequent investigations (Phase II, III) if sites of significance are identified
  - During construction archaeological monitoring of portions of the Project area not subject to subsurface testing

627

Terrestrial Archaeological Resources Investigation

Data Analysis and Reporting

Dominion Energy®

- Data analysis
  - Artifacts
  - Features
  - Dating
- Reporting
  - Technical report will be prepared documenting purpose, analysis, and conclusion following BOEM standards
  - Recommendations for additional investigation or mitigation
  - Unanticipated Discoveries Plan

628

Application of Findings for Cultural Resources

Dominion Energy

- BOEM in consultation with VDHR will use the findings to take into account effects to cultural resources
- BOEM will also consider input from interested parties
- If any adverse effects are identified, BOEM and Dominion as the Project Applicant will need to take one of the following two actions within the Section 106 framework:
  - Avoid or minimize the adverse effect through engineering changes
  - Make provisions for the adverse effects to be mitigated, such as:
    - National Register of Historic Places eligibility documentation
    - Development of educational resources
    - Phase II or III archaeological investigations

629

Next Steps

- Feedback from Tribes
- Continue Onshore and Offshore Research
- Undertake field verification (offshore) and field identification (onshore)
- Reporting
- Additional Studies, Mitigation

630

Discussion

For Further Information, Please Contact:

Dominion Energy®

Visit our website:

https://coastalvawind.com/

Call us:

1-844-319-2065

Reach out via e-mail:

Ken Custalow, Tribal Engagement Manager:

Ken.Custalow@dominionenergy.com

General Project Inquiries:

info@coastalvawind.com

632

Dominion Energy®

Actions Speak Louder

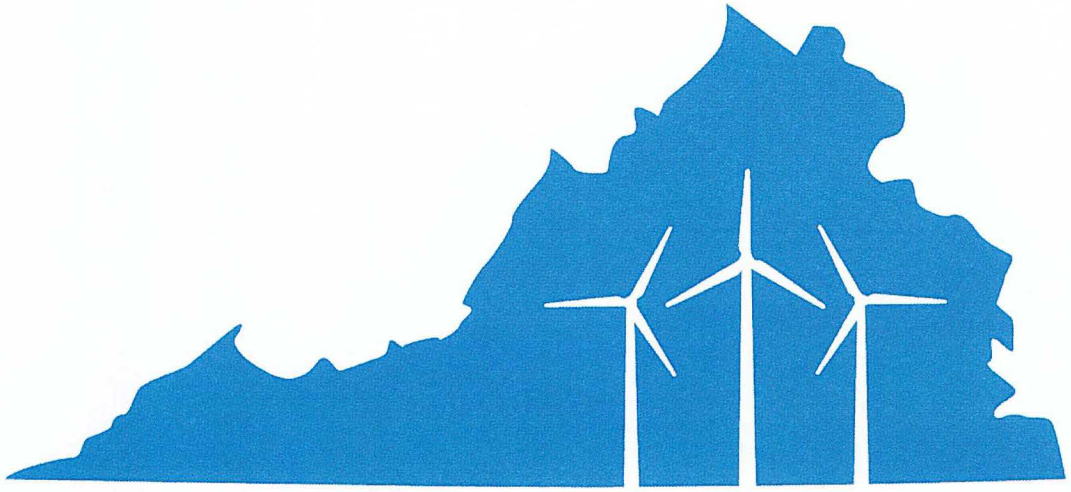
Coastal Virginia Offshore Wind

Why Offshore Wind?

Dominion Energy®
Actions Speak Louder

Coastal Virginia
Offshore Wind

- Supports the Commonwealth's goal of 100% zero carbon electricity by 2045
- Creates hundreds of jobs, and millions in tax revenue and economic benefits[1]
- Complements solar energy generation
- Positions Virginia to become a national leader in offshore wind



Growing Virginia's Economy *with Renewable and Clean Offshore Wind Generation*

[1]Mangum Economics, *Potential Impact of the Development of the Offshore Wind Energy Industry on Hampton Roads and Virginia*, September 2020.

Phase I Pilot Project

Dominion Energy
Actions Speak Louder

Coastal Virginia
Offshore Wind

- First offshore wind project installed in federal waters and first owned by an electric utility
- Two 6-megawatt wind turbines
- 12-megawatt total capacity
- Enough to power up to 3,000 homes
- Approximately 600 feet tall, the height of the Washington Monument
- Located within a 2,135-acre research lease area, 27 miles off the coast of Virginia Beach

Phase II Project

Dominion Energy
Actions Speak Louder

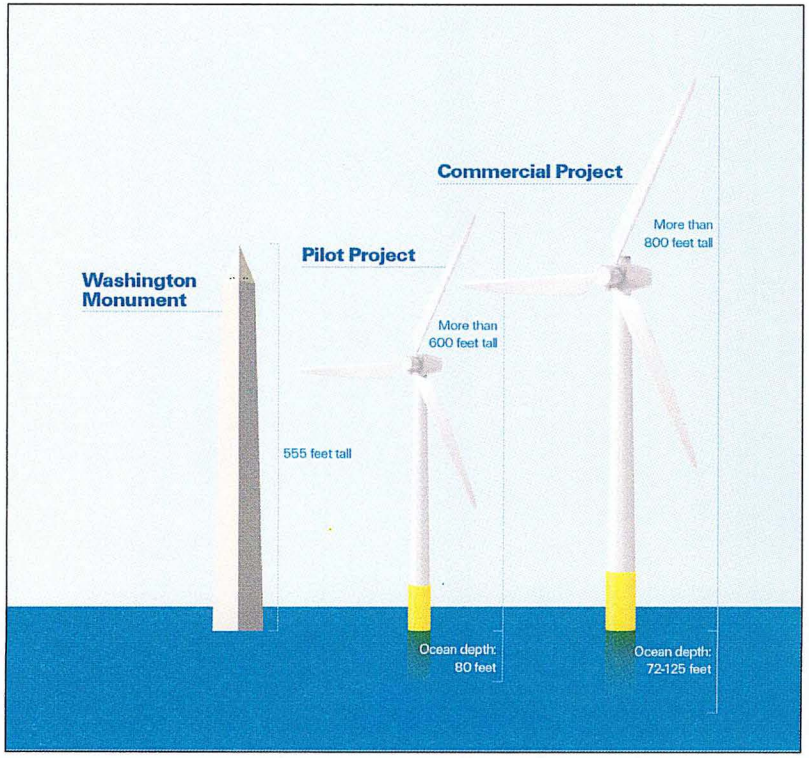
Coastal Virginia
Offshore Wind

- Planning 180 14-megawatt wind turbines
- 2,640-megawatt total capacity
- Enough to power up to 660,000 homes
- More than 800 feet tall
- Located 27 miles offshore within 112,800-acre lease area east of the pilot project
- Once complete in 2026, it's slated to be the largest project of its kind in United States

How Big Are Offshore Wind Turbines?

Dominion Energy®
Actions Speak Louder

Coastal Virginia
Offshore Wind

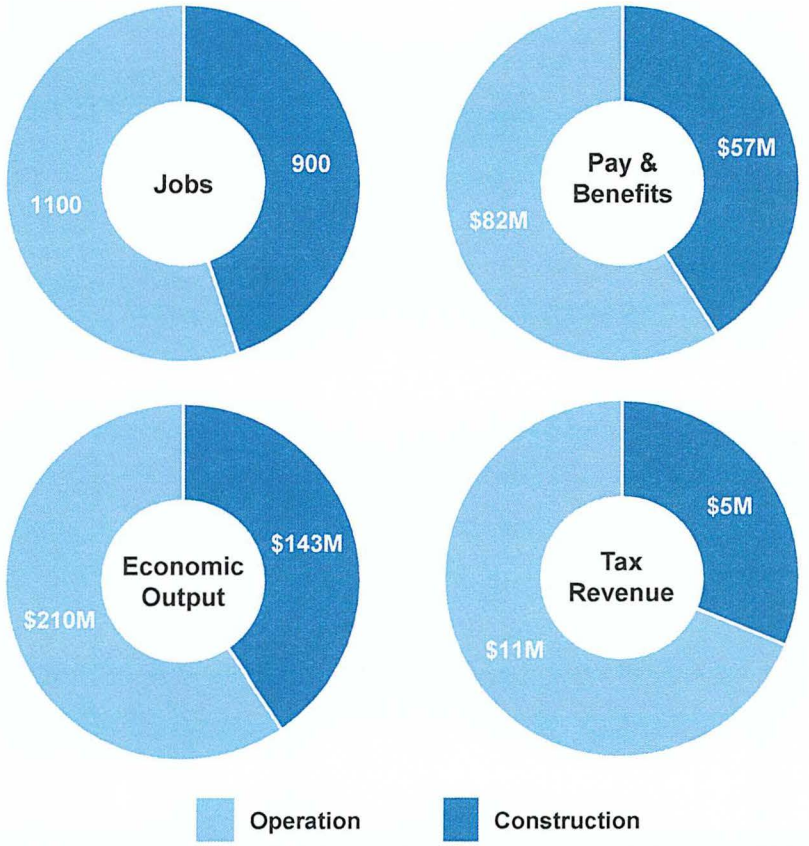


Growing a Clean Energy Economy

Dominion Energy® Actions Speak Louder

Dominion Energy Virginia Offshore Wind

- Approximately **900 jobs** and **$143 million in economic impact** annually during construction
- Approximately **1,100 jobs** and almost **$210 million in economic impact** annually during operation
- Priority hiring of veterans, local workers, and individuals from economically-challenged communities
- Maximizing opportunities for Virginia vendors, subcontractors, and suppliers
- Actively engaging Virginia businesses through outreach programs
- Workforce Development Partnerships



Source: Mangum Economics, *Potential Impact of the Development of the Offshore Wind Energy Industry on Hampton Roads and Virginia*, September 2020.

What CVOW Means for the Environment

Dominion Energy® Actions Speak Louder

Dominion Energy Offshore Wind

CVOW will generate 8.8 million megawatt hours annually, the equivalent of:

- Taking more than one million non-EV cars off the road
- Growing more than one hundred million trees for 10 years
- Switching more than two hundred million incandescent light bulbs to LEDs
- Charging almost eight hundred billion smartphones

639

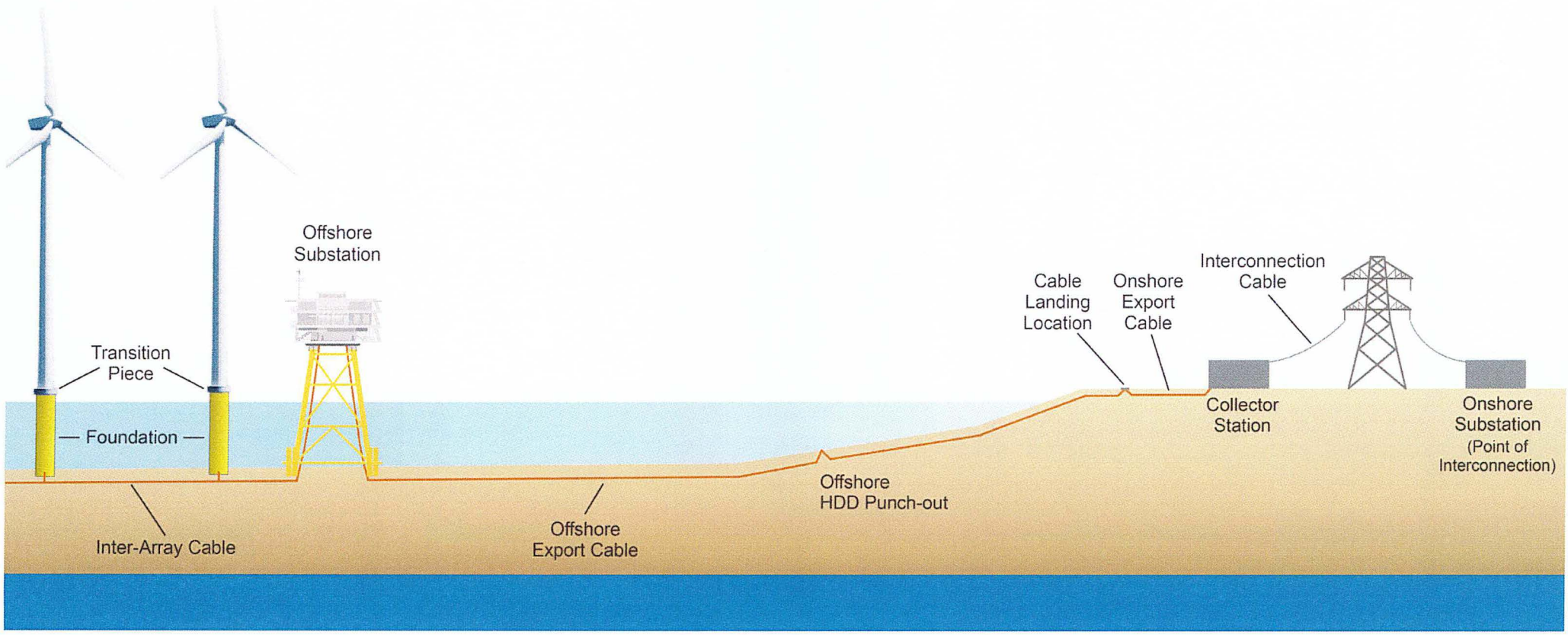
Source: Environmental Protection Agency, *Greenhouse Gas Equivalencies Calculator.*


Offshore Turbines + Onshore Transmission = CVOW
Dominion Energy®
Actions Speak Louder

Offshore Wind: How Does It Work?

Dominion Energy
Actions Speak Louder

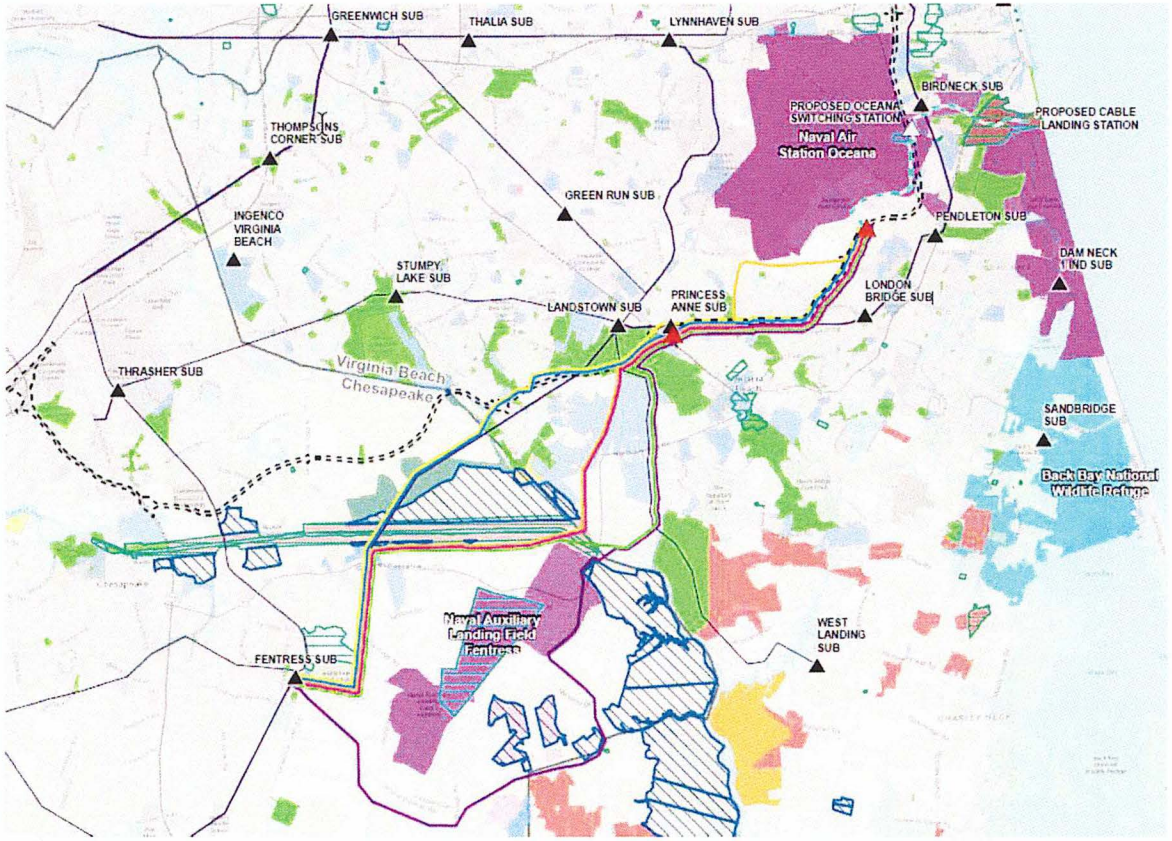
Coastal Virginia
Offshore Wind



Onshore Project Summary

Dominion Energy
Actions Speak Louder

Coastal Virginia
Offshore Wind



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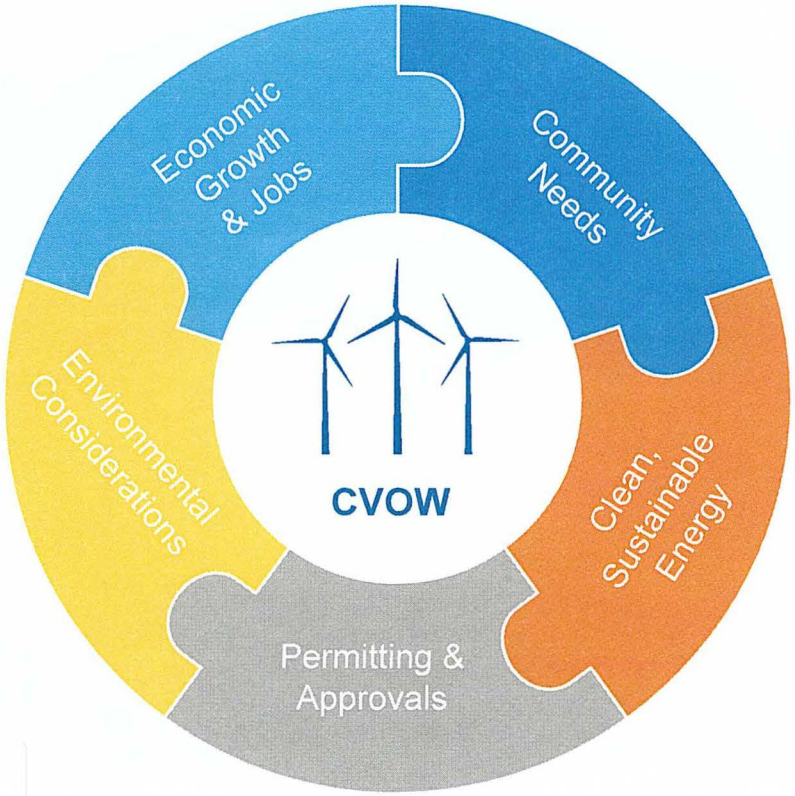
Partnering with Communities

Dominion Energy
Actions Speak Louder

Coastal Virginia Offshore Wind



Study Area

- Focused on information gathering and opportunities to hear from community members
- Information gathering will help us, the community, and regulators effectively evaluate potential routing options

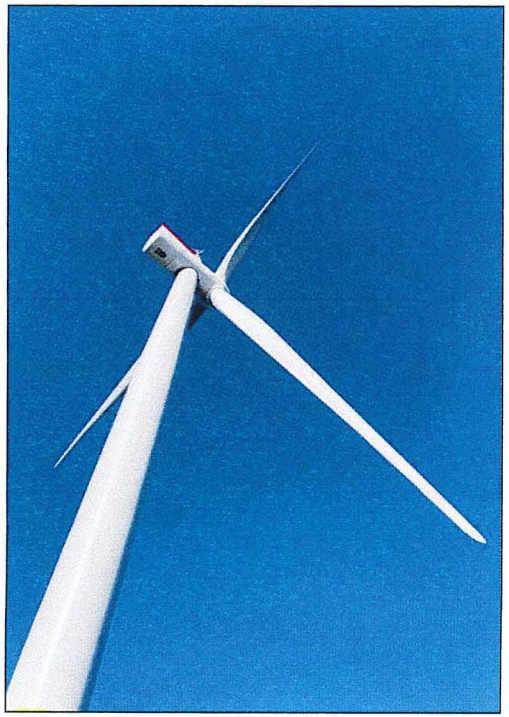
Seeking Public Input

- Understanding the communities' needs and partnering on opportunities created by the CVOW project
- Minimizing the impacts to landowners, environmental justice communities, sensitive species, and cultural and historic resources
- Maximizing the use of existing rights-of-way and other available space

Many Achievements, Many Milestones Ahead

Dominion Energy
Actions Speak Louder

Coastal Virginia
Offshore Wind

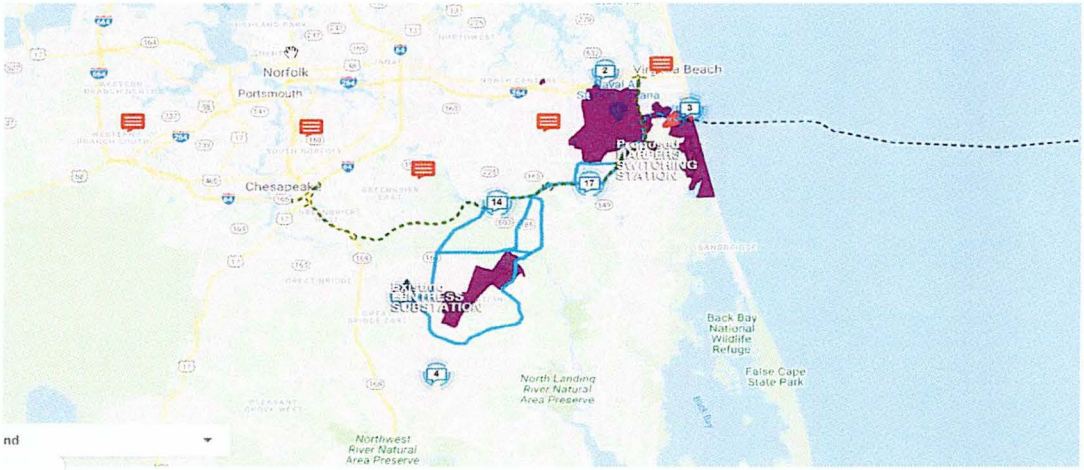


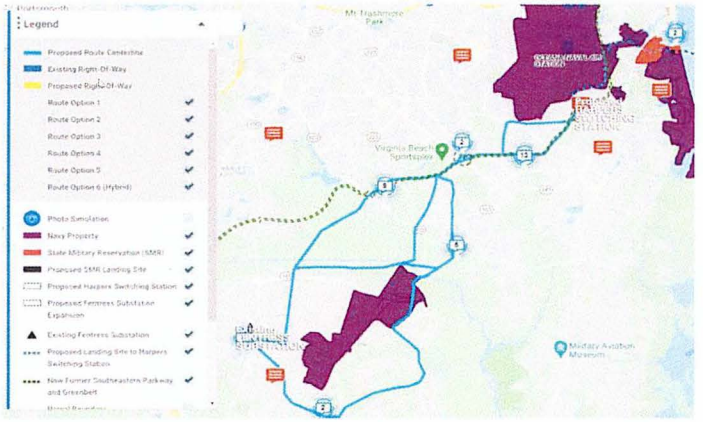
✓	**March 2021**	**First set of virtual public meetings**
	March – August 2021	Continue public meetings
	Mid 2021	COP updated from public input and routing considerations
	Mid to Late 2021	Begin filing for other necessary permits / approvals
	Late 2022 – Mid 2023	Final decisions for necessary permits / approvals
	Late 2023	Begin construction of onshore transmission
	2024 – 2026	Construction of offshore components and remaining onshore transmission

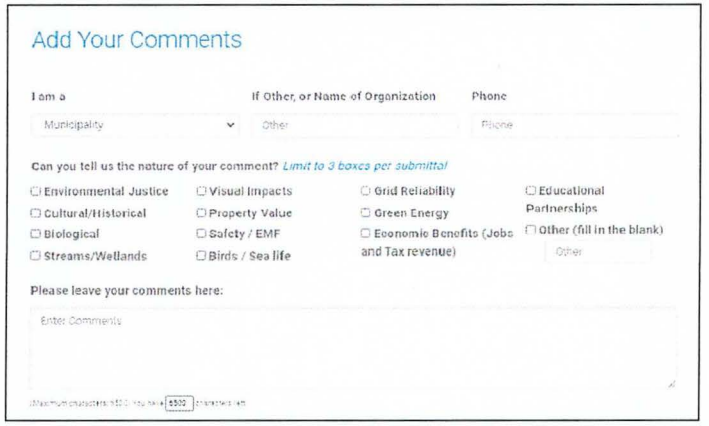
GeoVoice – Another Way to Learn from You

Dominion Energy® Actions Speak Louder | Coastal Virginia Offshore Wind

- Review the study area
- Add comments, provide input or share an insight on the location of important natural and historical resources.
- Track the project as it develops and receive updates.
- Available now on www.coastalvawind.com







How to Provide Input

Dominion Energy®
Actions Speak Louder

Coastal Virginia
Offshore Wind

- You can submit all future questions via email info@coastalvawind.com or by calling 1-844-319-2065

- For more information, please visit: **coastalvawind.com**

Questions

Dominion Energy®
Actions Speak Louder

Coastal Virginia
Offshore Wind

Date	*Stakeholder*	*Purpose/Topics*	*Category*
9/30/2021	City of Chesapeake's City Manager's Office	CVOW update	Local Govt Staff
9/30/2021	Virginia Department of Environmental Quality	CVOW Commercial – Project Update and Onshore Permitting	State Govt Staff
9/28/2021	BOEM	CVOW update	Federal Govt Staff
9/27/2021	City of Chesapeake Economic Development	CVOW update	Local Govt Staff
9/23/2021	Newport News Economic Development	CVOW outreach	Local Govt Staff
9/22/2021	City of Chesapeake's City Manager's Office	CVOW update and correspondence	Local Govt Staff
9/17/2021	Hampton Roads Transportation Accountability Commission	CVOW update	Local Govt Staff
9/14/2021	BOEM	CVOW update	Federal Govt Staff
9/1/2021	Commonwealth of Virginia - Governor's Office	Recap of June 29, 2021. CVOW hiring roundtable, and discussion of next steps	State Govt Staff
8/31/2021	BOEM	CVOW update	Federal Govt Staff
8/17/2021	BOEM	CVOW update	Federal Govt Staff
8/11/2021	Scott Stevens, County Administrator, James City County	CVOW outreach follow up	Local Govt Staff
8/8/2021	North Carolina Department of Environmental Quality	CVOW outreach	State Govt Staff
8/4/2021	City of Hampton	CVOW outreach follow up	Local Govt Staff
8/4/2021	City of Newport News	CVOW outreach follow up	Local Govt Staff
8/4/2021	City of Poquoson	CVOW outreach follow up	Local Govt Staff
8/4/2021	City of Portsmouth (Field Engineers)	Discuss some outstanding Dominion Energy initiatives in the city of Portsmouth	Local Govt Staff
8/4/2021	James City County	CVOW outreach follow up	Local Govt Staff
8/4/2021	Office of Senator John Cosgrove	Discussion with LA	State Govt Staff
8/4/2021	St. Paul's Community Development Corporation	General project update	Local Govt Staff
8/4/2021	Virginia Beach SWaM Office	SwaM-certified business participated in "Industry Day" to learn about CVOW and supplier opportunities	Local Govt Staff
8/3/2021	BOEM	CVOW update	Federal Govt Staff
8/3/2021	Virginia Beach Deputy City Manager Taylor Adams	CVOW update	Local Govt Staff
8/3/2021	York County	CVOW outreach follow up	Local Govt Staff
8/2/2021	Norfolk City Manager Chip Filer	Email follow up to schedule virtual meeting	Local Govt Staff
8/2/2021	Office of Delegate Barry Knight	CVOW update	State Govt Staff
8/2/2021	Virginia Beach Deputy City Manager Taylor Adams	CVOW update	Local Govt Staff
7/31/2021	Virginia Beach Legislative Liaison Deb Ryan	CVOW update	Local Govt Staff
7/30/2021	Office of Delegate Barry Knight	CVOW update	State Govt Staff
7/30/2021	Virginia Beach Deputy City Manager Ron Williams	CVOW update	Local Govt Staff
7/30/2021	Visit Virginia Beach Head Nancy Helman	CVOW update	Local Govt Staff
7/28/2021	Chesapeake Deputy City Manager Bob Geis	Project update	Local Govt Staff
7/28/2021	Chesapeake Deputy City Manager Dr. Wanda Barnard	Project update	Local Govt Staff
7/27/2021	Office of Senator John Cosgrove	Discussion with LA	State Govt Staff
7/26/2021	Chesapeake Deputy City Manager Bob Geis	CVOW update	Local Govt Staff
7/23/2021	City of Hampton	CVOW outreach follow up	Local Govt Staff
7/23/2021	City of Newport News	CVOW outreach follow up	Local Govt Staff
7/23/2021	City of Poquoson	CVOW outreach follow up	Local Govt Staff
7/23/2021	James City County	CVOW outreach follow up	Local Govt Staff
7/23/2021	LA for Del. Leftwich	CVOW update	State Govt Staff
7/23/2021	York County	CVOW outreach follow up	Local Govt Staff
7/22/2021	Chesapeake Deputy City Manager Bob Geis	CVOW update	Local Govt Staff
7/22/2021	LA for Del. Leftwich	CVOW update	State Govt Staff
7/22/2021	Virginia Beach Staff Drew Lupkin	CVOW update for Councilmember Barbara Henley's constituents monthly meeting	Local Govt Staff
7/21/2021	Hampton Roads Planning District Commission	BOEM scoping letter of support	Local Govt Staff
7/21/2021	LA for Del. Leftwich	CVOW update	State Govt Staff
7/21/2021	Virginia Beach City Manager Patrick Duhaney	Project update	Local Govt Staff

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7/20/2021	BOEM	CVOW update	Federal Govt Staff
7/16/2021	Virginia Department of Historic Resources (VDHR)	CVOW outreach	State Govt Staff
7/14/2021	BOEM	CVOW update	Federal Govt Staff
7/14/2021	Hampton Roads Planning District Commission	BOEM scoping letter of support	Local Govt Staff
7/12/2021	BOEM	CVOW update	Federal Govt Staff
7/12/2021	BOEM	Public Scoping meeting (2/3) for CVOW Construction & Operations Plan, which is required as part of NEPA process following July 2 nd issuance of NOI. Part of 30-day public comment period process which ends Aug 2nd	Federal Govt Staff
7/12/2021	BOEM	Public Scoping meeting (1/3) for CVOW Construction & Operations Plan, which is required as part of NEPA process following July 2 nd issuance of NOI. Part of 30-day public comment period process which ends Aug 2nd	Federal Govt Staff
7/6/2021	BOEM	Project discussion	Federal Govt Staff
6/30/2021	Virginia Beach Historic Preservation Commission	CVOW update, review conceptual routes, onshore historic resources, and photo simulations, solicit feedback, and exchange information relevant to routing and the project	Local Govt Staff
6/23/2021	Heath Covey (City of Chesapeake)	Shared information about open houses	Local Govt Staff
6/22/2021	BOEM	CVOW update	Federal Govt Staff
6/9/2021	Virginia DEQ	Discuss status of CVOW relative to upcoming SCC and State permitting	State Govt Staff
6/4/2021	City of Virginia Beach Staff	Follow up meeting to discuss current onshore transmission line routes	Local Govt Staff
5/27/2021	BOEM	Bi-weekly meeting	Federal Govt Staff
5/19/2021	Chesapeake Alliance	Left message re: mailer	Local Govt Staff
5/19/2021	Office of Delegate Kelly Convirs-Fowler	Advised Delegate and legislative aide that CVOW preliminary maps are being made public today, and that a GeoVoice Tool will be available to the public/constituents for commenting on maps.	State Govt Staff
5/18/2021	Hampton Roads Planning District Commission	Discussion and presentation about reveal of preliminary routes	Local Govt Staff
5/17/2021	City of Poquoson	CVOW outreach	Local Govt Staff
5/17/2021	Deputy City Manager Wanda Bernard Bailey	CVOW update	Local Govt Staff
5/17/2021	James City County	CVOW outreach	Local Govt Staff
5/17/2021	York County	CCOW outreach	Local Govt Staff
5/14/2021	City of Virginia Beach Historic Preservation Planner (EJ)	Discuss historic properties in Virginia Beach that the city would like to have considered in the Offshore Historic Properties Effects Analysis	Local Govt Staff
5/11/2021	BOEM	CVOW update	Federal Govt Staff
5/11/2021	National Park Service	CVOW update	Federal Govt Staff
5/11/2021	Virginia Department of Historical Resources	Project update	State Govt Staff
5/10/2021	BOEM & NMFS	Review the Benthic Characterization Report that was submitted as part of the March COP supplement and solicit feedback from the agencies.	Federal Govt Staff
5/6/2021	BOEM	Email exchange regarding ongoing studies/monitoring around Pilot Turbines	Federal Govt Staff
4/28/2021	Office of Sen. Lionell Spruill	Check-in	State Govt Staff
4/21/2021	Virginia Beach Mayor's Commission of Offshore Wind and Clean Energy	Organizational meeting to promote CVOW	Local Govt Staff
4/20/2021	BOEM	CVOW project overview	Federal Govt Staff
4/20/2021	Virginia Beach Parks and Recreation	To learn about opportunities within P&R to disseminate information about the Power of Wind and Offshore Wind to their audiences, mainly the thousands of children they oversee through after school and summer camp programs.	Local Govt Staff
4/19/2021	Virginia Department of Environmental Quality	Project check-in	State Govt Staff
4/14/2021	U.S. Fish and Wildlife Service	The meeting was initiated by USFWS as a follow up to larger avian/bat discussions we are having with USFWS/BOEM/DWR.	Federal Govt Staff
4/13/2021	BOEM	Bi-weekly call	Federal Govt Staff
4/12/2021	Portsmouth Partnership	Provide project updates and answer questions	Local Govt Staff
4/8/2021	Federal Permitting Improvement Steering Council	Project meeting	Federal Govt Staff

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4/7/2021	Virginia Department of Transportation	Left message with the Communications Manager for the Hampton Roads District (Holly Christopher)	State Govt Staff
4/7/2021	Virginia Health Department	Left message on main number and spoke with the administrative assistant in regard to a CVOW presentation	State Govt Staff
4/7/2021	Virginia Health Department (Virginia Beach)	Left message on main number and talked to VDH Executive Secretary in regard to a CVOW presentation	State Govt Staff
4/1/2021	Doug Beaver, Chief Resiliency Officer (Norfolk)	Project check-in	Local Govt Staff
3/31/2021	Veterans-Military Affairs-City of Norfolk	CVOW Project briefing	Local Govt Staff
3/30/2021	Deputy Secretary of Veterans and Defense Affairs (VA), Kathleen Jabs	CVOW outreach	State Govt Staff
3/30/2021	Public Utilities-City of Norfolk	Brief Interim Director about CVOW project	Local Govt Staff
3/26/2021	BOEM	Email communication to inquire about initial feedback on the Offshore Visual Study Plan submitted to BOEM and assess BOEM SME's willingness to discuss directly given the challenges with scheduling larger meetings.	Federal Govt Staff
3/25/2021	Avian and Bat Work Plan Discussion	Avian and Bat Work Plan Follow-up	State/Fed Govt
3/25/2021	North Carolina Department of Environmental Quality	CZMA Meeting	State Govt Staff
3/25/2021	U.S. EPA – Region 3	Provide USEPA with a project update, notify them of Dominion's intention to submit a Notice of Intent for the OCS Air Permit in Q3 2021, and discuss the OCS permitting process	Federal Govt Staff
3/23/2021	Virginia Department of Transportation	Shared contact information with the admin asst. in the Hampton Roads District and offered to provide a CVOW presentation to VDOT groups	State Govt Staff
3/21/2021	Patrick Duhaney, City Manager	Update re: packages to individual property owners asking for survey permission and upcoming landowner briefing meetings.	Local Govt Staff
3/21/2021	Chesapeake City Manager	Update re: packages to individual property owners asking for survey permission and upcoming landowner briefing meetings.	Local Govt Staff
3/20/2021	Ron Williams, Deputy City Manager	Update re: packages to individual property owners asking for survey permission and upcoming landowner briefing meetings. Mr. Williams to distribute to all department heads and staff.	Local Govt Staff
3/19/2021	DMME Oil and Gas Transition	Industry meeting	State Govt Staff
3/19/2021	Virginia Department of General Services	To provide an overview and continue discussions with SMR on the proposed route across SMR property and the various requirements. Topics of discussion included an overview of applicable form agreements and anticipated completion timelines. Provided an overview an overview and receive feedback from SMR on the proposed route across SMR property and the various components required and their configuration and location.	State Govt Staff
3/19/2021	Virginia Office of the Attorney General	To provide an overview and continue discussions with SMR on the proposed route across SMR property and the various requirements. Topics of discussion included an overview of applicable form agreements and anticipated completion timelines. Provided an overview an overview and receive feedback from SMR on the proposed route across SMR property and the various components required and their configuration and location.	State Govt Staff
3/17/2021	Portsmouth Partnership	Project briefing	Local Govt Staff
3/17/2021	Virginia Marine Resources Commission	Discuss Dominion presentation on OSW and CVOW for Association of Energy Engineers in June	State Govt Staff
3/16/2021	BOEM Casey Reeves, Jen Draher, Algene Byrum	Key topics discussed: SAP/COP Survey Plan Revision, Site Assessment Plan for Meteorological Buoys, COP Supplemental Filings, Avian and Bat Work Plan, Visual Impact Assessment, FAST-41, 3rd Party NEPA	Federal Govt Staff
3/11/2021	Chesapeake Alliance	Project update	Local Govt Staff
3/11/2021	Virginia Beach Deputy City Manager, David Bradley	Project outreach	Local Govt Staff
3/10/2021	North Carolina State Historic Preservation Office	To clarify data access on the HPOWEB system (online site files database)	State Govt Staff

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3/10/2021	Virginia Department of Environmental Quality (DEQ) Craig Nichol, Regional Director, Tidewater Region	The purpose of the meeting was to provide DEQ with a project update, and discuss DEQ permitting that will be required at a high level. The meeting covered the following: Reviewed Pilot Project briefly, Discussed benefits of OSW/ CVOW Project, Project timeline / NEPA Process, DEQ Engagements	State Govt Staff
3/5/2021	North Carolina Commission and Staff	Project update	State Govt Staff
3/3/2021	City of Norfolk Jared Chalk, Economic Development Director	Project discussion	Local Govt Staff
3/3/2021	Norfolk Economic Development Authority	Project update during the Norfolk EDA's regular monthly meeting	Local Govt Staff
3/1/2021	Congressional Staff Briefing Staff from the offices of Senator Warner, Senator Kaine, Congresswoman Luria, Congressman Scott and Congressman McEachin participated.	Project briefing	Federal Govt Staff
3/1/2021	Hampton Roads Planning District Commission	CVOW Project Brief, History of what the HRPDC has done on Offshore Wind	Local Govt Staff
3/1/2021	Virginia Economic Development Partnership	Project update and discussion	State Govt Staff
2/26/2021	City of Virginia Beach Staff (Planning and Community Development, Economic Development, Public Works, Public Utilities, Zoning, City Attorney, Parks and Recreation	Purpose of encounter: Update City Staff on the CVOW Project Review conceptual routes Solicit feedback on the routes Exchange information relevant to routing and the Project	Local Govt Staff
2/26/2021	Virginia Beach Staff – Planning, Public Works, Economic Development, Public Utilities	Routing discussion with ET and ERM	Local Govt Staff
2/25/2021	Interagency Meeting – BOEM, USFWS, DWR, Navy Included: VDWR – Ray Fernald, Rick Reynolds, Ernie Aschenbach, Ruth Boettcher USFWS – Pam Loring, Troy Anderson, Emily Argo BOEM – Casey Reeves, Algene Byrum, David Bigger Navy – Michael Wright, Blake Waller	The purpose of the meeting was to review agency comments received on the CVOW Commercial Avian and Bat Workplan. This workplan will be used for the surveys conducted prior to construction. We provided a project update, reviewed the comment matrix, and provided an overview on the status of the routing efforts.	Federal Govt Staff
2/25/2021	Taylor Adams (VB Economic Development) and Virginia Beach Vice Mayor Jim Wood	Discuss formation of the Mayor's Commission on Offshore Wind and Clean Energy	Local Govt Staff
2/24/2021	City of Virginia Beach Public Utilities	Discuss sharing of City of Virginia Beach utility shapefiles with Dominion	Local Govt Staff
2/24/2021	Fairfax County Environmental and Energy Coordination	CVOW Update Presentation	Local Govt Staff
2/23/2021	James Rogers, Assistant City Manager-Neighborhood Development	Project outreach	Local Govt Staff
2/22/2021	Chesapeake Alliance	Shared project post card collateral	Local Govt Staff
2/22/2021	Doug Beaver, Resilience Officer	Project outreach	Local Govt Staff
2/22/2021	Office of U.S. Senator Tim Kaine Diane Kaufman, Hampton Roads Regional Director	Request for briefing	Federal Govt Staff
2/19/2021	Virginia Department for Conservation and Recreation	Initial outreach for lines of communication of CVOW project for DCR	State Govt Staff
2/19/2021	Virginia Department of Environmental Quality Craig Nicol, Director, Tidewater Regional Office Melanie Davenport, Director Water Permitting	Initial outreach on commercial project; project overview; invite to public meetings; offer for larger update with broader DEQ staff.	State Govt Staff
2/19/2021	Wynter Benda, Deputy City Manager	Confirm whether City Manager Chip Filer wants City Council to be briefed	Local Govt Staff
2/18/2021	BOEM Algene Byrum, Jen Draher, Willy Hoffman, Brian Hooker, Jen Miller, Annette Moore, Casey Reeves, Josh Wadlington	To discuss geological and geophysical data, data products, & data transfer methods.	Federal Govt Staff

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2/17/2021	BOEM Casey Reeves, Algene Byrum, Justin Bedard, Connie Barnett	Purpose was to review the historic resources survey plan relative to Offshore project components and solicit BOEM's feedback. The Proposed Area of Potential Effects was reviewed, as well as the survey plans, and BOEM provided verbal concurrence and feedback. BOEM also provided feedback on tribal engagement, and lessons learned from other projects. Electric transmission also provided an update on onshore routing, SCC process, and the Stage I Pre-Application Analysis for cultural resources that will be completed as part of the SCC filing.	Federal Govt Staff
2/17/2021	Taylor Adams, Economic Development Director	To discuss the pending announcement of the Mayor's Commission on Offshore Wind and Clean Energy	Local Govt Staff
2/17/2021	Virginia Department of Historic Resources	Received letter re: project sent to Cultural/Advocacy contacts	State Govt Staff
2/12/2021	Deputy City Manager, Wynter Benda	Project outreach	Local Govt Staff
2/10/2021	Norfolk Economic Development Authority	Project overview provided at regular meeting	Local Govt Staff
2/1/2021	Chesapeake Planning Staff	Discuss transmission line routing through Chesapeake and receive input from the City, specifically related to land use topics.	Local Govt Staff
1/29/2021	Taylor Adams, Economic Development Director	Project outreach	Local Govt Staff
1/29/2021	Virginia Department of Historic Resources (VDHR)	The purpose of this call was to discuss archaeological survey plans for onshore components of the project, and also to communicate the BOEM process vs. SCC process for cultural resource investigations.	State Govt Staff
1/28/2021	Chesapeake City Manager, Chris Price	Follow up CVOW outreach	Local Govt Staff
1/26/2021	Portsmouth Port & Industrial Commission Meeting	To provide high level overview of CVOW and potential impact to Portsmouth ports, industry, and workforce.	Local Govt Staff
1/14/2021	Chesapeake City Manager Chris Price	Talked about communications with council and development opportunities in the city.	Local Govt Staff
1/13/2021	Virginia Beach senior staff, Mayor Bobby Dyer City Manager Patrick Duhaney Deputy City Manager Ron Williams Taylor Adams (Economic Development Director)	Project briefing	Local Govt Staff
1/11/2021	Virginia Beach Economic Development and Planning	Discuss CVOW routing with Virginia Beach Economic Development staff	Local Govt Staff
1/9/2021	City of Chesapeake Economic Development – Steven Wright	Project outreach	Local Govt Staff
1/7/2021	Portsmouth Economic Development Robert Moore (Director of Economic Development) and Brian Donahue (Assistant Director of Economic Development)	Request from City of Portsmouth to discuss engagement and partnership opportunities	Local Govt Staff
1/7/2021	Virginia Beach Deputy City Manager Ron Williams	CVOW outreach	Local Govt Staff
1/6/2021	Chesapeake Senior Staff Chris Price, City Manager, Bob Geis, Deputy City Manager, Wanda Barnard-Bailey, Deputy City Manager, Heath Covey, Director of Public Communications,, Allison Harper, Administrative Asst and Meeting Host	Project outreach	Local Govt Staff
1/5/2021	Virginia Beach Economic Development, Taylor Adams	Project discussion	Local Govt Staff
1/4/2021	Virginia Beach Public Works	Discuss routing	Local Govt Staff

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Date	Stakeholder	Purpose/Topics	Category
8/25/2021	Patawomeck Tribe	Provide update on CVOW	Tribe
8/2/2021	Nansemond Tribe	CVOW update	Tribe
7/30/2021	Patawomeck Tribe	CVOW outreach	Tribe
7/14/2021	Pamunkey Tribe	Invitation to meet to discuss latest transmission routes	Tribe
7/14/2021	Upper Mattaponi Tribe	Invitation to meet to discuss latest transmission routes	Tribe
7/13/2021	Chickahominy Tribe – Eastern Division	Invitation to meet to discuss latest transmission routes	Tribe
7/8/2021	Patawomeck Tribe	Invitation to meet to discuss latest transmission routes	Tribe
7/7/2021	Chickahominy Tribe – Eastern Division	Invitation to meet to discuss latest transmission line routes	Tribe
7/7/2021	Pamunkey Tribe (EJ)	Invitation to meet to discuss latest transmission line routes	Tribe
7/7/2021	Rappahannock Tribe	Invitation to meet to discuss latest transmission line routes	Tribe
7/7/2021	Upper Mattaponi Tribe	Invitation to meet to discuss latest transmission line routes	Tribe
7/5/2021	Upper Mattaponi Tribe	Invitation to meet to discuss latest transmission line routes	Tribe
7/2/2021	Chickahominy Tribe	Invitation to meet to discuss latest transmission line routes	Tribe
5/11/2021	Chickahominy – Eastern Division	Roundtable	Tribe
5/4/2021	Nansemond Tribe of Virginia	CVOW update	Tribe
4/15/2021	Chickahominy Eastern Division, Rappahannock, Nansemond, Upper Mattaponi	Project briefing	Tribe
4/13/2021	Upper Mattaponi, Pamunkey, Chickahominy, Chickahominy – Eastern Division, Rappahannock, Nansemond	Follow-up calls to tribes about the terrestrial archeology and historical properties survey processes	Tribe
3/17/2021	Cultural/Historic Preservation Advocacy and Native American Tribal Stakeholder Group	Brief them on the project and transmission – open lines of communication to receive their feedback.	Tribe
3/15/2021	Sappony Tribe	Sent him the CVOW Tribal Briefing presentation	Tribe
2/25/2021	Meherrin Tribe	Project outreach	Tribe
2/21/2021	Cheroenhaka Nottoway Tribe	Project overview provided	Tribe
2/21/2021	Monacan Tribe	Project outreach	Tribe
2/21/2021	Patawomeck Tribe	Project outreach	Tribe
2/21/2021	Rappahannock Tribe	Project outreach	Tribe
2/18/2021	Pamunkey Tribe	Project briefing	Tribe
2/17/2021	Cheroenhaka (Nottoway) Indian Tribe	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Chickahominy Indian Tribe	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Chickahominy Indian Tribe Eastern Division	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Mattaponi Tribe	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Monacan Indian Nation	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Nansemond Indian Nation	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Nottoway Indian Tribe of Virginia	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Pamunkey Indian Museum and Cultural Center	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Pamunkey Indian Tribe	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Patawomeck Indian Tribe of Virginia	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Rappahannock Tribe	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Upper Mattaponi Indian Tribe	Received letter re: project sent to Cultural/Advocacy contacts	Tribe
2/17/2021	Upper Mattaponi Tribe	Project briefing	Tribe
1/22/2021	Cheroenhaka Nottoway	Update on CVOW and offer meeting to discuss project in more detail.	Tribe
1/22/2021	Chickahominy Tribe	Update on CVOW and offer meeting to discuss project in more detail.	Tribe
1/22/2021	Mattaponi Tribe	Update on CVOW and offer meeting to discuss project in more detail.	Tribe
1/22/2021	Nansemond Tribe	Update on CVOW and offer meeting to discuss project in more detail.	Tribe
1/22/2021	Pamunkey Tribe	Update on CVOW and offer meeting to discuss project in more detail.	Tribe
1/22/2021	Rappahannock Tribe	Update on CVOW and offer meeting to discuss project in more detail.	Tribe
1/22/2021	Upper Mattaponi Tribe	Update on CVOW and offer meeting to discuss project in more detail.	Tribe

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III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

K. Identify coordination with any non-governmental organizations or private citizen groups.

Response: On February 17, 2021, the Company began to solicit comments via letter from the nongovernmental organizations and private citizen groups identified below. The Company also held two meetings with these organizations and groups to brief them on the project. The letter template and related meeting presentations are provided as Attachment III.K.1, Attachment III.K.2 and Attachment III.K.3.

Name	Organization
Ms. Elizabeth S. Kostelny	Preservation Virginia
Mr. Thomas Gilmore	American Battlefield Trust
Mr. Jim Campi	American Battlefield Trust
Mr. Max Hokit	American Battlefield Trust
Mr. Steven Williams	Colonial National Historical Park
Mr. Jack Gary	Council of Virginia Archaeologists
Ms. Leighton Powell	Scenic Virginia
Mr. Alexander Macaulay	Macaulay & Jamerson
Ms. Elaine Chang	National Trust for Historic Preservation
Mr. Dan Holmes	Piedmont Environmental Council
Dr. Cassandra Newby-Alexander, Dean	Norfolk State University

See Attachment III.B.4 for a listing of private citizen groups, such as civic leagues or homeowner associations engaged.

See Attachment III.K.4 for a full listing, as of the end of September 2021, of outreach and coordination activities with non-governmental organizations or private citizen groups.

Dominion Energy Virginia
Electric Transmission
P.O. Box 26666, Richmond, VA 23261-6666
DominionEnergy.com

Dominion Energy®

February 17, 2021

Coastal Virginia Offshore Wind Project

At Dominion Energy, we are committed to providing our customers with affordable, reliable and clean energy. Our Coastal Virginia Offshore Wind (CVOW) project demonstrates how we work to meet our commitment. It will be the largest offshore wind farm in the Americas and positions Hampton Roads as a leader in this burgeoning industry. Although the turbines will be 27 miles off the coast, we will need to get that energy onshore to power homes and businesses. It is an exciting project for our customers and the communities we serve.

Because you are a valued leader in the community, we would like your input as we move along the planning process and invite you to join us in two immediate events.

First, we are hosting a public meeting held over four different times on March 2 and 4, which you are invited to attend. Additional details on the meetings can be found at https://coastalvawind.com/learn/community-support.aspx. They will be held **at 8:00am and Noon on Tuesday, March 2 and at 11:00am and 6:00pm on Thursday, March 4.** Hopefully one of the options will accommodate your schedule.

Second, our goal is to convene the Cultural Advocacy Stakeholder group to discuss our project planning. Be on the lookout for an email to select preferred days and times. Our hope is to meet as a group virtually as soon as possible, given we didn't meet in 2020. However, this meeting is not the only time we invite you to provide us with your input during the project planning phase.

Hearing your insights and perspectives, along with local voices, will be invaluable as we plan the development of this transformational project.

We have begun the process of studying how best to connect the offshore wind turbines to the onshore electric grid. Building a reliable, strong, and resilient connection to the energy grid will help ensure that the renewable energy generated by the wind turbines will be delivered to homes and businesses in the Commonwealth. Enclosed is a map of the project study area which will help orient you. To deliver the energy generated by the offshore wind turbines to our customers' homes and businesses, undersea cables are proposed to come ashore at the State Military Reservation in Virginia Beach. Transmission lines will then carry the renewable energy to a proposed substation near Naval Air Station Oceana and then to the existing Fentress substation in Chesapeake

As with all of our projects, we will work to minimize impacts on the community, the environment and historic places. We also are committed to maximizing the local benefits, such as workforce development and jumpstarting the supply chain needs. Your feedback will help us achieve that and together, we'll make offshore wind a part of Virginia's future.

We look forward to discussing this important project with you. Please reach out to me by email (robert.e.richardson@dominionenergy.com) or phone (804) 248-1698.

Sincerely,

Robert E Richardson

Rob Richardson
Coastal Virginia Offshore Wind Project Team

Attachment III.K.2

Clean Air
Generates enough energy to power up to 660,000 homes with zero emissions and fuel costs

Clean Energy Diversity
Complementary resource with solar since both generate energy at different times

Clean Energy Economy
Foundation that can develop into a Virginia supply chain hub to stimulate economic growth and drive down costs

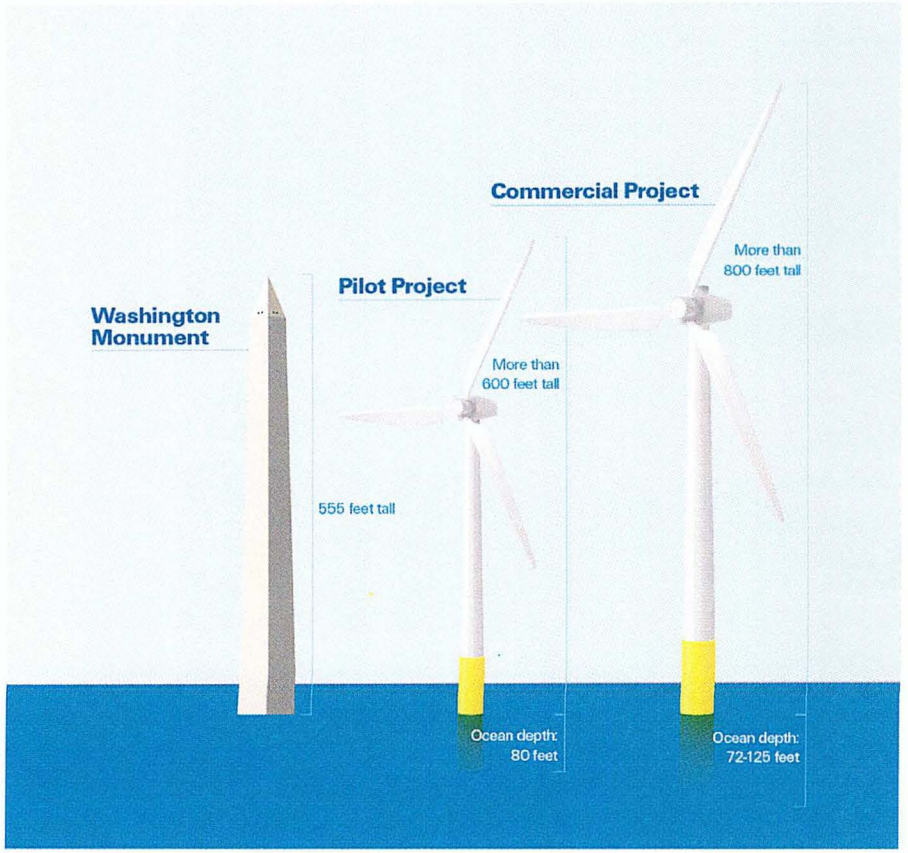
Clean Energy Jobs
Creates clean energy and manufacturing jobs throughout the Commonwealth as well as a talent pipeline through workforce development partnerships

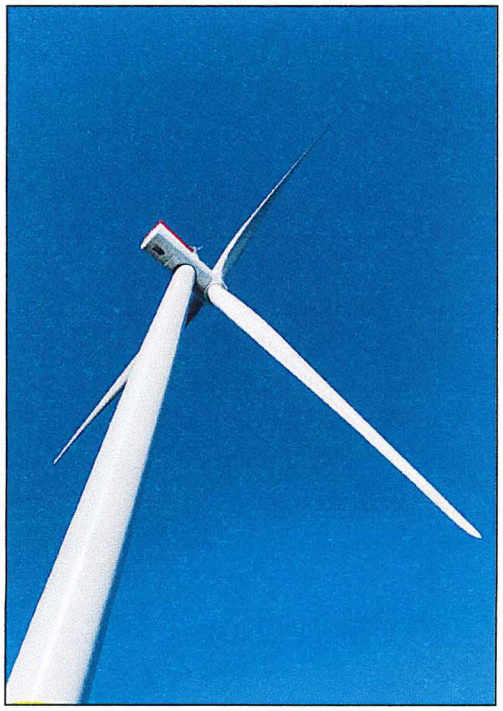
Clean Energy Goals
Critical resource for meeting the Commonwealth's objective of carbon-free energy by 2045

Clean Energy Research
Continue to support the advancement of offshore wind technology and environmental sustainability for marine, avian and terrestrial habitats

- Two 6 MW wind turbines; approximately 600 feet tall (about the height of the Washington Monument)
- 12-megawatt total capacity; enough to power up to 3,000 homes
- Located within a 2,135-acre research lease area, 27 miles off the coast of Virginia Beach
- First offshore wind project installed in federal waters and first owned by an electric utility
- Provides valuable experience in permitting, design, installation, and operations that can be applied to the commercial project
- Constructed May to Sept. 2020 – outside the North Atlantic Right Whale migration period

- Planning 188 wind turbines; 14 MW each
- More than 800 feet tall (about an 73-story building)
- 2,640-megawatt total capacity
- Enough to power up to 660,000 homes
- Located within a 112,800-acre lease area east of the pilot project
- Once complete, it will be the largest offshore wind project in United States





✓	Sep. 2019	2.6GW project announced
✓	Dec. 2020	Construction & Operation Plan (COP) submitted to Bureau of Ocean Energy Management
✓	March 2021	First set of virtual public meetings
	March – Mid 2021	Continue public meetings and conduct surveys
	Mid 2021	COP updated from public input and routing considerations
	Mid to Late 2021	Begin filing for other necessary permits / approvals
	Late 2022 – Mid 2023	Final decisions for necessary permits / approvals
	Late 2023 – Early 2024	Begin construction of onshore transmission infrastructure
	2024 – 2026	Construction of offshore components and remaining onshore infrastructure

Dominion Energy®

BOEM
Bureau of Ocean Energy Management

EPA

DMME
Virginia Department of Mines Minerals and Energy

Virginia DWR

National Oceanic and Atmospheric Administration NOAA U.S. Department of Commerce

U.S. Fish & Wildlife Service

Marine Mammal Commission

DHR

Virginia Marine Resources Commission

US Army Corps of Engineers®

DEQ
Virginia Department of Environmental Quality

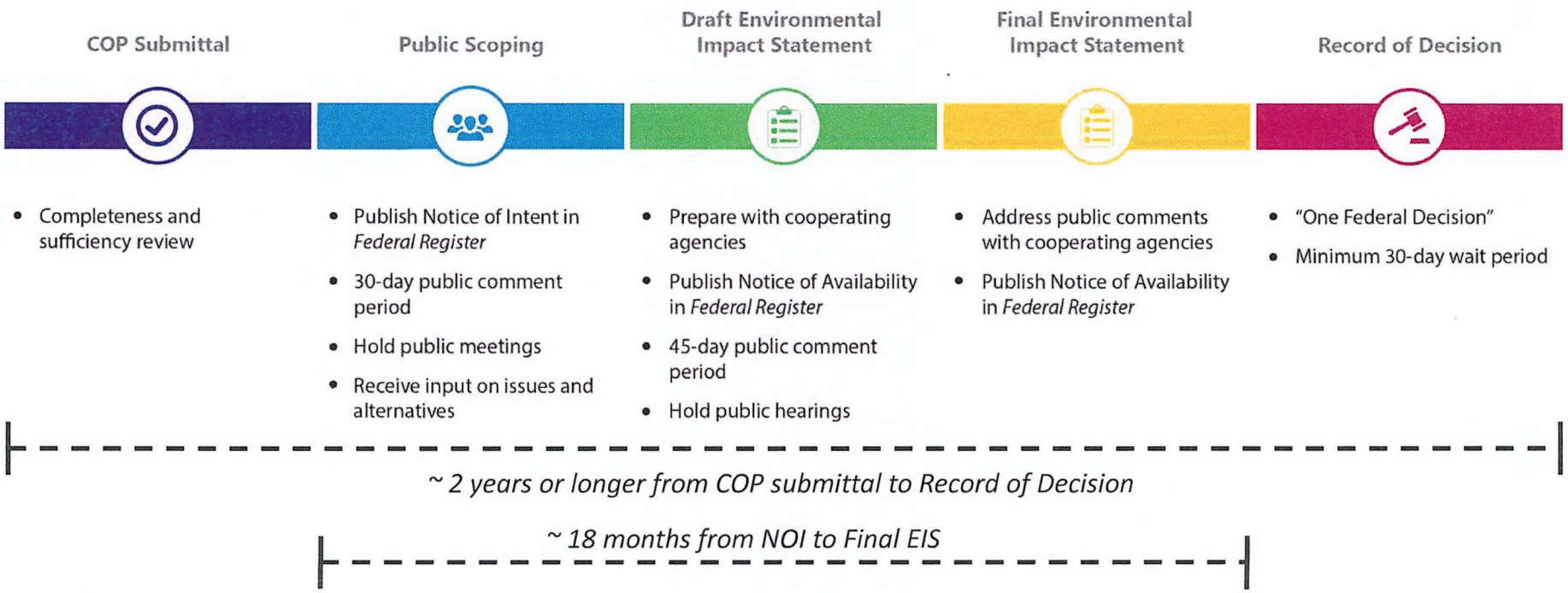
Federal Aviation Administration

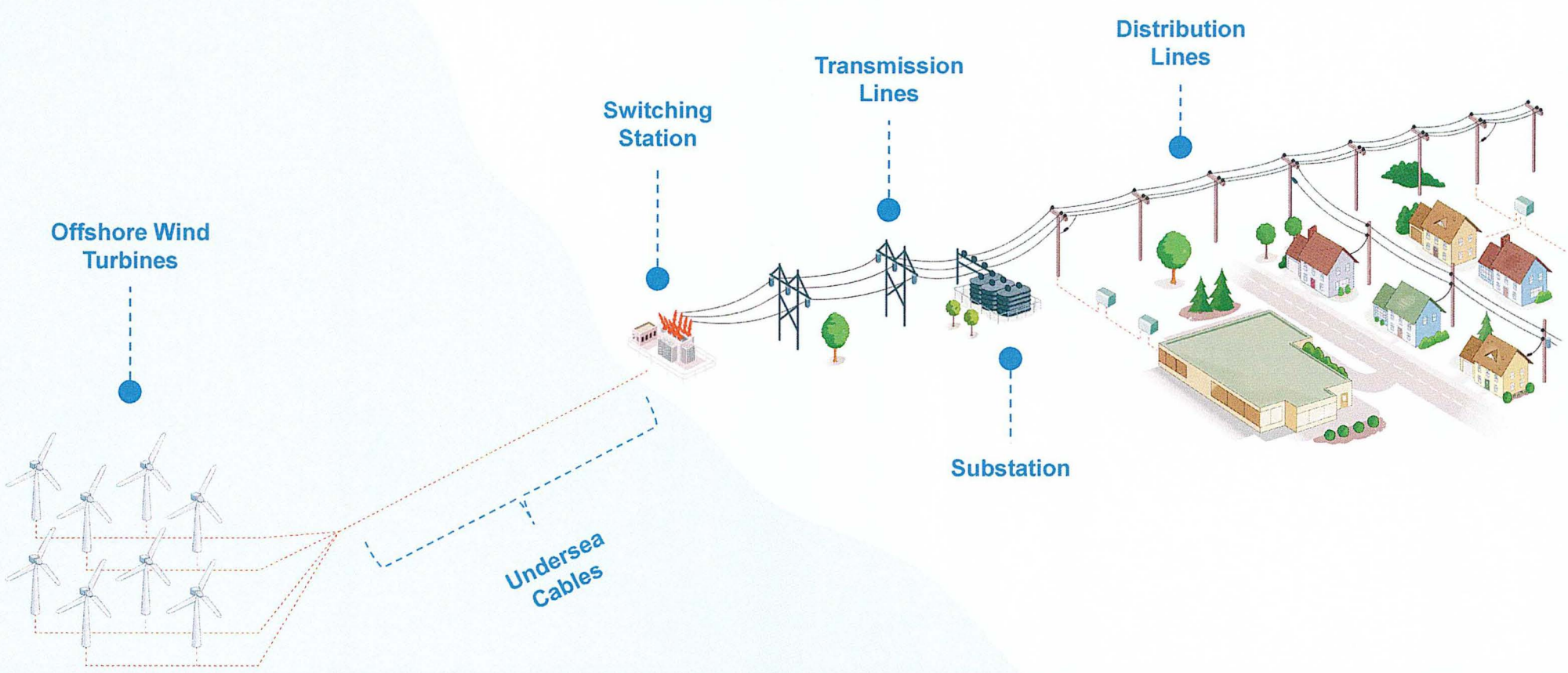
United States Coast Guard

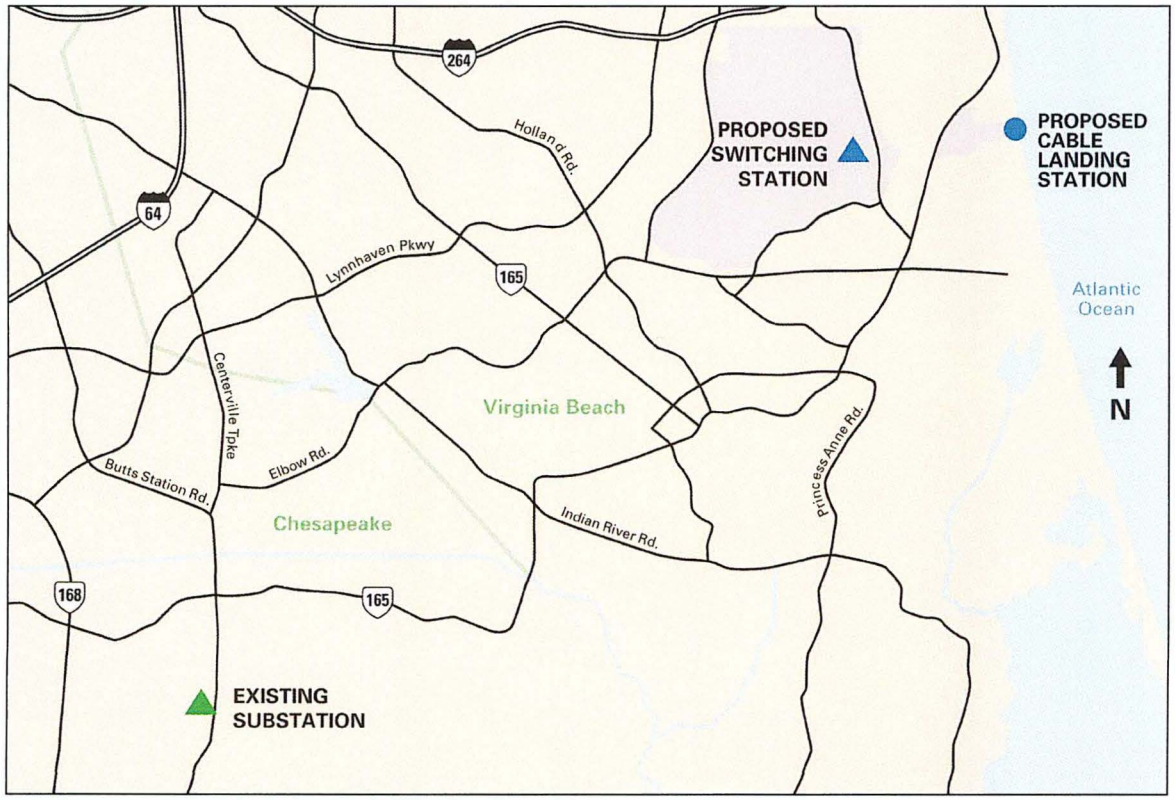
United States Navy

Required Plans, Surveys, and Studies

- Safety Management System
- Emergency Response Plan
- Oil Spill Response Plan
- Cultural Resource Protections
- Marine Debris Prevention Plan
- Acoustics
- Air Emissions
- Avian and Bat
- Aviation Impacts
- Electric and Magnetic Fields
- Fisheries
- Geophysical, Geotechnical, and Benthic
- Historic Architecture
- Marine and Terrestrial Archaeology
- Marine Mammals and Sea Turtles
- Navigational Safety Risk
- Sediment Transport
- Terrestrial Biological Resources
- Visual Impacts


COP Submittal
Public Scoping
Draft Environmental Impact Statement
Final Environmental Impact Statement
Record of Decision
• Completeness and sufficiency review
• Publish Notice of Intent in *Federal Register*
• 30-day public comment period
• Hold public meetings
• Receive input on issues and alternatives
• Prepare with cooperating agencies
• Publish Notice of Availability in *Federal Register*
• 45-day public comment period
• Hold public hearings
• Address public comments with cooperating agencies
• Publish Notice of Availability in *Federal Register*
• "One Federal Decision"
• Minimum 30-day wait period
~ 2 years or longer from COP submittal to Record of Decision
~ 18 months from NOI to Final EIS
SCC process: 9 months from filing to decision

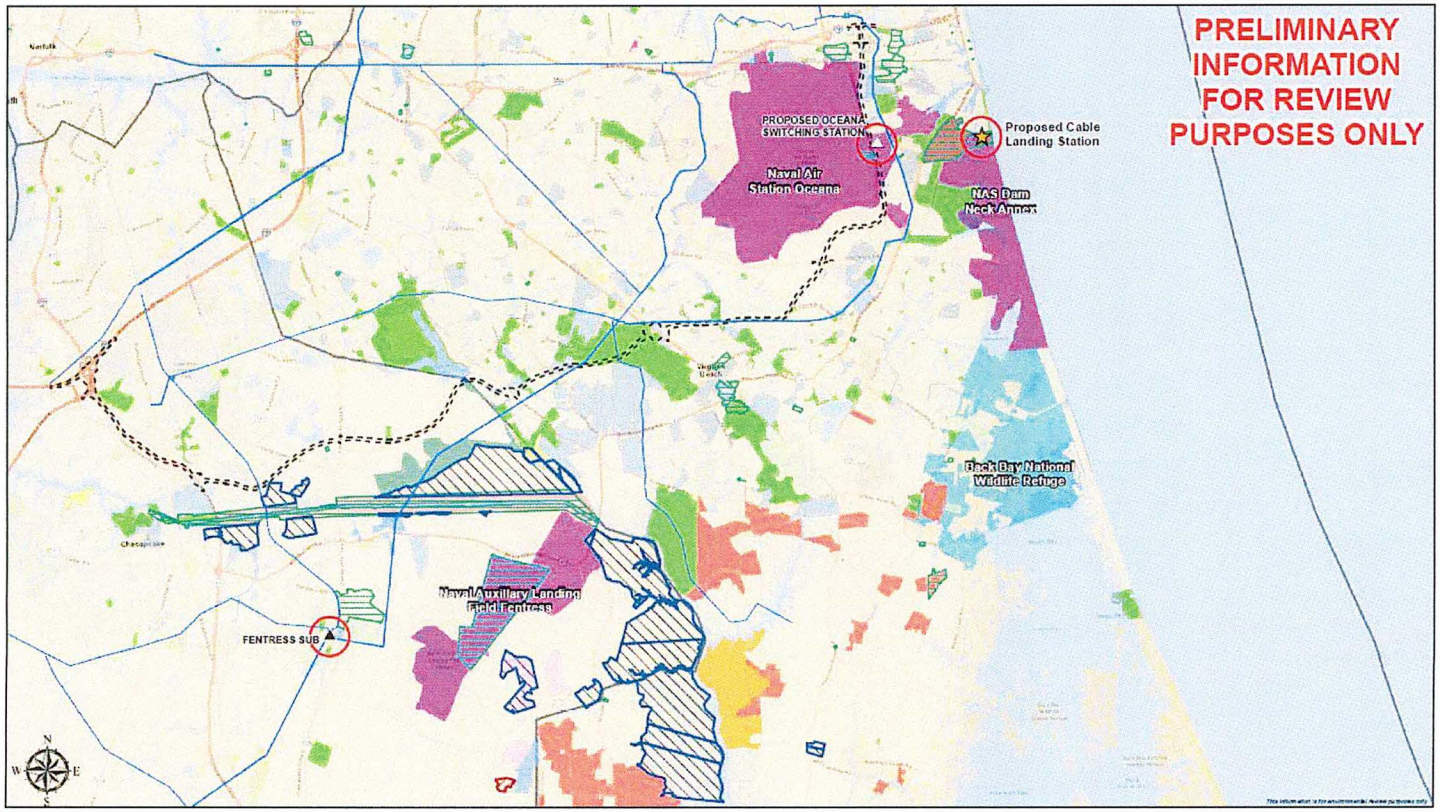

Distribution Lines
Transmission Lines
Switching Station
Offshore Wind Turbines
Substation
Undersea Cables



- Undersea cables proposed to come ashore at State Military Reservation (SMR) in Virginia Beach
- 230 kV transmission lines will interconnect SMR to a switching station proposed to be located near Naval Air Station Oceana
- 230 kV transmission lines will interconnect from the switching station to the Fentress substation in Chesapeake
- Approximately 13 miles from the proposed switching station to the substation

Dominion Energy is exploring all electrical solutions for transmission routes

665

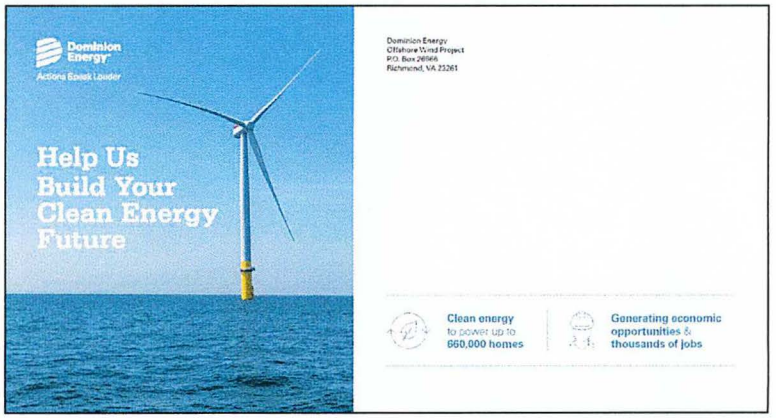

PRELIMINARY INFORMATION FOR REVIEW PURPOSES ONLY
PROPOSED OCEANA SWITCHING STATION
Proposed Cable Landing Station
Naval Air Station Oceana
NAS Dam Neck Annex
Back Bay National Wildlife Refuge
Naval Auxiliary Landing Field Fentress
FENTRESS SUB
Existing Substation
Proposed Switching Station
Proposed Cable Landing Station
Existing DOM Transmission Line
NRHP/VLR Eligible/Listed/ Potentially Eligible Resource
Southeastern Parkway & Greenbelt
City Park
City Property
U.S. Navy Land
U.S. Army Corps of Engineers Land
U.S. Fish and Wildlife Service Land
State Natural Area
State Military Reservation
The Nature Conservancy
City of Virginia Beach Open Space Easement
City of Chesapeake NALF Fentress Encroachment Protection Acquisition Program
City of Chesapeake Open Space and Agricultural Preservation Program (Sawyer Parcel)
City of Chesapeake PDR Easement
NRCS Wetlands Reserve Program Easements
USFWS Easement
VOF Easements
City Boundary

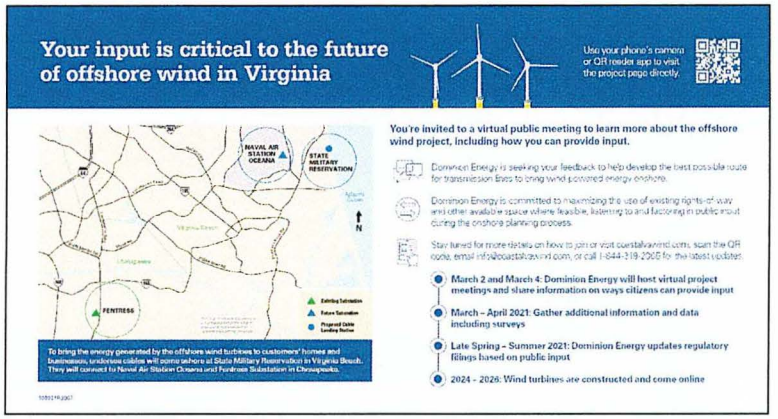
999

Purpose

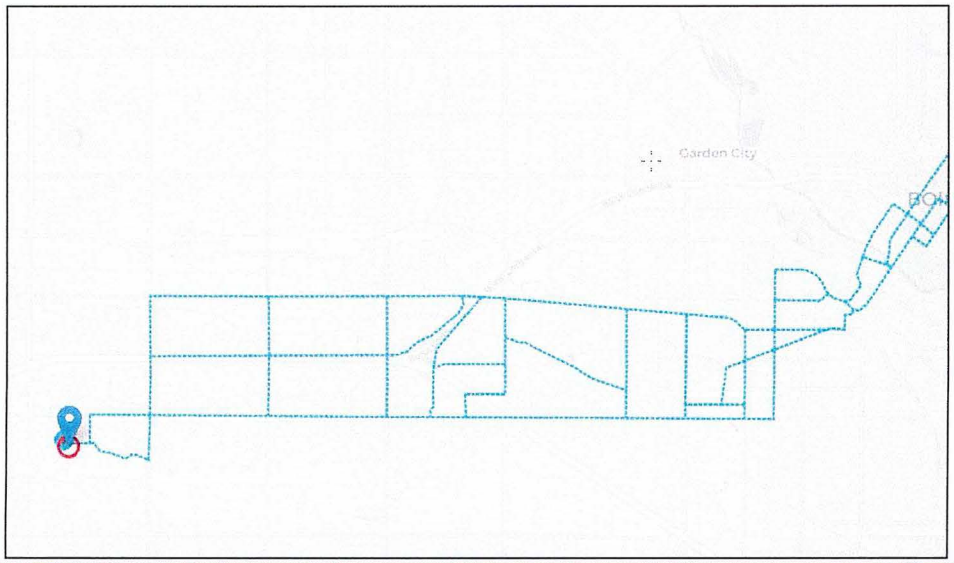
- Seeking public input on a number of topics through virtual meetings, workshops, roundtables, etc
  - Transmission infrastructure location
  - Environmental Justice considerations
  - Environmental, Historic Preservation and other topics

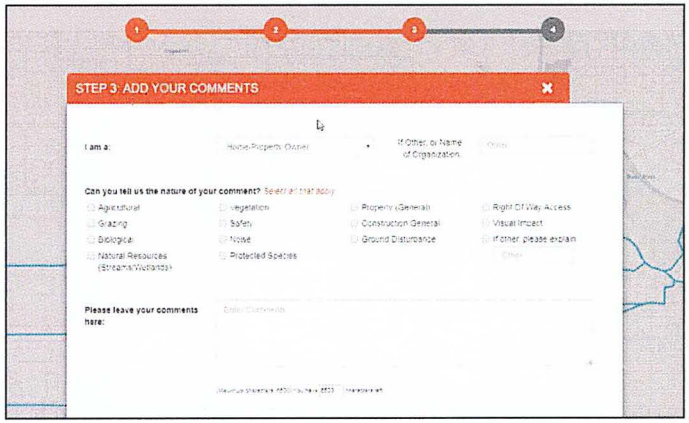
- We are committed to:
  - Listening to and factoring in public input
  - Maximizing the use of existing rights-of-way and other available space
  - Creating local jobs and vendor opportunities
  - Balancing considerations of regulatory requirements and various stakeholders

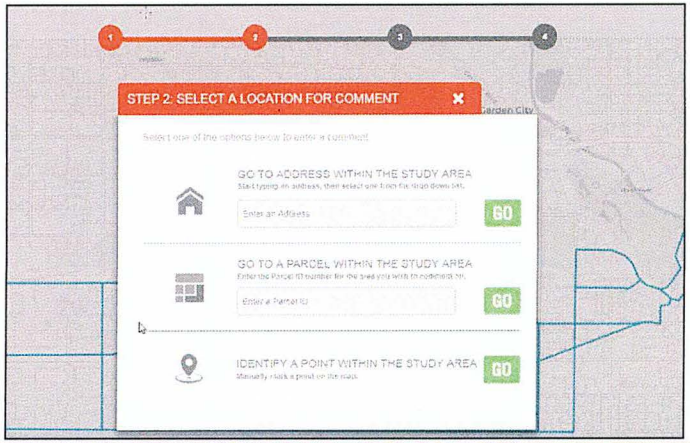




- Web-based application to capture input on CVOW
- Using GIS, identify key locations
- Interactive – with the ability to register, comment and stay connected



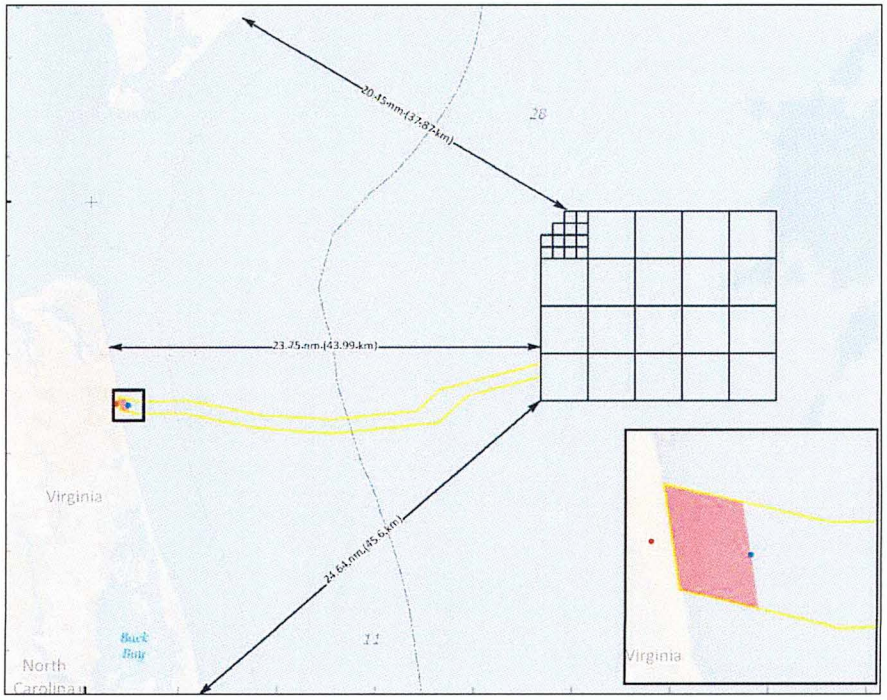




Coastal
Virginia
Offshore Wind
Dominion Energy
Actions Speak Louder

CVOW Commercial Project Summary

- Scheduled completion end of 2026
- Planning 188 14-megawatt wind turbines[1]
- 2,640-megawatt total capacity
- Enough to power up to 660,000 homes
- More than 800 feet tall
- Located 27 miles offshore within 112,800-acre lease area east of the pilot project

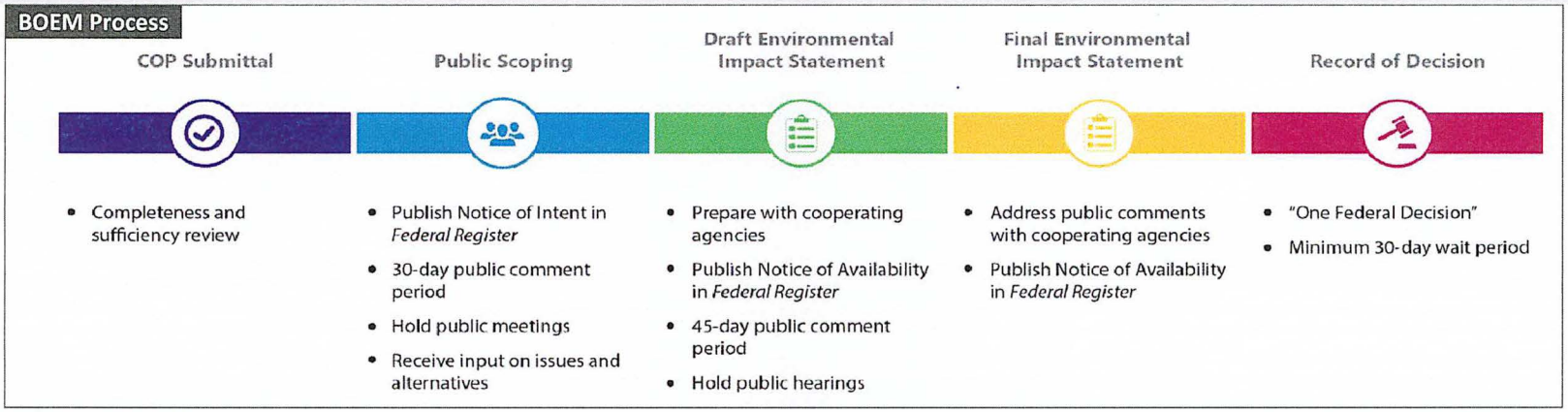


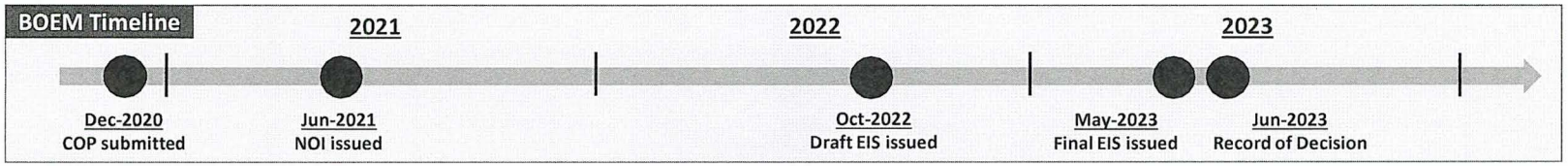
[1] Dependent on State Corporation Commission review

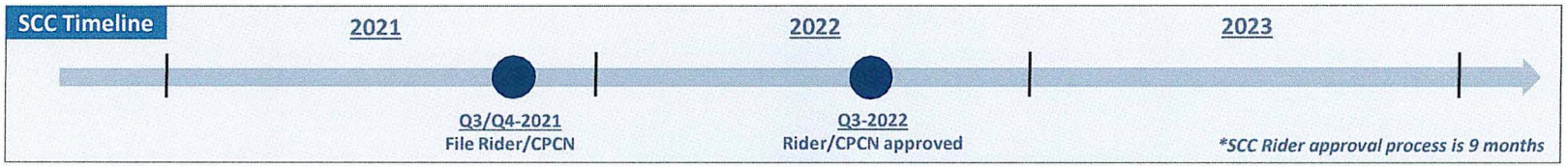
671

NEPA and SCC Alignment

Dominion Energy







672

Federal Agency Coordination

Dominion Energy

Bureau of Ocean Energy Management

- Bi-weekly discussions on project development, specific plans (visual assessment, geotech/geophysical data needs, etc.) and NEPA process

U.S. Navy

- Onshore transmission route options, including location of switching station, and compatibility with Naval Air Station Oceana mission

U.S. Coast Guard

- Navigational Safety Risk Analysis, Search & Rescue procedures, Opportunities to gain familiarity with operating Pilot Turbines, Oil Spill Response

National Marine Fisheries Service

- Marine Mammals, Incidental Harassment Authorizations (IHA), Letter of Authorization (LOA)

Army Corps of Engineers

- Joint Permit Application and electric transmission route crossing of the Intracoastal Waterway

Fish and Wildlife Service

- Avian and Bat surveys, protected species

EPA, Region III

- Air permitting during construction and operations. EPA and Virginia Department of Environmental Quality discussions underway on permitting jurisdictions.

673

Impact Assessments

Dominion Energy

- Air Quality
- Avian and Bat Species
- Aviation and Radar
- Benthic Resources, Fishes, Invertebrates, and Essential Fish Habitats
- Commercial and Recreational Fishing
- DoD and OCS Natural Security Maritime Uses
- Environmental Justice
- **Historic Properties Assessment**
- In-Air Acoustic Environment
- Land Transportation and Traffic
- Land Use and Zoning
- **Marine Archaeological Resources**
- Marine Energy and Infrastructure
- Marine Mammals
- Marine Transportation and Navigation
- Other Coastal and Marine Resources
- Physical and Oceanographic Conditions
- Population, Economy, Employment, Housing, and Public Services
- Public Health and Safety
- Recreation and Tourism
- Sea Turtles
- **Terrestrial Archaeological Resources**
- Terrestrial Vegetation and Wildlife
- Underwater Acoustic Environment
- Visual Resources
- Water Quality
- Wetlands and Waterbodies

Outreach Efforts To Date and Ongoing

Dominion Energy

Stakeholder Engagement

- General Public, landowners and neighborhood associations
- Elected officials and government agencies
- Businesses and Chambers of Commerce
- Environmental, marine life and recreational advocates
- Fisheries
- Universities
- Environmental Justice, historic and cultural stewardship organizations
- Tribal Communities

Public Input Opportunities

- Public Meetings: March 2 & 4
- Landowner Meetings: March 30
- Additional stakeholder meetings planned for May, June and July
- CoastalVAWind.com and GeoVoice

GEOVOICE

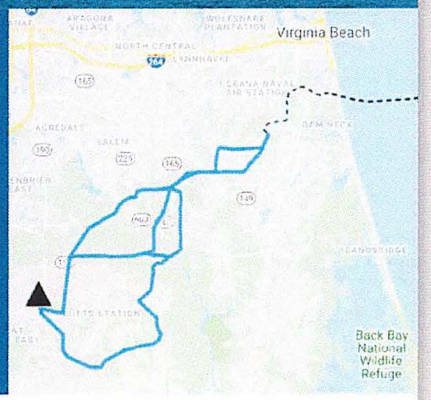
Dominion Energy

Help Build Virginia's Clean Energy Future

Dominion Energy
Actions Speak Louder

Coastal Virginia **Offshore Wind**

Sign up at GeoVoice by scanning the QR Code to provide input, share an insight on the location of important natural and historical resources, and stay informed about the Coastal Virginia Offshore Wind (CVOW) project.



Review the study area

Add comments, provide input or share an insight

Track the project as it develops and receive updates

Available now with the QR Code and on coastalvawind.com

Your Input Matters

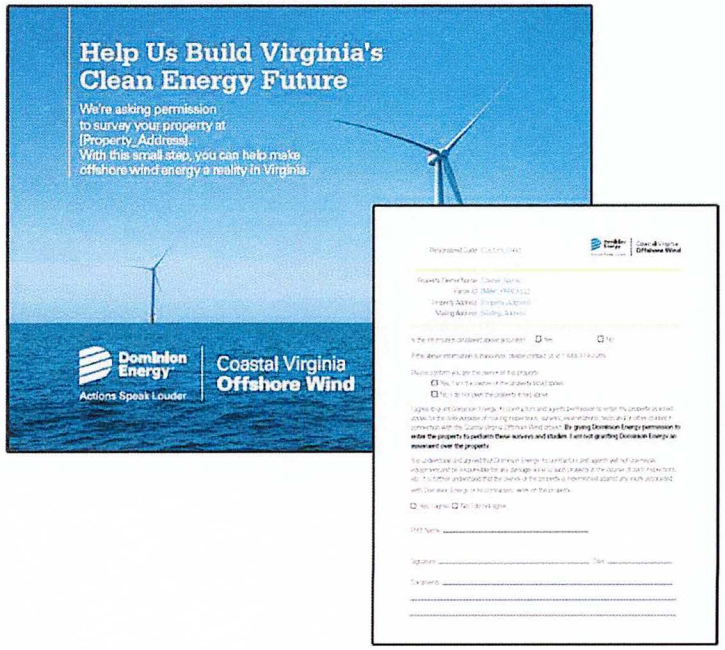
If you have any questions, comments or want to learn more about the Coastal Virginia Offshore Wind (CVOW) project, please contact us:
Phone: 1-844-319-2065 **Email: info@coastalvawind.com** **Website: coastalvawind.com**

676

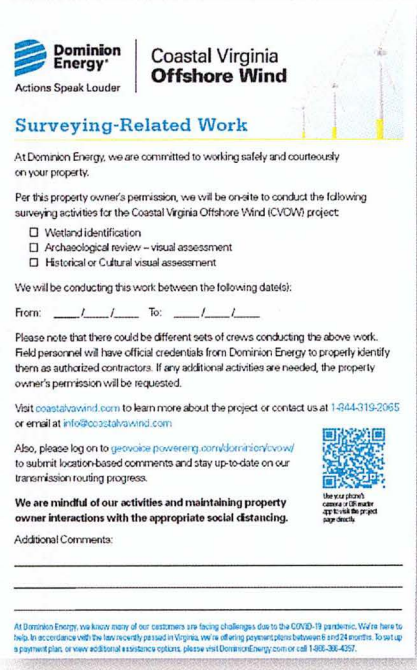
Access Request / Surveying

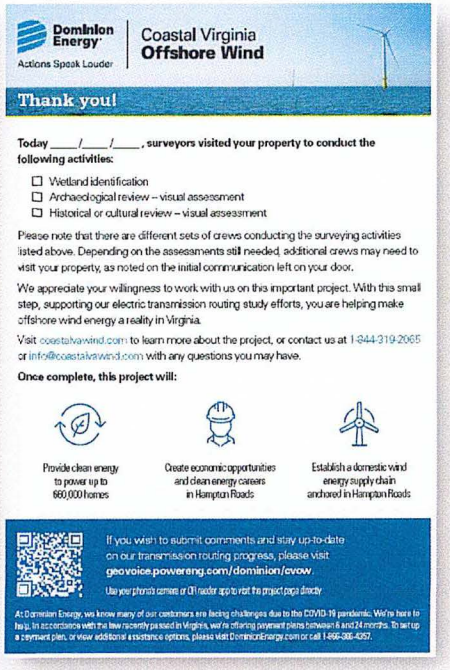
Dominion Energy

Property Owner Access Request



On-Site Communications





Cultural Resources Regulatory Context

~ By complying with both the federal and state regulatory process, a rigorous review process is ensured ~

State Agencies:

Virginia Department of Historic Resources (VDHR)

North Carolina Historic Preservation Office (NCHPO)

Federal Agency:

Bureau of Ocean Energy Management (BOEM)

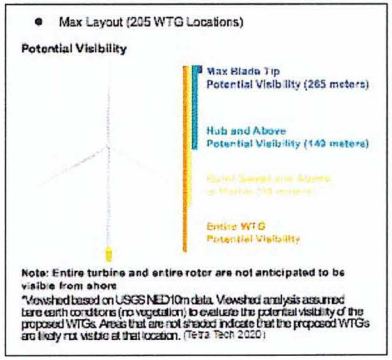
- The SCC's review of the Project will occur concurrently with and in some instances following key milestones in BOEM's NEPA review process.
- BOEM's NEPA review schedule for the Project precedes Dominion's public input process as well as the SCC review and approval of a route for the onshore transmission line.
- The survey is anticipated to encompass all of the routes eventually formally noticed to the public as required by the SCC for inclusion in the Certificate of Public Convenience and Necessity (CPCN) review process.

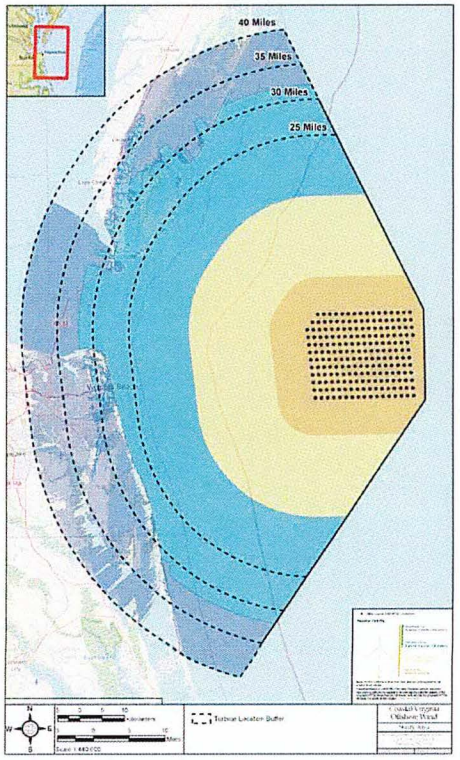
Offshore Project Components

Historic Properties Study Area and Preliminary Area of Potential Effects (PAPE)

Dominion Energy

- 40-mile buffer around Wind Turbines
- Bare earth model incorporating:
  - Location of turbines
  - Curvature of the earth
  - Topography
  - Views from onshore
- Preliminary analysis of the PAPE:
  - 1,255 previously identified properties
  - Additional 514 properties in historic districts
- Identify:
  - Properties eligible or listed in State/National Register of Historic Places
  - National Historic Landmarks
  - Historic properties in V-CRIS and HPOWEB
  - Properties of interest to Tribes and Engagement Groups



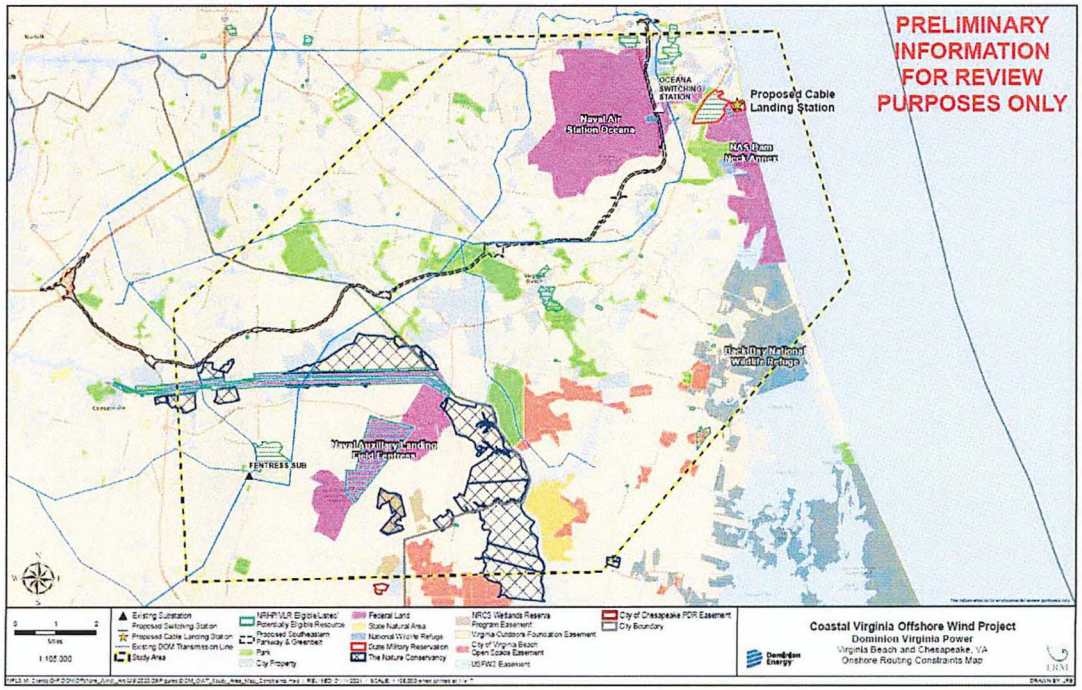


679

Onshore Project Components
Historic Properties Survey Plan

Dominion Energy

- Study Area
- Stage 1 Pre-application Analysis
  - Defined by VDHR, including guidelines
  - Photo simulations: analyze potential severity of impacts from considered resources
  - VDHR Categories
    - None
    - Minimal
    - Moderate
    - Severe
- Stage 2 Survey
  - Potential to likely focus on a smaller number of routes, or changes to current set of options

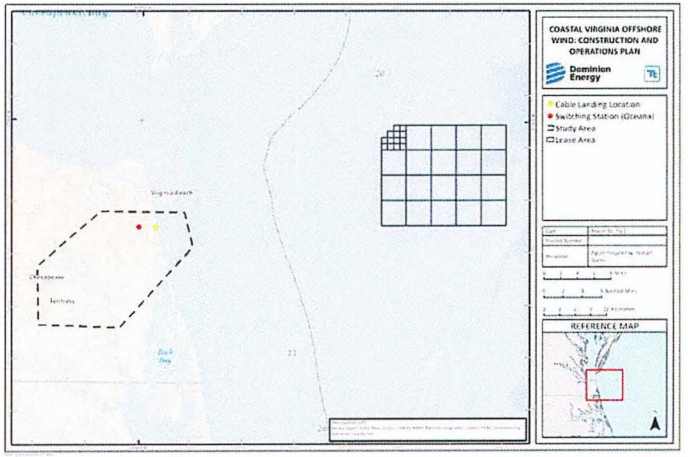


Terrestrial Archaeological Resources Investigation

Area of Potential Effect

Dominion Energy

- Definition of the Area of Potential Effect (APE) for the Project
  - Maximum footprint of direct impacts from Project construction and staging
  - APE will include the Cable Landing Location, the Onshore Export Cable, a Switching Station, an Interconnection Cable, an Onshore Substation, and an Operations & Maintenance Facility
  - Currently multiple route options and locations under consideration, and are anticipated to be further refined prior to the initiation of field surveys

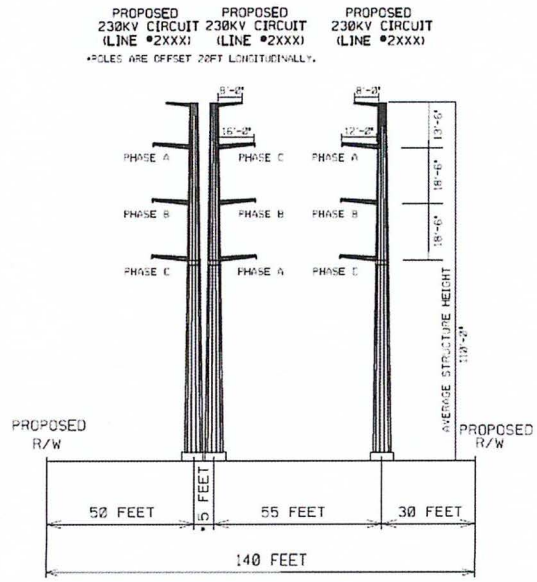


681

Application of Findings for Cultural Resources

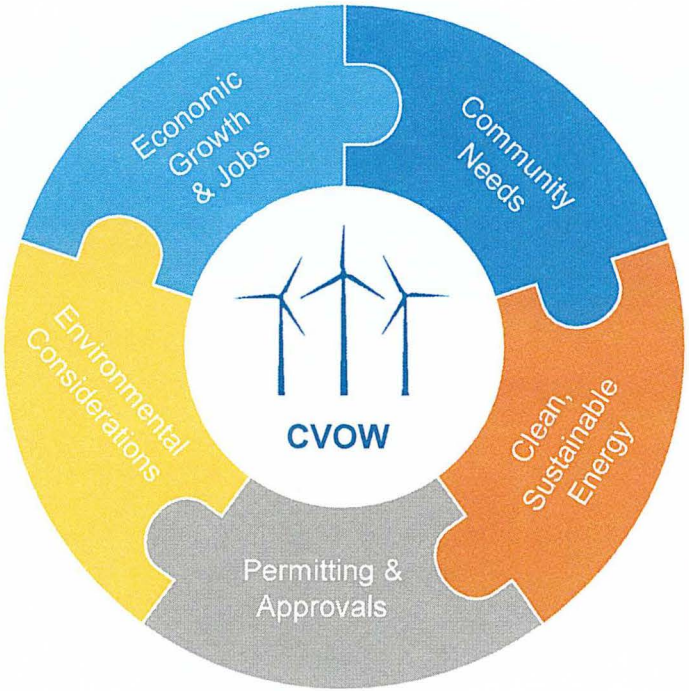
- BOEM in consultation with VDHR will use the findings to take into account effects to cultural resources
- BOEM will also consider input from interested parties
- If any adverse effects are identified, BOEM and Dominion as the Project Applicant will need to take one of the following two actions within the Section 106 framework:
  - Avoid or minimize the adverse effect through engineering changes
  - Make provisions for the adverse effects to be mitigated, such as:
    - National Register of Historic Places eligibility documentation
    - Development of educational resources
    - Phase II or III archaeological investigations

TYPICAL TRANSMISSION
RIGHT OF WAY



NOTE: Information contained on drawing is to be considered preliminary in nature and subject to change based on final design.

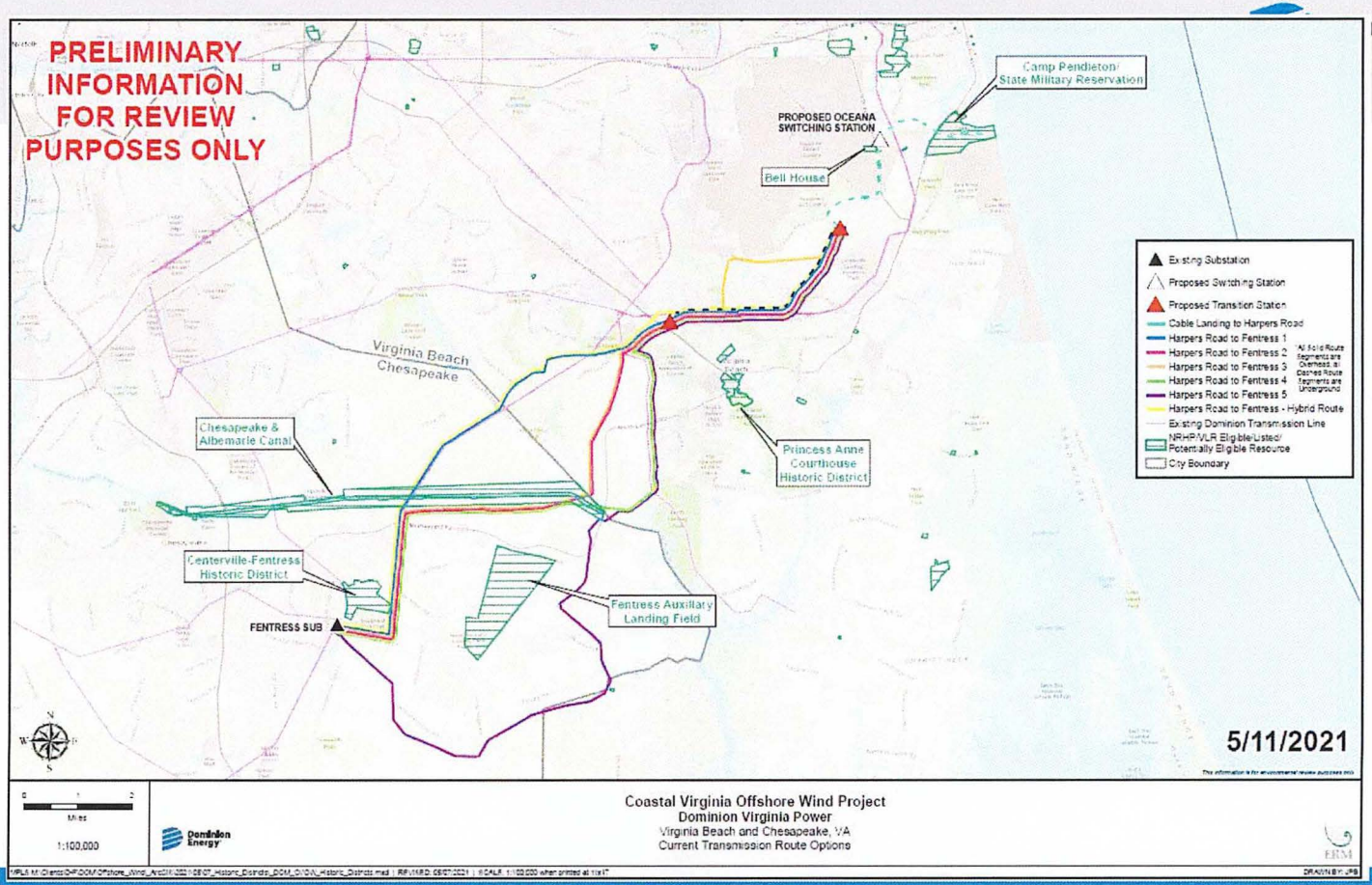
Partnering with Communities



- Information gathering has helped and will help us, the community, and regulators effectively evaluate potential routing options
- Important to hear from landowners and other stakeholder prior to filing with the State Corporation Commission and BOEM

Seeking Public Input

- Understanding the communities' needs and partnering on opportunities created by the CVOW project
- Minimizing the impacts to landowners, environmental justice communities, sensitive species, and cultural and historic resources
- Maximizing the use of existing rights-of-way and other available space


PRELIMINARY INFORMATION FOR REVIEW PURPOSES ONLY
Camp Pendleton/ State Military Reservation
PROPOSED OCEANA SWITCHING STATION
Bell House
Virginia Beach
Chesapeake
Chesapeake & Albemarle Canal
Princess Anne Courthouse Historic District
Centerville-Fentress Historic District
FENTRESS SUB
Fentress Auxiliary Landing Field
Existing Substation
Proposed Switching Station
Proposed Transition Station
Cable Landing to Harpers Road
Harpers Road to Fentress 1
Harpers Road to Fentress 2
Harpers Road to Fentress 3
Harpers Road to Fentress 4
Harpers Road to Fentress 5
Harpers Road to Fentress - Hybrid Route
Existing Dominion Transmission Line
NRHP/VLR Eligible/Listed/ Potentially Eligible Resource
City Boundary
All Solid Route Segments are Overhead, all Dashed Route Segments are Underground
5/11/2021
Miles
1:100,000
Coastal Virginia Offshore Wind Project
Dominion Virginia Power
Virginia Beach and Chesapeake, VA
Current Transmission Route Options

Discussion

Date	*Stakeholder*	*Purpose/Topics*	*Category*
8/26/2021	Hampton Roads Black Caucus	CVOW presentation by Katharine Bond	Hist/Cultural
8/23/2021	The Nature Conservancy (TNC)	Part of routine outreach between TNC and Dominion	Environmental/Marine Orgs
8/20/2021	The Nature Conservancy (TNC)	Update on CVOW On-Shore activities and discuss next steps	Environmental/Marine Orgs
8/17/2021	Virginia African American Cultural Center (VAACC)	CVOW update	Hist/Cultural
8/10/2021	Chesapeake Climate Action Network	Discuss the email that was sent out concerning the open houses and virtual meetings	Environmental/Marine Orgs
8/5/2021	Chesapeake NAACP	CVOW update	Hist/Cultural
8/4/2021	Chesapeake NAACP	CVOW check-in	Hist/Cultural
8/4/2021	Hispanic Chamber of Coastal Virginia	General project update	Hist/Cultural
8/4/2021	League of Conservation Voters	CVOW discussion	Environmental/Marine Orgs
8/4/2021	Macaulay & Jamerson, Alexander Macaulay	CVOW discussion	Environmental/Marine Orgs
8/4/2021	NAACP Hampton	CVOW outreach follow up	Hist/Cultural
8/4/2021	Newport News NAACP	CVOW outreach follow up	Hist/Cultural
8/4/2021	Virginia Beach Minority Business Council	CVOW update	Hist/Cultural
8/4/2021	York-James City-Williamsburg NAACP	CVOW outreach follow up	Hist/Cultural
8/3/2021	Back Bay Foundation	CVOW update	Environmental/Marine Orgs
8/3/2021	James River Association	CVOW outreach follow up	Environmental/Marine Orgs
8/3/2021	Virginia African American Advisory Board	CVOW update	Hist/Cultural
8/3/2021	Virginia Asian Chamber of Commerce	General project update	Hist/Cultural
8/2/2021	Urban League of Hampton Roads (EJ)	CVOW update	Hist/Cultural
8/2/2021	Virginia African American Advisory Board (EJ)	CVOW update	Hist/Cultural
8/2/2021	Wetlands Watch	CVOW update	Environmental/Marine Orgs
7/30/2021	Ducks Unlimited	CVOW update	Environmental/Marine Orgs
7/30/2021	Elizabeth River Project	CVOW update	Environmental/Marine Orgs
7/28/2021	Chesapeake Climate Action Network	Project outreach	Environmental/Marine Orgs
7/28/2021	Virginia Hispanic Chamber of Commerce	General project update	Hist/Cultural
7/27/2021	Black Brand	Project outreach	Hist/Cultural
7/27/2021	League of Conservation Voters	CVOW discussion	Environmental/Marine Orgs
7/27/2021	Macaulay & Jamerson, Alexander Macaulay	CVOW discussion	Environmental/Marine Orgs
7/27/2021	Virginia Beach Audubon	Project outreach	Environmental/Marine Orgs
7/26/2021	Audubon Society – Clean Energy Initiative	Follow up to environmental advocacy group trip to pilot turbines where we discussed outreach to local Audubon chapters	Environmental/Marine Orgs
7/26/2021	Hampton Roads Committee of 200+ Men	CVOW outreach follow up	Hist/Cultural
7/23/2021	James River Association	CVOW outreach follow up	Environmental/Marine Orgs
7/23/2021	NAACP Hampton	CVOW outreach follow up	Hist/Cultural
7/23/2021	Newport News NAACP	CVOW outreach follow up	Hist/Cultural
7/23/2021	York-James City-Williamsburg NAACP	CVOW outreach follow up	Hist/Cultural
7/21/2021	Lynnhaven River Now	Project update	Environmental/Marine Orgs
7/21/2021	Virginia Beach NAACP	Project update	Hist/Cultural
7/21/2021	Wetlands Watch	CVOW update	Environmental/Marine Orgs
7/16/2021	CVOW North Atlantic Right Whale NGO Working Group	CVOW outreach	Environmental/Marine Orgs
7/14/2021	Audubon Society – Clean Energy Initiative	Follow up to environmental advocacy group trip to pilot turbines where we discussed outreach to local Audubon chapters	Environmental/Marine Orgs
7/14/2021	Chesapeake Bay Foundation	Timeline update on OSW project and transmission routes	Environmental/Marine Orgs
7/14/2021	Chesapeake Bay Foundation	Project briefing/update	Environmental/Marine Orgs
7/14/2021	Nansemond Tribe	Invitation to meet to discuss latest transmission routes	Hist/Cultural
7/13/2021	Chesapeake Bay Foundation	Project briefing/update	Environmental/Marine Orgs
7/13/2021	Sierra Club	Ongoing communication and project update with key stakeholder	Environmental/Marine Orgs
7/12/2021	Chesapeake Bay Foundation	Project briefing/update	Environmental/Marine Orgs
6/18/2021	Virginia Hispanic Chamber of Commerce	Invited to 6/29 VCEA Hiring Roundtable	Hist/Cultural
6/18/2021	Virginia Interfaith Center for Public Policy	Invited to 6/29 VCEA Hiring Roundtable	Hist/Cultural
6/18/2021	Virginia State Conference NAACP	Invited to 6/29 VCEA Hiring Roundtable	Hist/Cultural
6/17/2021	Black BRAND Hampton Roads' Regional Chamber of Commerce	Social media support	Hist/Cultural
6/17/2021	On Point Communications	Social media support	Hist/Cultural
6/17/2021	Urban League of Hampton Roads (EJ)	Social media support	Hist/Cultural
6/14/2021	Virginia Beach NAACP	CVOW update	Hist/Cultural
6/2/2021	Sierra Club (VA Chapter)	Project update	Environmental/Marine Orgs
5/26/2021	Southern Environmental Law Center/Defenders of Wildlife	Introductory call on SELC and Defenders of Wildlife's work in maritime mammal conservation.	Environmental/Marine Orgs
5/19/2021	Back Bay Restoration Foundation	CVOW update	Environmental/Marine Orgs
5/19/2021	Chesapeake Bay Foundation	CVOW update	Environmental/Marine Orgs
5/19/2021	Ducks Unlimited, Chip Heaps	CVOW update	Environmental/Marine Orgs
5/19/2021	Elizabeth River Project	CVOW update	Environmental/Marine Orgs

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5/19/2021	Lynnhaven River Now	Left message on mailer and offered to meet on any questions they may have with CVOW project	Environmental/Marine Orgs
5/19/2021	Wetlands Watch	CVOW update	Environmental/Marine Orgs
5/18/2021	The Nature Conservancy	Trip to the Volgenau Virginia Coastal Reserve (VCR) was hosted by TNC as a platform for discussion on environmental concerns associated with the CVOW Commercial Project.	Environmental/Marine Orgs
5/17/2021	Chesapeake NAACP	CVOW update	Hist/Cultural
5/14/2021	African American Heritage Trail	Check-in	Hist/Cultural
5/14/2021	American Bird Conservancy	Provided project points of contact and an invitation to future environmental workshops and June 9 CVOW trip (accepted).	Environmental/Marine Orgs
5/14/2021	Center for African American Public Policy	Offered follow up spot of the NSU radio show	Hist/Cultural
5/14/2021	Hispanic Chamber of Coastal Virginia	Check-in	Hist/Cultural
5/14/2021	NAACP Norfolk	Check-in	Hist/Cultural
5/14/2021	NAACP Virginia Beach	Check-in	Hist/Cultural
5/14/2021	National Audubon Society	Provided project points of contact and an invitation to future environmental workshops and June 9 CVOW trip (accepted).	Environmental/Marine Orgs
5/14/2021	Norfolk State University – Joseph Jenkins Center for the Study of the African Diaspora	Project outreach	Hist/Cultural
5/14/2021	The Virginia Asian Chamber of Commerce	Check-in	Hist/Cultural
5/14/2021	The Virginia Hispanic Chamber of Commerce/Virginia Hispanic Foundation	Requested follow up meeting	Hist/Cultural
5/12/2021	International Fund for Animal Welfare	Introductory call on their work in maritime mammal conservation	Environmental/Marine Orgs
5/11/2021	Heritage Partners	Roundtable	Hist/Cultural
5/11/2021	Norfolk State University – Joseph Jenkins Center for the Study of the African Diaspora	Roundtable	Hist/Cultural
5/11/2021	Preservation Virginia	Roundtable	Hist/Cultural
5/6/2021	The Nature Conservancy	Introductory call on TNC's work in maritime mammal conservation and offshore wind.	Environmental/Marine Orgs
5/5/2021	Whale and Dolphin Conservation	Introductory call on WDC's work in maritime mammal conservation	Environmental/Marine Orgs
5/3/2021	NAACP – Chesapeake	CVOW project overview	Hist/Cultural
4/26/2021	The Nature Conservancy	Discuss TNC review and feedback on onshore routing alternatives relative to TNC Land Holdings/Conservation Easements.	Environmental/Marine Orgs
4/23/2021	National Wildlife Federation and Natural Resources Defense Council	Introductory call to learn about NWF and NRDC's work in the offshore wind space	Environmental/Marine Orgs
4/21/2021	Portsmouth Branch #7104, NAACP	CVOW briefing	Hist/Cultural
4/16/2021	Historic Properties Engagement Group	CVOW outreach	Hist/Cultural
4/13/2021	Urban League of Hampton Roads	CVOW outreach	Hist/Cultural
4/12/2021	La Selecta	CVOW outreach	Hist/Cultural
4/12/2021	NAACP – York James City County Williamsburg Chapter	CVOW outreach	Hist/Cultural
4/7/2021	Chesapeake Climate Action Network	CVOW initial encounter	Environmental/Marine Orgs
4/1/2021	Virginia Renewable Energy Alliance	Regional MOU between MD, VA, and NC. Potential for Lamberts Point to be developed. Efforts on local hiring and economically disadvantaged communities. Discuss major equipment packages	Environmental/Marine Orgs
3/31/2021	Virginia State Conference NAACP	Provide project updates, answer questions, offer partnership opportunities to host community conversations as well as outreach to local NAACP chapters.	Hist/Cultural
3/26/2021	Oceana	Establish a working relationship regarding the Right Whale and have Oceana help establish contacts in the NGO community.	Environmental/Marine Orgs
3/25/2021	100 Black Men of Virginia Peninsula	CVOW outreach	Hist/Cultural
3/25/2021	NAACP – Hampton Chamber	CVOW outreach	Hist/Cultural
3/25/2021	NAACP – Newport News Chamber	CVOW outreach	Hist/Cultural
3/23/2021	Filipino-American Political Action Group	Notification re: packages to individual property owners asking for survey permission and upcoming landowner briefing meetings.	Hist/Cultural
3/23/2021	Urban League of Hampton Roads	Notification re: packages to individual property owners asking for survey permission and upcoming landowner briefing meetings.	Hist/Cultural
3/23/2021	Virginia Beach Minority Business Council	Notification re: packages to individual property owners asking for survey permission and upcoming landowner briefing meetings.	Hist/Cultural
3/22/2021	American Clean Power	Establish a working relationship regarding the Right Whale and have ACP help establish contacts in industry and the NGO community.	Environmental/Marine Orgs
3/21/2021	Chesapeake Coalition of Black Pastors	Discussions regarding hosting a community conversation.	Hist/Cultural
3/17/2021	Cultural/Historic Preservation Advocacy and Native American Tribal Stakeholder Group Environmental Org Participants: Scenic Virginia, Piedmont Environmental Council, Preservation Virginia	Brief them on the project and transmission – open lines of communication to receive their feedback.	Environmental/Marine Orgs

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3/17/2021	Cultural/Historic Preservation Advocacy and Native American Tribal Stakeholder Group Historical/Cultural participants: Preservation Virginia, Norfolk State – Joseph Jenkins Center for the Study of African Diaspora, National Trust for Historic Preservation, American Battlefield Trust, Colonial National Historical Trust, Virginia Department of Historic Resources	Brief them on the project and transmission – open lines of communication to receive their feedback.	Hist/Cultural
3/16/2021	Virginia Hispanic Chamber of Commerce	Introductions of CVOW team members, education of the topic, answer any questions.	Hist/Cultural
3/16/2021	Wetlands Watch	Project outreach	Environmental/Marine Orgs
3/12/2021	Lynnhaven River NOW,	To explain to the group about the Mayor's Commission on Offshore Wind and Clean Energy being announced on March 17	Environmental/Marine Orgs
3/9/2021	Sierra Club	Discuss workforce development and share insights to assist in developing an OSW workforce development presentation.	Environmental/Marine Orgs
3/8/2021	Ducks Unlimited	Project update	Environmental/Marine Orgs
3/8/2021	Environmental Workshop Organizations: Audubon, Ducks Unlimited, Elizabeth River Project, Friends of Norfolk's Environment, Lynnhaven River Now, National Wildlife Foundation, The Nature Conservancy, North Carolina Coastal Federation, Sierra Club, Southern Environmental Law Center, Surfrider Foundation (VA Beach), Virginia Conservation Network, Virginia Institute of Marine Science	Discussion of COP environmental provisions and environmental advocacy group interest in the project. Hot topics: Baseline characterizations and protections for sensitive marine species (NARW), Environmental monitoring for Pilot and pre-monitoring for commercial project, Offshore lighting, Environmental justice review and mapping to avoid equity concerns, Coordination of transmission routing with Avangrid, IHA modifications for spotted and common dolphins	Environmental/Marine Orgs
3/7/2021	Norfolk State University – Center for African American Public Policy State of the Water Radio Show, WNSB 91.1FM Eric W. Claville, J.D., M.L.I.S., Director, Center for African American Public Policy Adjunct Professor of Political Science	Project discussion	Hist/Cultural
3/2/2021	Chesapeake Bay Foundation	CVOW project update	Environmental/Marine Orgs
3/1/2021	Hispanic Chamber of Coastal Virginia	Share project information	Hist/Cultural
3/1/2021	Nansemond River Preservation Alliance	Project update	Environmental/Marine Orgs
3/1/2021	Virginia Beach Audubon	Project update	Environmental/Marine Orgs
2/26/2021	Surfrider Foundation	CVOW Project Brief, General outreach and discussion of upcoming virtual meeting	Environmental/Marine Orgs
2/24/2021	The Nature Conservancy	CVOW Onshore Route Alternatives Discussion	Environmental/Marine Orgs
2/22/2021	Back Bay Restoration Foundation	Project update	Environmental/Marine Orgs
2/21/2021	Macaulay and Jamerson	Project check-in	Environmental/Marine Orgs
2/21/2021	Sierra Club	Project check-in	Environmental/Marine Orgs
2/21/2021	Southern Environmental Law Center	Project check-in	Environmental/Marine Orgs
2/21/2021	Virginia League of Conservation Voters	Project check-in	Environmental/Marine Orgs
2/17/2021	American Battlefield Trust	Received letter re: project sent to Cultural/Advocacy contacts	Hist/Cultural
2/17/2021	Colonial National Historic Park	Received letter re: project sent to Cultural/Advocacy contacts	Hist/Cultural
2/17/2021	Council of Virginia Archeologists	Received letter re: project sent to Cultural/Advocacy contacts	Hist/Cultural
2/17/2021	Macaulay & Jamerson	Received letter re: project sent to Cultural/Advocacy contacts	Environmental/Marine Orgs
2/17/2021	National Trust for Historic Preservation	Received letter re: project sent to Cultural/Advocacy contacts	Hist/Cultural
2/17/2021	Norfolk State University	Received letter re: project sent to Cultural/Advocacy contacts	Hist/Cultural
2/17/2021	Piedmont Environmental Council	Received letter re: project sent to Cultural/Advocacy contacts	Environmental/Marine Orgs
2/17/2021	Preservation Virginia	Received letter re: project sent to Cultural/Advocacy contacts	Environmental/Marine Orgs
2/17/2021	Scenic Virginia	Received letter re: project sent to Cultural/Advocacy contacts	Environmental/Marine Orgs
2/17/2021	Virginia Asian Chamber of Commerce	Project outreach	Hist/Cultural
2/12/2021	Elizabeth River Project	Project update	Environmental/Marine Orgs
2/12/2021	Norfolk State University – Joseph Jenkins Roberts Center for African Diaspora Studies	Informational and offer to answer questions	Hist/Cultural
2/11/2021	Hispanic Chamber of Coastal Virginia	Project outreach	Hist/Cultural
2/11/2021	Virginia Beach Minority Business Council	Project outreach	Hist/Cultural
2/5/2021	African American Heritage Trail/City of Chesapeake, Parks, Recreation, and Tourism	Project outreach	Hist/Cultural
2/4/2021	The Nature Conservancy	Discussion of COP Summary and concerns about project's impacts on migrating birds	Environmental/Marine Orgs
2/2/2021	Center for African American Public Policy (Norfolk State University)	Initial Outreach; Answer questions	Hist/Cultural
2/2/2021	Chesapeake Bay Foundation	Update on CVOW plans	Environmental/Marine Orgs
2/2/2021	Virginia Beach NAACP	Project outreach	Hist/Cultural
1/28/2021	James River Association	Discuss Dominion Energy's Coastal Virginia Offshore Wind project.	Environmental/Marine Orgs

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1/27/2021	Dr. Tommy Blogger	Introduction meeting with Dr. Bogger to cover high-level project details, discuss role of local historian in assisting Dominion Energy understand cultural and historically significant locations in the study area, provide contact information of Dominion Energy team, and determine Dr. Bogger's information needs to begin research	Hist/Cultural
1/27/2021	Hampton Vice Mayor/President of Hampton Roads Committee of 200 Plus Men – Jimmy Gray	Discuss the Coastal Virginia Offshore Wind project and its potential impact on the Hampton citizens.	Hist/Cultural
1/25/2021	The Natural Conservancy	Stakeholder engagement; review of specific concerns and sensitivities related to onshore infrastructure.	Environmental/Marine Orgs
1/24/2021	Hispanic Chamber of Commerce/Virginia Coalition of Latino Organizations	Discuss general info on CVOW and make sure the community has input.	Hist/Cultural
1/22/2021	Colonial National Historic Park	To generally discuss CVOW and provide a brief overview of the transmission needs	Hist/Cultural
1/22/2021	Council of Virginia Archeologists	To generally discuss CVOW and provide a brief overview of the transmission needs	Hist/Cultural
1/22/2021	National Trust for Historic Preservation	To generally discuss CVOW and provide a brief overview of the transmission needs	Hist/Cultural
1/22/2021	Norfolk State University – Joseph Jenkins Center for the Study of the African Diaspora	To generally discuss CVOW and provide a brief overview of the transmission needs	Hist/Cultural
1/22/2021	Piedmont Environmental Council	To generally discuss CVOW and provide a brief overview of the transmission needs	Environmental/Marine Orgs
1/22/2021	Preservation Virginia	To generally discuss CVOW and provide a brief overview of the transmission needs	Environmental/Marine Orgs
1/22/2021	Scenic Virginia	To generally discuss CVOW and provide a brief overview of the transmission needs	Environmental/Marine Orgs
1/21/2021	Sierra Club	Outreach on CVOW-Tier 1, identified myself as her contact going forward and asked her what issues and concerns she may have and any details she would like to share about Sierra Club plans	Environmental/Marine Orgs
1/13/2021	The Nature Conservancy	Update Dominion on TNC's role in Atlantic Coast Fisheries Management, Share TNC's preliminary thinking on impacts to fish from offshore wind development. Discuss ways to collaborate to resolve differences and develop solutions. Plan for a similar discussion around pelagic and migratory shorebirds	Environmental/Marine Orgs

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III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

L. Identify any environmental permits or special permissions anticipated to be needed.

Response: The permits or special permissions that are likely to be required for the proposed Projects are listed in the table below.

Anticipated Permits

Activity	Potential Permit	Agency/Organization
Construct and Operate CVOW	FEIS/ROD	BOEM
Impacts to wetlands and waters of the U.S.	Individual Permit	U.S. Army Corps of Engineers
Impacts to wetlands and waters of the U.S.	Virginia Water Protection Permit	Virginia Department of Environmental Quality
Work within, over or under state subaqueous bottom	Subaqueous Bottom Permit	Virginia Marine Resources Commission
Discharge of Stormwater from Construction	Construction General Permit	Virginia Department of Environmental Quality
Work within Virginia Beach right-of-way	Transportation Utility Permit	City of Virginia Beach
Work within Chesapeake right-of-way	Transportation Utility Permit	City of Chesapeake
Airspace obstruction evaluation	FAA 7460-1 and 7460-2	Federal Aviation Administration
Fentress Substation Expansion	Conditional Use Permit	City of Chesapeake
Work within, over or under tidal wetlands	Wetlands Permit	Virginia Beach Wetlands Board
Work within, over or under tidal wetlands	Wetlands Permit	VMRC (on behalf of the City of Chesapeake)
Work within, over or on Railroad property	Utility Occupancy Permit	Chesapeake and Albemarle Railroad

Because the federal permitting process will overlap with and address many of the same issues addressed in the Commission's permitting process, including related to the Virginia Facilities, below is a summary of that process and where the CVOW Commercial Project is within it.

Federal Permitting Process

Under the Outer Continental Shelf Lands Act ("OCSLA"), the Secretary of the Interior is responsible for the administration of mineral and wind exploration and development of the OCS (Title 43, Chapter 29, Subchapter I, § 1301). In 2005, the

OCSLA was amended to authorize the Department of the Interior ("DOI") to issue leases, easements, and rights-of-way for alternate uses and alternative energy development on the OCS (Section 388 of the Energy Policy Act of 2005). Through this amendment and subsequent delegation by the Secretary of the Interior, BOEM has the authority to issue these leases and regulate activities that occur within them, including the approval of a Construction and Operations Plan ("COP"), which is a detailed plan for the construction and installation, operations and maintenance, and conceptual decommissioning of an offshore wind energy facility in an OCS renewable energy lease area. Through a competitive leasing process under 30 CFR 585.211, Dominion Energy Virginia was awarded Commercial Lease OCS-A 0483 beginning approximately 27 statute miles offshore of Virginia Beach, Virginia. In accordance with 30 CFR §§ 585.626 and 627, Dominion Energy Virginia submitted an initial COP to BOEM on December 17, 2020, for a completeness determination. Following discussions with BOEM, the Company subsequently updated the initial COP on June 17 and June 29, 2021. On July 2, 2021, BOEM deemed the COP complete for purposes of its review under BOEM's substantive regulations, as well as through the required federal NEPA, and, therefore, issued a Notice of Intent ("NOI") to prepare an Environmental Impact Statement ("EIS") pursuant to NEPA.[43] The Company submitted an additional update to the COP on October 29, 2021. BOEM will conduct environmental and technical reviews of the COP and will decide whether to approve, approve with modification, or disapprove the COP. As noted, the COP also serves as the basis for BOEM's review under NEPA.

As the federal agency charged with issuing the OCS Lease and reviewing and approving the COP, BOEM will serve as the lead federal agency for the entire Project throughout the permitting process. As part of the COP approval process, BOEM must ensure that any activities approved are safe, conserve natural resources on the OCS, are undertaken in coordination with relevant federal agencies, provide a fair return to the United States, and are compliant with all applicable laws and regulations (30 CFR § 585.102). As noted, BOEM will prepare an EIS for the Project, because under NEPA it is a major federal action significantly affecting the quality of the human environment. For purposes of the NEPA review and the EIS, the CVOW Commercial Project includes all offshore and onshore components. Offshore components include wind turbine generators ("WTGs"), foundations, inter-array cables, offshore substations, and offshore export cables, as discussed in the Generation Appendix. Onshore components include Onshore Export Circuits, Harpers Switching Station, the Overhead Transmission Circuits, and the Fentress Substation Expansion.

Importantly, while BOEM is the lead federal agency for purposes of preparing the EIS, various portions of the CVOW Commercial Project also require review and approval of other federal agencies. These federal agencies are known as cooperating federal agencies, and will participate in the BOEM-led EIS process. For example, because portions of the Virginia Facilities will impact Waters of the United States, as that term is defined under the Clean Water Act ("CWA") (*e.g.*,

[43] *See* https://www.regulations.gov/document/BOEM-2021-0040-0001.

including open waters and wetlands) the Company will need to obtain an individual CWA permit from Corps. Other federal agencies that need to review and approval various portions of the CVOW Commercial Project include, but are not limited to, the U.S. Navy and U.S. Environmental Protection Agency.

Notably, under the CWA, and its implementing regulations, the Corps can only issue a permit if it finds that there is a practicable alternative to the proposed project which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequence (40 C.F.R. 230.10(a)). This requirement requires the Corps to determine what it calls the "least damaging practicable alternative" or "LEDPA," and if the proposed alternative is not the LEDPA, there is a likelihood the Corps would not be able to issue a permit for it. This is because impacts to the aquatic environment (*e.g.*, wetlands) typically drive the Corps's LEDPA determination. Thus, while the Company believes its preferred alternative before the Commission avoids and reasonably minimizes impacts to the local communities, the environment, scenic assets, and cultural and historic properties in manner consistent with the Commission's governing statutes, the Company highlights the importance of potential impacts to the aquatic resources in the Commission's review, in light of the Corps's role and requirements in the federal permitting process.

As noted above, BOEM issued the NOI on July 2, 2021, which officially kicked off BOEM's review and the NEPA/EIS process to be used by all of the federal agencies involved. The first step in that process is public scoping, which serves to identify issues and potential alternatives for consideration in the EIS. Throughout the scoping process, federal agencies; state, tribal, and local governments; and the general public had the opportunity to assist BOEM with identification of significant resources and issues, impact-producing factors, reasonable alternatives, and potential mitigation measures to be analyzed in the EIS as well as to provide additional information. Three public scoping meetings were held: July 12, July 14, and July 20, 2021, and included a 30-day public comment period, which ended on August 2, 2021. As of this filing, BOEM is considering the comments received during the scoping period, in order to inform the EIS.

Following the scoping process, BOEM will prepare the Draft EIS ("DEIS") in coordination with cooperating agencies. Once complete, BOEM will publish a notice of availability ("NOA") and request public comments on the DEIS. Currently, BOEM expects to issue the NOA in August 2022. After the public comment period on the DEIS ends, BOEM will review, gather additional information as needed, respond to comments received, and will develop the Final EIS ("FEIS"). Currently, BOEM expects to make the FEIS available to the public in May 2023. A Record of Decision ("ROD") will then be issued 30 days after the FEIS is released, in accordance with 40 C.F.R. § 1506.11. The ROD is the decision document to approve, approve with modifications, or deny the Company's request for approval of the COP. In addition to BOEM, the Company expects that the other federal agencies involved also will issue RODs related to their purview, including those related to the Virginia Facilities, about the same time BOEM issues its ROD.

IV. HEALTH ASPECTS OF ELECTROMAGNETIC FIELDS ("EMF")

A. Provide the calculated maximum electric and magnetic field levels that are expected to occur at the edge of the ROW. If the new transmission line is to be constructed on an existing electric transmission line ROW, provide the present levels as well as the maximum levels calculated at the edge of ROW after the new line is operational.

Response: **Overhead Transmission Circuits**

Public exposure to magnetic fields is best estimated by field levels from power lines calculated at annual average loading. For any day of the year, the EMF levels associated with average conditions provide the best estimate of potential exposure. Maximum (peak) values are less relevant as they may occur for only a few minutes or hours each year.

This section describes the levels of EMF associated with the proposed transmission lines. EMF levels are provided for both historical (2020) and future (2025) annual average and maximum (peak) loading conditions.

Existing Lines – Historical average loading in 2020

EMF levels were calculated for the existing lines at the historical average load condition (380 amps for Line #271, 0 amps for Line #I-74, 116 amps for Line #2118, and 270 amps for Line #147) and at an operating voltage of 120.75 and 241.5 kV when supported on the existing structures – Attachments II.A.5.b and II.A.5.c.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a historical average load operating temperature.

EMF levels at the edge of the rights-of-way for the existing lines at the historical average loading.

	Left Edge Looking Towards Harpers		**Right Edge Looking Towards Harpers**	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
Attachment II.A.5.b	0.517	24.587	0.117	9.532
Attachment II.A.5.c	1.194	18.482	1.194	18.482

Existing Lines – Historical peak loading in 2020

EMF levels were calculated for the existing lines at the historical peak load condition (1006 amps for Line #271, 0 amps for Line #I-74, 344 amps for Line #2118, and 541 amps for Line #147) and at an operating voltage of 120.75 and 241.5 kV when supported on the existing structures – Attachments II.A.5.b and II.A.5.c.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a historical average load operating temperature.

EMF levels at the edge of the rights-of-way for the existing lines at the historical average loading.

	Left Edge Looking Towards Harpers		**Right Edge Looking Towards Harpers**	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
Attachment II.A.5.b	0.508	66.728	0.012	25.484
Attachment II.A.5.c	1.198	41.120	1.198	41.120

Proposed project – Projected average loading in 2025

EMF levels were calculated for the proposed Project at the ***projected average*** load condition (396 amps for Line #271 and 121 amps for Line #2118, 281 amps for Line #147, and 914 amps for the 3 CVOW circuits) and at operating voltages of 120.75 kV and 241.5 kV when supported on the proposed Project structures – see Attachment II.A.5.a, II.A.5.b, and II.A.5.c.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a projected average load operating temperature.

EMF levels at the edge of the rights-of-way for the proposed Project at the projected average loading:

	Left Edge Looking towards Harpers		**Right Edge Looking towards Harpers**	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
Attachment II.A.5.a	0.692	46.785	0.883	48.909

Attachment II.A.5.b	0.698	64.258	0.594	34.123
Attachment II.A.5.c	1.318	23.756	0.891	51.728

Proposed project – Projected Peak loading in 2025

EMF levels were calculated for the proposed Project at the ***projected peak*** load condition (1047 amps for Line #271, 358 amps for Line #2118, 563 amps for Line #147, and 2175 amps for the 3 CVOW circuits) and at operating voltages of 120.75 kV and 241.5 kV when supported on the proposed Project structures – see Attachment II.A.5.a, II.A.5.b, and II.A.5.c.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a projected peak load operating temperature.

EMF levels at the edge of the rights-of-way for the proposed Project at the projected peak loading:

	Left Edge Looking Towards Harpers		**Right Edge Looking Towards Harpers**	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
Attachment II.A.5.a	0.667	116.848	0.868	122.815
Attachment II.A.5.b	0.677	161.895	0.572	83.296
Attachment II.A.5.c	1.323	54.882	0.878	129.070

Underground Transmission Lines

In an underground XLPE cable, the electric field is contained entirely within the cable sheath. Therefore, there is no electric field at any point external to the circuits.

Onshore Export Circuits

The magnetic fields listed below were calculated at 1 meter above grade, 3' depth and 10' separation for the Onshore Export Circuits. See Attachment II.A.5.d. The calculations were completed at peak loading (852 Amp).

Maximum EMF Level at 1.0 Meter Above Ground (Peak Loading)

Conductor Type/Duct bank Configuration	Peak Loading EMF Level at 1 meter above ground (mG)	
	Edge of Right-of-Way	Peak
5000 kcmil Al (Open Trench/Three Duct bank)	18.4	88.7

Offshore Export Circuits

The magnetic fields for the Offshore Export Circuits are provided below. See Attachment II.A.5.e.

Summary of Calculated Magnetic- and Induced Electric-Field Levels for 3.3 ft. Burial Depth and Peak Loading at Specified Horizontal Distances[1]

Cable Configuration	Evaluation Height	Magnetic Field (mG)			Electric Field (mV/m)[2]		
		Max	+/- 5 ft.	+/- 10 ft.	Max	+/- 5 ft.	+/- 10 ft.
Offshore Export Circuit	At the seabed	112	15	0.7	1.9	0.3	<0.1
	3.3 ft. above the seabed	8.7	2.7	0.2	0.2	0.1	<0.1
Offshore Export Circuit: Trenchless Installation[3]	At the seabed	112	16	0.7	1.9	0.3	<0.1
	3.3 ft. above the seabed	8/7	2.8	0.3	0.2	0.1	<0.1

1. For the individual Offshore Export Circuits, the horizontal distance is measured from the centerline of the cable. For the Offshore Export Circuits in the Trenchless Installation configuration the maximum is measured over the middle cable, and the horizontal distance is measured from the center of the right-side or left-side cable, for distances > 0 feet and < 0 feet, respectively.

2. Induced electric fields in representative marine species of interest are lower than those presented herein for induced electric fields in seawater.

3. The Offshore Export Circuits in Trenchless Installation conduits are modeled with a burial depth of 3.3 feet to the top of the cable, providing a conservative estimate of field values. The actual burial depth of the Trenchless Installation conduits will be 82 to 98 feet. At this burial depth, calculated field levels, even directly above the cable will be much less than 0.1 mG and 0.1 mV/m, and likely near background levels.

IV. HEALTH ASPECTS OF ELECTROMAGNETIC FIELDS ("EMF")

B. If the Applicant is of the opinion that no significant health effects will result from the construction and operation of the line, describe in detail the reasons for that opinion and provide references or citations to supporting documentation.

Response: The conclusions of multidisciplinary scientific review panels assembled by national and international scientific agencies during the past two decades are the foundation of the Company's opinion that no adverse health effects will result from the operation of the proposed Project. Each of these panels has evaluated the scientific research related to health and power-frequency EMF and provided conclusions that form the basis of guidance to governments and industries. The Company regularly monitors the recommendations of these expert panels to guide their approach to EMF.

Research on EMF and human health varies widely in approach. Some studies evaluate the effects of high, short-term EMF exposures not typically found in people's day-to-day lives on biological responses, while others evaluate the effects of common, lower EMF exposures found throughout communities. Studies also have evaluated the possibility of effects (*e.g.*, cancer, neurodegenerative diseases, and reproductive effects) of long-term exposure. Altogether, this research includes well over a hundred epidemiologic studies of people in their natural environment and many more laboratory studies of animals (*in vivo*) and isolated cells and tissues (*in vitro*). Standard scientific procedures, such as weight-of-evidence methods, were used by the expert panels assembled by agencies to identify, review, and summarize the results of this large and diverse research.

The reviews of EMF biological and health research have been conducted by numerous scientific and health agencies, including the European Health Risk Assessment Network on Electromagnetic Fields Exposure ("EFHRAN"), the International Commission on Non-Ionizing Radiation Protection ("ICNIRP"), the World Health Organization ("WHO"), the IEEE's International Committee on Electromagnetic Safety ("ICES"), the Scientific Committee on Emerging and Newly Identified Health Risks ("SCENIHR") of the European Commission, and the Swedish Radiation Safety Authority ("SSM") (formerly the Swedish Radiation Protection Authority ["SSI"]) (WHO, 2007; SCENIHR, 2009, 2015; EFHRAN, 2010, 2012; ICNIRP, 2010; SSM, 2015, 2016, 2018, 2019, 2020, 2021; ICES, 2019). The general scientific consensus of the agencies that have reviewed this research, relying on generally accepted scientific methods, is that the scientific evidence does not confirm that common sources of EMF in the environment, including transmission lines and other parts of the electric system, appliances, etc., are a cause of any adverse health effects.

The most recent reviews on this topic include the 2015 report by SCENIHR and annual reviews published by SSM (*e.g.*, for the years 2015 through 2021). These reports, similar to previous reviews, found that the scientific evidence does not

confirm the existence of any adverse health effects caused by environmental or community exposure to EMF.

The WHO has recommended that countries adopt recognized international standards published ICNIRP and ICES. Typical levels of EMF from Dominion's power lines outside its property and rights-of-way are far below the screening reference levels of EMF recommended for the general public and still lower than exposures equivalent to restrictions to limits on fields within the body (ICNIRP, 2010; ICES, 2019).

Thus, based on the conclusions of scientific reviews and the levels of EMF associated with the proposed Project, the Company has determined that no adverse health effects are anticipated to result from the operation of the proposed Project.

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IV. HEALTH ASPECTS OF ELECTROMAGNETIC FIELDS ("EMF")

C. Describe and cite any research studies on EMF the Applicant is aware of that meet the following criteria:

1. Became available for consideration since the completion of the Virginia Department of Health's most recent review of studies on EMF and its subsequent report to the Virginia General Assembly in compliance with 1985 Senate Joint Resolution No. 126;

2. Include findings regarding EMF that have not been reported previously and/or provide substantial additional insight into findings; and

3. Have been subjected to peer review.

Response: The Virginia Department of Health ("VDH") conducted its most recent review and issued its report on the scientific evidence on potential health effects of extremely low frequency ("ELF") EMF in 2000: "[T]he Virginia Department of Health is of the opinion that there is no conclusive and convincing evidence that exposure to extremely low frequency EMF emanated from nearby high voltage transmission lines is causally associated with an increased incidence of cancer or other detrimental health effects in humans."[44]

The continuing scientific research on EMF exposure and health has resulted in many peer-reviewed publications since 2000. The accumulating research results have been regularly and repeatedly reviewed and evaluated by national and international health, scientific, and government agencies, including most notably:

- The WHO, which published one of the most comprehensive and detailed reviews of the relevant scientific peer-reviewed literature in 2007;
- SCENIHR, a committee of the European Commission, which published its assessments in 2009 and 2015;
- The SSM, which has published annual reviews of the relevant peer-reviewed scientific literature since 2003, with its most recent review published in 2021; and,
- EFHRAN, which published its reviews in 2010 and 2012.

The above reviews provide detailed analyses and summaries of relevant recent peer-reviewed scientific publications. The conclusions of these reviews that the evidence overall does not confirm the existence of any adverse health effects due to exposure to EMF below scientifically established guideline values are consistent with the conclusions of the VDH report. With respect to the statistical association observed in some of the childhood leukemia epidemiologic studies, the most recent

[44] *See* http://www.vdh.virginia.gov/content/uploads/sites/12/2016/02/highfinal.pdf.

comprehensive review of the literature by SCENIHR, published in 2015, concluded that "no mechanisms have been identified and no support is existing [*sic*] from experimental studies that could explain these findings, which, together with shortcomings of the epidemiological studies prevent a causal interpretation" (SCENIHR, 2015, p. 16).

While research is continuing on multiple aspects of EMF exposure and health, many of the recent publications have focused on an epidemiologic assessment of the relationship between EMF exposure and childhood leukemia and EMF exposure and neurodegenerative diseases. Of these, the following recent publications, published following the inclusion date (June 2014) for the SCENIHR (2015) report through May 2021, provided additional evidence and contributed to clarification of previous findings. Overall, new research studies have not provided evidence to alter the previous conclusions of scientific and health organizations, including the WHO and SCENIHR.

Recent epidemiologic studies of EMF and childhood leukemia include:

- Bunch et al. (2015) assessed the potential association between residential proximity to high-voltage underground cables and development of childhood cancer in the United Kingdom largely using the same epidemiologic data as in a previously published study on overhead transmission lines (Bunch et al., 2014). No statistically significant associations or trends were reported with either distance to underground cables or calculated magnetic fields from underground cables for any type of childhood cancers.

- Pedersen et al. (2015) published a case-control study that investigated the potential association between residential proximity to power lines and childhood cancer in Denmark. The study included all cases of leukemia (n=1,536), central nervous system tumor, and malignant lymphoma (n=417) diagnosed before the age of 15 between 1968 and 2003 in Denmark, along with 9,129 healthy control children matched on sex and year of birth. Considering the entire study period, no statistically significant increases were reported for any of the childhood cancer types.

- Salvan et al. (2015) compared measured magnetic-field levels in the bedroom for 412 cases of childhood leukemia under the age of 10 and 587 healthy control children in Italy. Although the statistical power of the study was limited because of the small number of highly exposed subjects, no consistent statistical associations or trends were reported between measured magnetic-field levels and the occurrence of leukemia among children in the study.

- Bunch et al. (2016) and Swanson and Bunch (2018) published additional analyses using data from an earlier study (Bunch et al., 2014). Bunch et al. (2016) reported that the association with distance to power lines observed in earlier years was linked to calendar year of birth or year of cancer diagnosis, rather than the age of the power lines. Swanson and Bunch (2018) re-analyzed

data using finer exposure categories (e.g., cut-points of every 50-meter distance) and broader groupings of diagnosis date (e.g., 1960-1979, 1980-1999, and 2000-on) and reported no overall associations between exposure categories and childhood leukemia for the later periods (1980 and on), and consistent pattern for the periods prior to 1980.

- Crespi et al. (2016) conducted a case-control epidemiologic study of childhood cancers and residential proximity to high-voltage power lines (60 kilovolts ["kV"] to 500 kV) in California. Childhood cancer cases, including 5,788 cases of leukemia and 3,308 cases of brain tumor, diagnosed under the age of 16 between 1986 and 2008, were identified from the California Cancer Registry. Controls, matched on age and sex, were selected from the California Birth Registry. Overall, no consistent statistically significant associations for leukemia or brain tumor and residential distance to power lines were reported.

- Kheifets et al. (2017) assessed the relationship between calculated magnetic-field levels from power lines and development of childhood leukemia within the same study population evaluated in Crespi et al. (2016). In the main analyses, which included 4,824 cases of leukemia and 4,782 controls matched on age and sex, the authors reported no consistent patterns, or statistically significant associations between calculated magnetic-field levels and childhood leukemia development. Similar results were reported in subgroup and sensitivity analyses. In two subsequent studies, Amoon et al. (2018a, 2019) examined the potential impact of residential mobility (i.e., moving residences between birth and diagnosis) on the associations reported in Crespi et al. (2016) and Kheifets et al. (2017). Amoon et al. (2018a) concluded that changing residences was not associated with either calculated magnetic-field levels or proximity to the power lines, while Amoon et al. (2019) concluded that while uncontrolled confounding by residential mobility had some impact on the association between EMF exposure and childhood leukemia, it was unlikely to be the primary driving force behind the previously reported associations in Crespi et al. (2016) and Kheifets et al. (2017).

- Amoon et al. (2018b) conducted a pooled analysis of 29,049 cases and 68,231 controls from 11 epidemiologic studies of childhood leukemia and residential distance from high-voltage power lines. The authors reported no statistically-significant association between childhood leukemia and proximity to transmission lines of any voltage. Among subgroup analyses, the reported associations were slightly stronger for leukemia cases diagnosed before 5 years of age and in study periods prior to 1980. Adjustment for various potential confounders (*e.g.*, socioeconomic status, dwelling type, residential mobility) had little effect on the estimated associations.

- Kyriakopoulou et al. (2018) assessed the association between childhood acute leukemia and parental occupational exposure to social contacts, chemicals, and electromagnetic fields. The study was conducted at a major pediatric hospital in Greece and included 108 cases and 108 controls matched for age, gender,

and ethnicity. Statistically non-significant associations were observed between paternal exposure to magnetic fields and childhood acute leukemia for any of the exposure periods examined (1 year before conception; during pregnancy; during breastfeeding; and from birth until diagnosis); maternal exposure was not assessed due to the limited sample size. No associations were observed between childhood acute leukemia and exposure to social contacts or chemicals.

- Auger et al. (2019) examined the relationship between exposure to EMF during pregnancy and risk of childhood cancer in a cohort of 784,000 children born in Quebéc. Exposure was defined using residential distance to the nearest high-voltage transmission line or transformer station. The authors reported statistically non-significant associations between proximity to transformer stations and any cancer, hematopoietic cancer, or solid tumors. No associations were reported with distance to transmission lines.

- Crespi et al. (2019) investigated the relationship between childhood leukemia and distance from high-voltage lines and calculated magnetic-field exposure, separately and combined, within the California study population previously analyzed in Crespi et al. (2016) and Kheifets et al. (2017). The authors reported that neither close proximity to high-voltage lines nor exposure to calculated magnetic fields alone were associated with childhood leukemia; an association was observed only for those participants who were both close to high-voltage lines (< 50 meters) and had high calculated magnetic fields (≥ 0.4 microtesla [i.e., ≥ 4 milligauss]). No associations were observed with low-voltage power lines (< 200 kV). In a subsequent study, Amoon et al. (2020) examined the potential impact of dwelling type on the associations reported in Crespi et al. (2019). Amoon et al. (2020) concluded that while the type of dwelling at which a child resides (e.g., single-family home, apartment, duplex, mobile home) was associated with socioeconomic status and race or ethnicity, it was not associated with childhood leukemia and did not appear to be a potential confounder in the relationship between childhood leukemia and magnetic-field exposure in this study population.

- Swanson et al. (2019) conducted a meta-analysis of 41 epidemiologic studies of childhood leukemia and magnetic-field exposure published between 1979 and 2017 to examine trends in childhood leukemia development over time. The authors reported that while the estimated risk of childhood leukemia initially increased during the earlier period, a statistically non-significant decline in estimated risk has been observed from the mid-1990s until the present (*i.e.*, 2019).

- Talibov et al. (2019) conducted a pooled analysis of 9,723 cases and 17,099 controls from 11 epidemiologic studies to examine the relationship between parental occupational exposure to magnetic fields and childhood leukemia. No statistically significant association was found between either paternal or

maternal exposure and leukemia (overall or by subtype). No associations were observed in the meta-analyses.

- Núñez-Enríquez et al. (2020) assessed the relationship between residential magnetic-field exposure and B-lineage acute lymphoblastic leukemia ("B-ALL") in children under 16 years of age in Mexico. The study included 290 cases and 407 controls matched on age, gender, and health institution; magnetic-field exposure was assessed through the collection of 24-hour measurements in the participants' bedrooms. While the authors reported some statistically significant associations between elevated magnetic-field levels and development of B-ALL, the results were dependent on the chosen cut-points.
- Seomun et al. (2021) performed a meta-analysis based on 33 previously published epidemiologic studies investigating the potential relationship between magnetic-field exposure and childhood cancers, including leukemia and brain cancer. For childhood leukemia, the authors reported statistically significant associations with some, but not all, of the chosen cut-points for magnetic-field exposure. The associations between magnetic-field exposure and childhood brain cancer were statistically non-significant. The study provided limited new insight as most of the studies included in the current meta-analysis, were included in previously conducted meta- and pooled analyses.

Recent epidemiologic studies of EMF and neurodegenerative diseases include:

- Seelen et al. (2014) conducted a population-based case-control study in the Netherlands and included 1,139 cases diagnosed with amyotrophic lateral sclerosis ("ALS") between 2006 and 2013 and 2,864 frequency-matched controls. The shortest distance from the case and control residences to the nearest high-voltage power line (50 to 380 kilovolts [kV]) was determined by geocoding. No statistically significant associations between residential proximity to power lines with voltages of either 50 to 150 kV or 220 to 380 kV and ALS were reported.

- Sorahan and Mohammed (2014) analyzed mortality from neurodegenerative diseases in a cohort of approximately 73,000 electricity supply workers in the United Kingdom. Cumulative occupational exposure to magnetic-fields was calculated for each worker in the cohort based on their job titles and job locations. Death certificates were used to identify deaths from neurodegenerative diseases. No associations or trends for any of the included neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, and ALS) were observed with various measures of calculated magnetic fields.

- Koeman et al. (2015, 2017) analyzed data from the Netherlands Cohort Study of approximately 120,000 men and women who were enrolled in the cohort in 1986 and followed up until 2003. Lifetime occupational history, obtained through questionnaires, and job-exposure matrices on ELF magnetic fields and other occupational exposures were used to assign exposure to study subjects. Based on 1,552 deaths from vascular dementia, the researchers reported a

statistically not significant association of vascular dementia with estimated exposure to metals, chlorinated solvents, and ELF magnetic fields. However, because no exposure-response relationship for cumulative exposure was observed and because magnetic fields and solvent exposures were highly correlated with exposure to metals, the authors attributed the association with ELF magnetic fields and solvents to confounding by exposure to metals (Koeman et al., 2015). Based on a total of 136 deaths from ALS among the cohort members, the authors reported a statistically significant, approximately two-fold association with ELF magnetic fields in the highest exposure category. This association, however, was no longer statistically significant when adjusted for exposure to insecticides (Koeman et al., 2017).

- Fischer et al. (2015) conducted a population-based case-control study that included 4,709 cases of ALS diagnosed between 1990 and 2010 in Sweden and 23,335 controls matched to cases on year of birth and sex. The study subjects' occupational exposures to ELF magnetic fields and electric shocks were classified based on their occupations, as recorded in the censuses and corresponding job-exposure matrices. Overall, neither magnetic fields nor electric shocks were related to ALS.

- Vergara et al. (2015) conducted a mortality case-control study of occupational exposure to electric shock and magnetic fields and ALS. They analyzed data on 5,886 deaths due to ALS and over 58,000 deaths from other causes in the United States between 1991 and 1999. Information on occupation was obtained from death certificates and job-exposure matrices were used to categorize exposure to electric shocks and magnetic fields. Occupations classified as "electric occupations" were moderately associated with ALS. The authors reported no consistent associations for ALS, however, with either electric shocks or magnetic fields, and they concluded that their findings did not support the hypothesis that exposure to either electric shocks or magnetic fields explained the observed association of ALS with "electric occupations."

- Pedersen et al. (2017) investigated the occurrence of central nervous system diseases among approximately 32,000 male Danish electric power company workers. Cases were identified through the national patient registry between 1982 and 2010. Exposure to ELF magnetic fields was determined for each worker based on their job titles and area of work. A statistically significant increase was reported for dementia in the high exposure category when compared to the general population, but no exposure-response pattern was identified, and no similar increase was reported in the internal comparisons among the workers. No other statistically significant increases among workers were reported for the incidence of Alzheimer's disease, Parkinson's disease, motor neuron disease, multiple sclerosis, or epilepsy, when compared to the general population, or when incidence among workers was analyzed across estimated exposure levels.

- Vinceti et al. (2017) examined the association between ALS and calculated

magnetic-field levels from high-voltage power lines in Italy. The authors included 703 ALS cases and 2,737 controls; exposure was assessed based on residential proximity to high-voltage power lines. No statistically significant associations were reported and no exposure-response trend was observed. Similar results were reported in subgroup analyses by age, calendar period of disease diagnosis, and study area.

- Checkoway et al. (2018) investigated the association between Parkinsonism[45] and occupational exposure to magnetic fields and several other agents (endotoxins, solvents, shift work) among 800 female textile workers in Shanghai. Exposure to magnetic fields was assessed based on the participants' work histories. The authors reported no statistically significant associations between Parkinsonism and occupational exposure to any of the agents under study, including magnetic fields.

- Gunnarsson and Bodin (2018) conducted a meta-analysis of occupational risk factors for ALS. The authors reported a statistically significant association between occupational exposures to EMF, estimated using a job-exposure matrix, and ALS among the 11 studies included. Statistically significant associations were also reported between ALS and jobs that involve working with electricity, heavy physical work, exposure to metals (including lead) and chemicals (including pesticides), and working as a nurse or physician. The authors reported some evidence for publication bias. In a subsequent publication, Gunnarsson and Bodin (2019) updated their previous meta-analysis to also include Parkinson's disease and Alzheimer's disease. A slight, statistically significant association was reported between occupational exposure to EMF and Alzheimer's disease; no association was observed for Parkinson's disease.

- Huss et al. (2018) conducted a meta-analysis of 20 epidemiologic studies of ALS and occupational exposure to magnetic fields. The authors reported a weak overall association; a slightly stronger association was observed in a subset analysis of six studies with full occupational histories available. The authors noted substantial heterogeneity among studies, evidence for publication bias, and a lack of a clear exposure-response relationship between exposure and ALS.

- Jalilian et al. (2018) conducted a meta-analysis of 20 epidemiologic studies of occupational exposure to magnetic fields and Alzheimer's disease. The authors reported a moderate, statistically significant overall association; however, they noted substantial heterogeneity among studies and evidence for publication bias.

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[45] Parkinsonism is defined by Checkoway et al. (2018) as "*a syndrome whose cardinal clinical features are bradykinesia, rest tremor, muscle rigidity, and postural instability. Parkinson disease is the most common neurodegenerative form of [parkinsonism]*" (p. 887).

- Röösli and Jalilian (2018) performed a meta-analysis using data from five epidemiologic studies examining residential exposure to magnetic fields and ALS. A statistically non-significant negative association was reported between ALS and the highest exposed group, where exposure was defined based on distance from power lines or calculated magnetic-field level.

- Gervasi et al. (2019) assessed the relationship between residential distance to overhead power lines in Italy and risk of Alzheimer's dementia and Parkinson's disease. The authors included 9,835 cases of Alzheimer's dementia and 6,810 cases of Parkinson's disease; controls were matched by sex, year of birth, and municipality of residence. A weak, statistically non-significant association was observed between residences within 50 meters of overhead power lines and both Alzheimer's dementia and Parkinson's disease, compared to distances of over 600 meters.

- Peters et al. (2019) examined the relationship between ALS and occupational exposure to both magnetic fields and electric shock in a pooled study of data from three European countries. The study included 1,323 ALS cases and 2,704 controls matched for sex, age, and geographic location; exposure was assessed based on occupational title and defined as low (background), medium, or high. Statistically significant associations were observed between ALS and ever having been exposed above background levels to either magnetic fields or electric shocks; however, no clear exposure-response trends were observed with exposure duration or cumulative exposure. The authors also noted significant heterogeneity in risk by study location.

- Filippini et al. (2020) investigated the associations between ALS and several environmental and occupational exposures, including electromagnetic fields, within a case-control study in Italy. The study included 95 cases and 135 controls matched on age, gender, and residential province; exposure to electromagnetic fields was assessed using the participants' responses to questions related to occupational use of electric and electronic equipment, occupational EMF exposure, and residential distance to overhead power lines. The authors reported a statistically significant association between ALS and residential proximity to overhead power lines and a statistically non-significant association between ALS and occupational exposure to EMF; occupational use of electric and electronic equipment was associated with a statistically non-significant decrease in ALS development.

- Huang et al. (2020) conducted a meta-analysis of 43 epidemiologic studies examining potential occupational risk factors for dementia or mild cognitive impairment. The authors included five cohort studies and seven case-control studies related to magnetic-field exposure. For both study types, the authors reported positive associations between dementia and work-related magnetic-field exposures. The paper, however, provided no information on the occupations held by the study participants, their magnetic-field exposure levels, or how magnetic-field levels were assessed; therefore, the results are difficult

to interpret. The authors also reported a high level of heterogeneity among studies. Thus, this analysis adds little, if any, to the overall weight of evidence on a potential association between dementia and magnetic fields.

- Jalilian et al. (2020) conducted a meta-analysis of ALS and occupational exposure to both magnetic fields and electric shocks within 27 studies from Europe, the United States, and New Zealand. A weak, statistically significant association was reported between magnetic-field exposure and ALS; however, the authors noted evidence of study heterogeneity and publication bias. No association was observed between ALS and electric shocks.

- Chen et al. (2021) conducted a case-control study to examine the association between occupational exposure to electric shocks, magnetic fields, and motor neuron disease ("MND") in New Zealand. The study included 319 cases with a MND diagnosis (including ALS) and 604 controls, matched on age and gender; exposure was assessed using the participants' occupational history questionnaire responses and previously developed job-exposure matrices for electric shocks and magnetic fields. The authors reported no associations between MND and exposure to magnetic fields; positive associations were reported between MND and working at a job with the potential for electric shock exposure.

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V. NOTICE

A. Furnish a proposed route description to be used for public notice purposes. Provide a map of suitable scale showing the route of the proposed project. For all routes that the Applicant proposed to be noticed, provide minimum, maximum and average structure heights.

Response: A map showing the proposed and alternative routes to be used for the Virginia Facilities is provided as Attachment V.A. A written description of the routes is as follows:

Cable Landing to Harpers Proposed Route – Underground

The submarine Offshore Export Circuits would come ashore at a site referred to as the Cable Landing Location within the Virginia State Military Reservation ("SMR") in Virginia Beach. At this location, the Offshore Export Circuits would connect to the Onshore Export Circuits in a series of buried vaults. The Onshore Export Circuits would then be installed underground from the Cable Landing Location to the proposed site for the Harpers Switching Station on the north side of Harpers Road within Naval Air Station ("NAS") Oceana. This route, referred to as the Cable Landing to Harpers Proposed Route, would measure approximately 4.4 miles in length.

Upon exiting the Cable Landing Location, the route would head west/southwest for about 0.9 mile to General Booth Boulevard, crossing the SMR. This segment would include a trenchless crossing of Lake Christine using horizontal directional drilling ("HDD"). The route would then head west/northwest for approximately 1.4 miles, of which about 0.6 mile would be adjacent to Bells Road. This segment would include an HDD crossing of Owl Creek and would enter NAS Oceana near Bells Road. The route would then head south for 1.1 miles along the east side of Oceana Boulevard. At the intersection of Oceana Boulevard and Harpers Road, the Cable Landing to Harpers Proposed Route would head west for 1.0 mile along the north side of Harpers Road, terminating at the Harpers Switching Station site.

Harpers to Fentress Proposed Route 1 – Overhead

Harpers to Fentress Proposed Route 1 would require an overhead installation of the three 230 kV transmission circuits between the Harpers Switching Station site in Virginia Beach and Dominion Energy Virginia's existing Fentress Substation in Chesapeake. The route would measure approximately 14.2 miles in total length. After exiting the switching station, the route would head southwest for about 2.3 miles mostly within the Southeastern Parkway & Greenbelt ("SEPG") corridor – an undeveloped study corridor for a former highway project – crossing Dam Neck Road and London Bridge Road. The route would then head west/southwest for about 3.2 miles within the SEPG corridor, crossing Holland Road and Princess Anne Road and entering the Princess Anne Commons area of Virginia Beach. About 1.8 miles of this segment of the route would be adjacent to Dominion Energy

Virginia's existing transmission right-of-way for Lines #2118/147. In the area approximately between Dam Neck Road and Princess Anne Road, the route would pass between or near the Prince George Estates, Mayberry, Castleton, Pine Ridge, Holland Pines, and Woods of Piney Grove subdivisions.

From Princess Anne Commons, the route would continue southwest for about 0.8 mile within the SEPG corridor to an intersection with Dominion Energy Virginia's existing transmission right-of-way for Lines #271/I-74. The route would then follow this existing right-of-way for about 6.1 miles to the south, entering Chesapeake just south of Indian River Farms Park. In Virginia Beach, this route segment would cross Salem Road, North Landing River, and Indian River Road, and pass through or between the Highland Meadows, Highland Acres, Dewberry Farm, Indian River Woods, and Indian River Farms subdivisions. In Chesapeake, the route segment would cross the Intracoastal Waterway canal, Mt. Pleasant Road, and Blue Ridge Road. Existing lattice structures within the right-of-way for Lines #271/I-74 would be removed and replaced with new single-circuit and double-circuit monopole structures to carry Line #271 and the three circuits required for the overhead transmission line.

From a point just south of Blue Ridge Road, Harpers to Fentress Proposed Route 1 would follow Dominion Energy Virginia's existing transmission right-of-way for Lines #2240/I-74 for about 1.7 miles to Fentress Substation, crossing Whittamore Road and the Centerville Turnpike and paralleling part of the boundary of the Battlefield Golf Club. Existing lattice structures within the right-of-way would be removed and replaced with new double circuit and single circuit monopole structures to carry Line #2240 and the three circuits required for the project.

Harpers to Fentress Proposed Route 1 would require 354 single circuit or double circuit monopole structures with a minimum structure height of 75 feet, a maximum structure height of 170 feet, and an average structure height of 121 feet.

Harpers to Fentress Alternative Route 2 – Overhead

Harpers to Fentress Alternative Route 2 would require an overhead installation of the three 230 kV transmission circuits between the Harpers Switching Station site in Virginia Beach and Dominion Energy Virginia's existing Fentress Substation in Chesapeake. The route would measure approximately 15.2 miles in total length. After exiting the switching station, the route would head southwest for about 2.3 miles mostly within the SEPG corridor, crossing Dam Neck Road and London Bridge Road. The route would then head west/southwest for about 3.2 miles within the SEPG corridor, crossing Holland Road and Princess Anne Road and entering the Princess Anne Commons area of Virginia Beach. About 1.8 miles of this segment would be adjacent to Dominion Energy Virginia's existing transmission right-of-way for Lines #2118/147. In the area approximately between Dam Neck Road and Princess Anne Road, the route would pass between or near the Prince George Estates, Mayberry, Castleton, Pine Ridge, Holland Pines, and Woods of Piney Grove subdivisions.

From Princess Anne Commons, the route would head south/southwest for approximately 3.2 miles, crossing Salem Road, Indian River Road, North Landing River (where the route would enter Chesapeake), and the Intracoastal Waterway canal. The route would then head west for 3.2 miles paralleling the south side of the canal to an intersection with Dominion Energy Virginia's existing transmission right-of-way for Lines #271/I-74. The route would follow this existing right-of-way for about 1.6 miles to the south, crossing Mt. Pleasant Road and Blue Ridge Road. Existing lattice structures within the right-of-way would be removed and replaced with new double circuit and single circuit monopole structures to carry Line #271 and the three circuits required for the project.

From a point just south of Blue Ridge Road, Harpers to Fentress Alternative Route 2 would follow Dominion Energy Virginia's existing transmission right-of-way for Line #2240 for about 1.7 mile to Fentress Substation, crossing Whittamore Road and the Centerville Turnpike and paralleling part of the boundary of the Battlefield Golf Club. Existing lattice structures within the right-of-way would be removed and replaced with new double circuit and single circuit monopole structures to carry Line #2240 and the three circuits required for the project.

Harpers to Fentress Alternative Route 2 would require 375 single circuit or double circuit monopole structures with a minimum structure height of 75 feet, a maximum structure height of 170 feet, and an average structure height of 120 feet.

Harpers to Fentress Alternative Route 5 – Overhead

Harpers to Fentress Alternative Route 5 would require an overhead installation of the three 230 kV transmission circuits between the Harpers Switching Station site in Virginia Beach and Dominion Energy Virginia's existing Fentress Substation in Chesapeake. The route would measure approximately 20.2 miles in total length. After exiting the switching station, the route would head southwest for about 2.3 miles mostly within the SEPG corridor, crossing Dam Neck Road and London Bridge Road. The route would then head west/southwest for about 3.2 miles within the SEPG corridor, crossing Holland Road and Princess Anne Road and entering the Princess Anne Commons area of Virginia Beach. About 1.8 miles of this segment would be adjacent to Dominion Energy Virginia's existing transmission right-of-way for Lines #2118/147. In the area approximately between Dam Neck Road and Princess Anne Road, the route would pass between or near the Prince George Estates, Mayberry, Castleton, Pine Ridge, Holland Pines, and Woods of Piney Grove subdivisions.

From Princess Anne Commons, Harpers to Fentress Alternative Route 5 would head south for approximately 2.8 miles adjacent to Dominion Energy Virginia's existing right-of-way for Line #2085, crossing North Landing Road and Indian River Road and passing west of the Courthouse Estates and Courthouse Woods subdivisions. The route would then head southwest for 1.2 miles, crossing Upton's Lane and the North Landing River near the North Landing River Bridge, at which point the route would enter Chesapeake. The route would then head

south/southwest for 6.2 miles, crossing Mt. Pleasant Road (twice), Blackwater Road (thrice), Fentress Airfield Road (twice), and Land of Promise Road. Portions of this segment would parallel Fentress Airfield Road and Blackwater Road, and about 2.6 miles would parallel the south side of the Pocaty River. The route would then head west/northwest for 3.9 miles to Fentress Substation, crossing Long Ridge Road, Land of Promise Road, and the Centerville Turnpike.

Harpers to Fentress Alternative Route 5 would require 515 single circuit or double circuit monopole structures with a minimum structure height of 75 feet, a maximum structure height of 170 feet, and an average structure height of 116 feet.

Harpers to Fentress Alternative Hybrid Route – Underground/Overhead

The Harpers to Fentress Alternative Hybrid Route would utilize essentially the same alignment as Harpers to Fentress Proposed Route 1, but part of the route would be underground and the switching station (referred to as the Chicory Switching Station) would be built on an alternate site east of Princess Anne Road in Virginia Beach. The route would measure approximately 14.2 miles in total length. Beginning at Harpers Road, the route would use an underground configuration for the three 230 kV transmission circuits, heading southwest for about 2.3 miles, mostly within the SEPG corridor, crossing Dam Neck Road and London Bridge Road. The route would then head west/southwest for about 2.2 miles within the SEPG corridor to the Chicory Switching Station site near Princess Anne Road. About 1.8 miles of this segment of the route would be adjacent to Dominion Energy Virginia's existing transmission right-of-way for Lines #2118/147. In the area approximately between Dam Neck Road and Princess Anne Road, the route would pass between or near the Prince George Estates, Mayberry, Castleton, Pine Ridge, Holland Pines, and Woods of Piney Grove subdivisions.

The Harpers to Fentress Alternative Hybrid Route would exit the Chicory Switching Station in an overhead configuration and continue west/southwest for about 1.7 miles within the SEPG corridor to an intersection with Dominion Energy Virginia's existing transmission right-of-way for Lines #271/I-74. The route would then follow this existing right-of-way for about 6.1 miles to the south, entering Chesapeake just south of Indian River Farms Park. In Virginia Beach, this route segment would cross Salem Road, North Landing River, and Indian River Road, and pass through or between the Highland Meadows, Highland Acres, Dewberry Farm, Indian River Woods, and Indian River Farms subdivisions. In Chesapeake, the route segment would cross the Intracoastal Waterway canal, Mt. Pleasant Road, and Blue Ridge Road in Chesapeake. Existing lattice structures within the right-of-way for Lines #271/I-74 would be removed and replaced with new single circuit and double circuit monopole structures to carry Line #271 and the three circuits required for the project.

From a point just south of Blue Ridge Road, the Harpers to Fentress Alternative Hybrid Route would follow Dominion Energy Virginia's existing transmission right-of-way for Line #2240 for about 1.7 mile to Fentress Substation, crossing

Whittamore Road and the Centerville Turnpike and paralleling part of the boundary of the Battlefield Golf Club. Existing lattice structures within the right-of-way would be removed and replaced with new double circuit and single circuit monopole structures to carry Line #2240 and the three circuits required for the project.

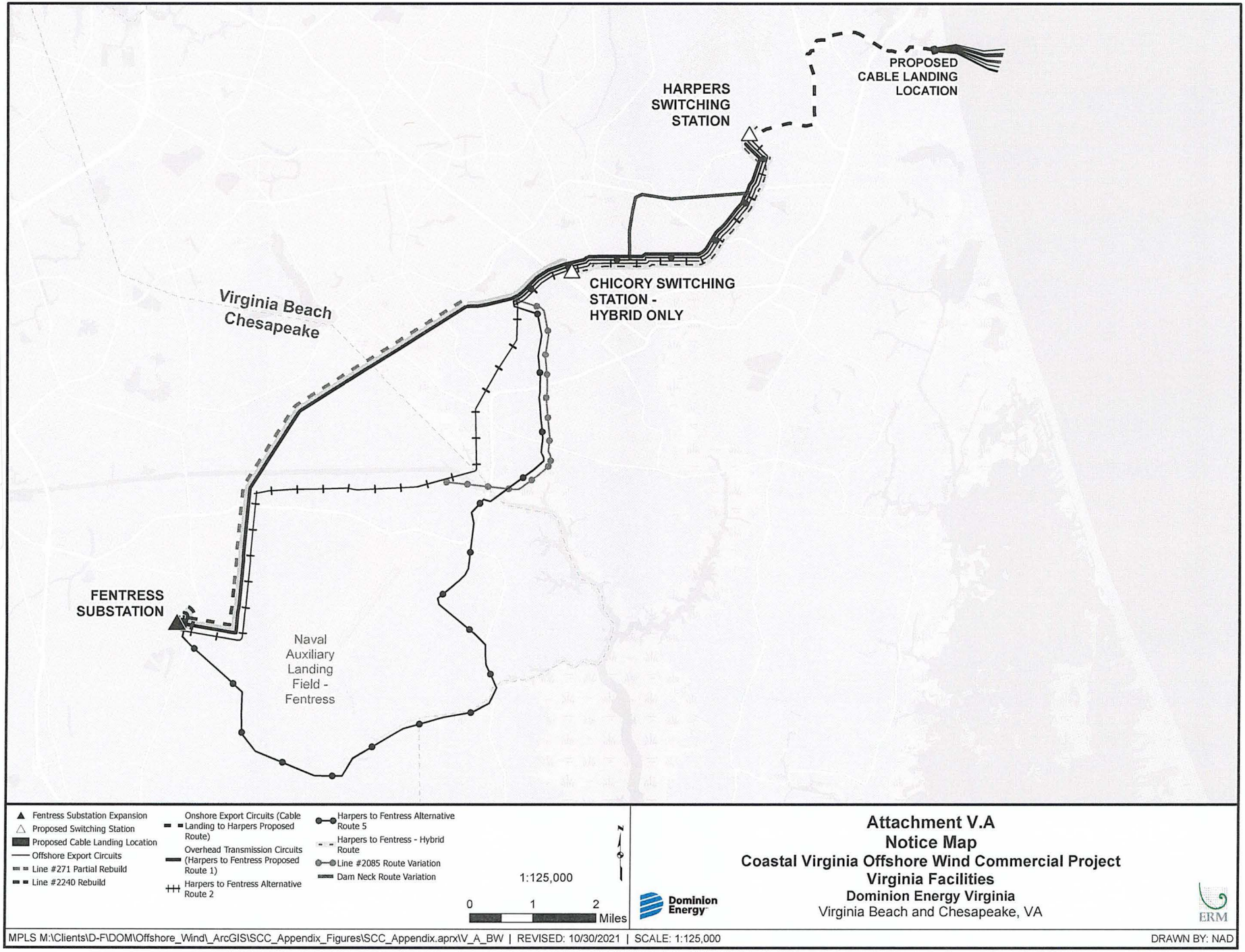
The overhead segment of the Harpers to Fentress Alternative Hybrid Route would require 243 single circuit or double circuit monopole structures with a minimum structure height of 75 feet, a maximum structure height of 170 feet, and an average structure height of 122 feet.

Dam Neck Route Variation – Overhead

The Dam Neck Route Variation is an overhead alternative to the common segment of Harpers to Fentress Proposed Route 1 and Harpers to Fentress Alternative Routes 2 and 5 approximately between Dam Neck Road and Holland Drive in Virginia Beach where Harpers to Fentress Proposed Route 1 and Harpers to Fentress Alternative Routes 2 and 5 would pass between the Prince George Estates, Mayberry, Castleton, and Pine Ridge subdivisions. The route variation would measure approximately 2.8 miles in total length. It would parallel the south side of Dam Neck Road for approximately 1.8 miles to the west, then head south for about 1.0 mile to Dominion Energy Virginia's existing transmission right-of-way for Lines #2118/147. The route would cross Harpers Road, London Bridge Road, and West Neck Creek. The route variation would require 75 single circuit monopole structures with a minimum structure height of 110 feet, a maximum structure height of 170 feet, and an average structure height of 124 feet.

Line #2085 Route Variation – Overhead

The Line #2085 Route Variation is an overhead alternative to Harpers to Fentress Alternative Route 2, measuring approximately 4.4 miles in total length. It would deviate from Harpers to Fentress Alternative Route 2 in the Princess Anne Commons area of Virginia Beach. From here, it would follow Dominion Energy Virginia's existing right-of-way for Line #2085 for about 2.8 miles to the south, crossing North Landing Road and Indian River Road and passing west of the Courthouse Estates and Courthouse Woods subdivisions. The route would then head southwest and west for approximately 1.7 miles, crossing Upton's Lane, North Landing River (where it would enter Chesapeake), North Landing Road, and the Intracoastal Waterway canal. The Line #2085 Route Variation would require 135 single circuit monopole structures (and H-frame structures at the canal crossing only) with a minimum structure height of 100 feet, a maximum structure height of 170 feet, and an average structure height of 113 feet.



Attachment V.A
Notice Map
Coastal Virginia Offshore Wind Commercial Project
Virginia Facilities
Dominion Energy Virginia
Virginia Beach and Chesapeake, VA

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V. NOTICE

B. List Applicant offices where members of the public may inspect the application. If applicable, provide a link to website(s) where the application may be found.

Response: A copy of the Application is available at the following locations:

Dominion Energy Virginia Beach office
4901 Princess Anne Road
Virginia Beach, Virginia 23462

Dominion Energy Chesapeake office
801 S. Battlefield Blvd.
Chesapeake, Virginia 23322

Additionally, copy of the Application will be made available electronically for public inspection at: www.coastalvawind.com.

V. NOTICE

C. List all federal, state, and local agencies and/or officials that may reasonably be expected to have an interest in the proposed construction and to whom the Applicant has furnished or will furnish a copy of the application.

Response:

Ms. Bettina Rayfield
Manager Environmental Impact Review and Long Range Priorities Program
Office of Environmental Impact Review
Department of Environmental Quality
PO Box 1105
Richmond, Virginia 23218

Ms. Rene Hypes
Virginia Department of Conservation and Recreation
Environmental Review Coordinator, Natural Heritage Program
600 East Main Street, Suite 1400
Richmond, Virginia 23219

Ms. Robbie Rhur
Planning Bureau
Department of Conservation and Recreation
600 East Main Street, 17th Floor
Richmond, Virginia 23219

Mr. Roger Kirchen
Review and Compliance Division
Department of Historic Resources
2801 Kensington Avenue
Richmond, Virginia 23221

Ms. Amy M. Ewing
Virginia Department of Wildlife Resources
P.O. Box 90778
Henrico, Virginia 23228

Mr. Keith Tignor
Endangered Plant and Insect Species Program
Virginia Department of Agriculture and Consumer Affairs
102 Governor Street
Richmond, Virginia 23219

Mr. Terry Lasher
Forestland Conservation Division
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville, Virginia 22903

Mr. Mark Eversole
Habitat Management Division
Virginia Marine Resources Commission
Building 96, 380 Fenwick Road
Fort Monroe, Virginia 23651

Mr. Troy Andersen
US Fish and Wildlife Service
Ecological Services Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061

Regulator of the Day
US Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510

Ms. Martha Little
Virginia Outdoors Foundation
600 East Main Street, Suite 402
Richmond, Virginia 23219

Mr. Mike Helvey
Obstruction Evaluation Group Manager
Federal Aviation Administration
FAA Eastern Regional Office
800 Independence Ave, SW
Room 400 East
Washington, D.C. 20591

Mr. Scott Denny
Airport Services Division
Virginia Department of Aviation
5702 Gulfstream Road
Richmond, Virginia 23250

Ms. Locke Ogens
The Nature Conservancy, State Director
652 Peter Jefferson Parkway, Suite 190
Charlottesville, Virginia 22911

Mr. Christopher Hall, P.E.
District Engineer, Virginia Department of Transportation
Hampton Roads District
7511 Burbage Drive
Suffolk, Virginia 23435

Mr. Patrick A. Duhaney
City of Virginia Beach City Manager
2401 Courthouse Dr.
Virginia Beach, Virginia 23456

Mr. Christopher M. Price
City of Chesapeake City Manager
306 Cedar Road – Sixth Floor
Chesapeake, Virginia 23322

Mr. Robert J. Tajan
Director, City of Virginia Beach Planning Department
2875 Sabre St., Suite 500
Virginia Beach, Virginia 23452

Mr. Phil D. Pullen, P.E.
City of Virginia Beach, Department of Public Works
Transportation Division Manager
484 Viking Drive, Suite 200
Virginia Beach, Virginia 23452

Mr. James McNamera
City of Chesapeake, Planning Department
Acting Planning Director
306 Cedar Road, Second Floor
Chesapeake, Virginia 23322

Mr. C. Earl Sorey, Jr., P.E.
Director, City of Chesapeake Public Works Department
306 Cedar Road, Third Floor
Chesapeake, Virginia 23322

V. NOTICE

D. If the application is for a transmission line with a voltage of 138 kV or greater, provide a statement and any associated correspondence indicating that prior to the filing of the application with the SCC the Applicant has notified the chief administrative officer of every locality in which it plans to undertake construction of the proposed line of its intention to file such an application, and that the Applicant gave the locality a reasonable opportunity for consultation about the proposed line (similar to the requirements of § 15.2-2202 of the Code for electric transmission lines of 150 kV or more).

Response: In accordance with Va. Code § 15.2-2202 E, letters dated September 28, 2021, were sent to Mr. Patrick A. Duhaney, City Manager of the City of Virginia Beach, and Mr. Christopher M. Price, City Manager of the City of Chesapeake, where the Virginia Facilities are located. The letters described the CVOW Project and offered the Cities an opportunity to comment on the Virginia Facilities. Copies of these letters are included as Attachment V.D.1.

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor, Glen Allen, Virginia 23060

September 28, 2021

Mr. Patrick A. Duhaney
City Manager, City of Virginia Beach
2401 Courthouse Dr.
Virginia Beach, Virginia 23456

Reference: Dominion Energy Virginia's Proposed CVOW Commercial Project, Cities of Virginia Beach and Chesapeake, Virginia
Notice Pursuant to Va. Code § 15.2-2202 E

Dear Mr. Duhaney,

Dominion Energy Virginia (the "Company") is proposing to build the Coastal Virginia Offshore Wind Commercial Project ("CVOW Project" or "CVOW"). The CVOW Project will begin 27 miles off the coast of Virginia Beach, adjacent to the Company's existing two turbines currently in operation, and extend east into the Atlantic an additional 15 miles. With a combined nameplate capacity of approximately 2.6 gigawatts, CVOW will serve as a critical resource for meeting Virginia's objective of carbon-free energy by 2045.

To reliably interconnect the offshore wind turbines with the electric transmission system and to maintain compliance with the North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company is proposing to construct certain transmission facilities located within the Commonwealth of Virginia ("Virginia Facilities"), including three, new 230 kV electric transmission lines. If approved, the new transmission lines will be located in the Cities of Virginia Beach and Chesapeake and will interconnect with the existing 500 kV Fentress Substation in the City of Chesapeake. The Virginia Facilities will also include expansion of the Fentress Substation and other related transmission facilities.

Following extensive study and public engagement, Dominion Energy Virginia has identified six transmission route options for consideration. The Virginia State Corporation Commission ("SCC") has regulatory jurisdiction over electric transmission facilities in Virginia. As such, Dominion Energy Virginia is preparing an application for a Certificate of Public Convenience and Necessity ("CPCN") for the Virginia Facilities from the SCC.

Pursuant to Va. Code § 15.2-2202, the Company is writing to notify the City of Virginia Beach of the proposed facilities in advance of the SCC filing. If the locality has any questions or comments, we ask that, within 30 days of receipt of this letter, to please reach out to the Company.

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor, Glen Allen, Virginia 23060

Enclosed is an overview map of the routes currently under review. If you would like to receive a GIS shapefile of the routes to assist in your review or if you have any questions, please do not hesitate to contact me at (804) 310-9658 or lane.e.carr@dominionenergy.com.

Dominion Energy Virginia appreciates your assistance with this review and looks forward to any additional information you may have to offer.

Regards,

Lane Carr
Siting and Permitting Specialist

Attachment: Project Overview Map

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor, Glen Allen, Virginia 23060

September 28, 2021

Mr. Christopher M. Price
City Manager, City of Chesapeake
306 Cedar Road – Sixth Floor
Chesapeake, Virginia 23322

Reference: Dominion Energy Virginia's Proposed CVOW Commercial Project, Cities of Virginia Beach and Chesapeake, Virginia
Notice Pursuant to Va. Code § 15.2-2202 E

Dear Mr. Price,

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Pursuant to Va. Code § 15.2-2202, the Company is writing to notify the City of Chesapeake of the proposed facilities in advance of the SCC filing. If the locality has any questions or comments, we ask that, within 30 days of receipt of this letter, to please reach out to the Company.

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor, Glen Allen, Virginia 23060

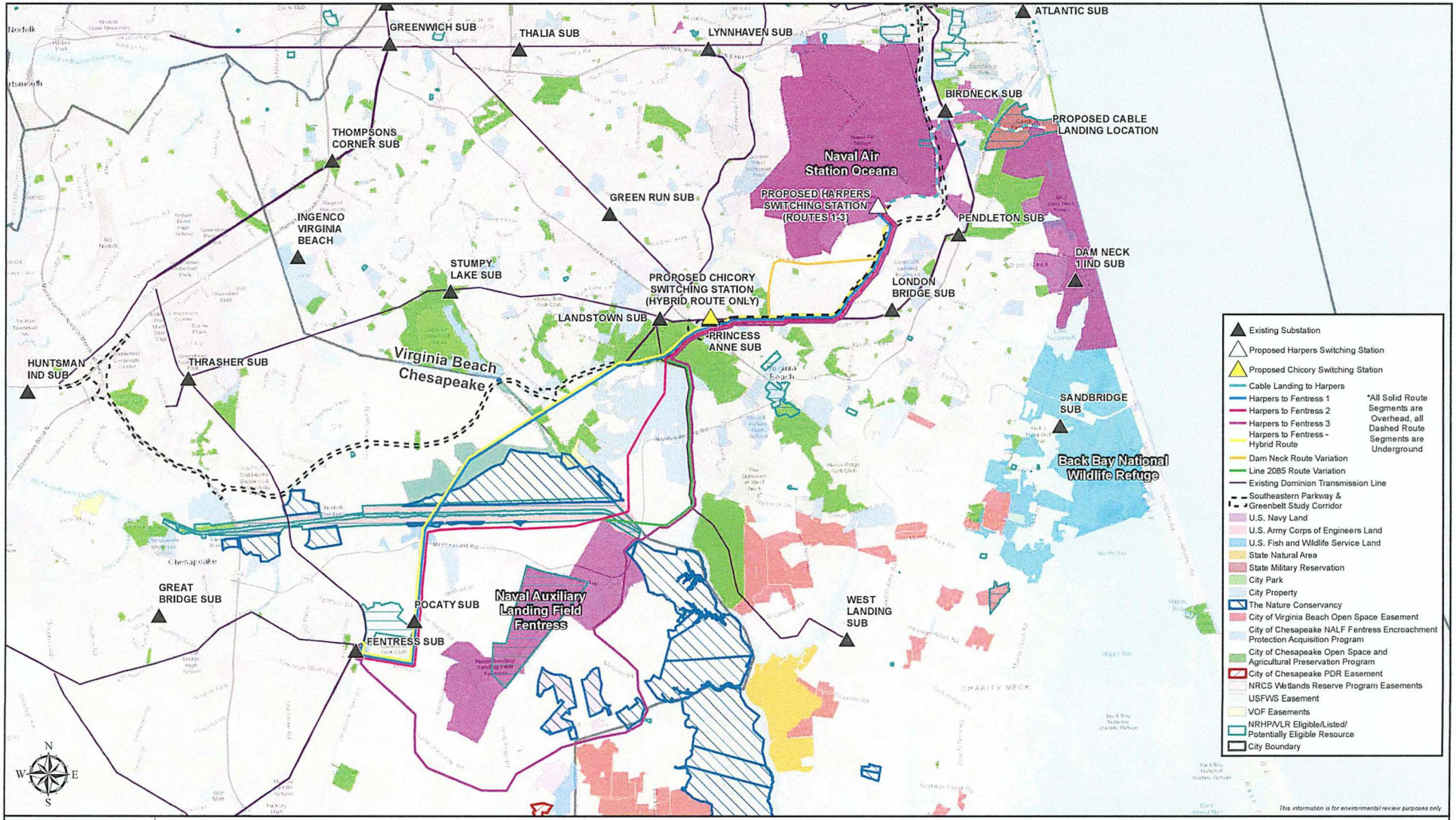
Enclosed is an overview map of the routes currently under review. If you would like to receive a GIS shapefile of the routes to assist in your review or if you have any questions, please do not hesitate to contact me at (804) 310-9658 or lane.e.carr@dominionenergy.com.

Dominion Energy Virginia appreciates your assistance with this review and looks forward to any additional information you may have to offer.

Regards,

Lane Carr
Siting and Permitting Specialist

Attachment: Project Overview Map



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Dominion Energy

Coastal Virginia Offshore Wind Commercial Project - Project Overview Map
Dominion Virginia Power
Virginia Beach and Chesapeake, VA
Current Transmission Line Routes

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