

# New York State Offshore Wind Maritime Technical Working Group

## Cabling Workshop: *Advancing Cable Routing Coordination*

March 2, 2023

Participant package for 2:15pm Breakouts on Key Topics

### **Topic #1 – Maritime Outreach & Coordination..... p.2**

- What if any changes are needed to improve coordination between the maritime sector and offshore wind developers?
  
- What types of outreach should be standard on all offshore wind projects?

### **Topic #2 – Information Needs & Technology..... p.10**

- What information or technologies might help us overcome challenges discussed today?
  
- What data gaps create challenges for maritime/offshore wind industries?
  
- What baseline studies are most important to plan an offshore wind project’s cable route?

### **Topic #3 - Policy & Procedures ..... p.14**

- What considerations should be prioritized for coordinated offshore wind transmission?
  
- Should there be any additions or changes to the Constraints (Tables 2-4 and 2-5) or Siting Principles (Section 4.1) identified in the Cable Assessment?

Name (optional): \_\_\_\_\_

**Topic #1 – Maritime Outreach & Coordination**

- What if any changes are needed to improve coordination between the maritime sector and offshore wind developers?
  
- What types of outreach should be standard on all offshore wind projects?

Optional materials that may be useful for this discussion:

*Sunrise Wind Article VII Certificate, Appendix J – Mariner Notification & Input Process*

## **APPENDIX J**

### **MARINER NOTIFICATION AND INPUT PROCESSES**

Sunrise Wind LLC (the Certificate Holder), consistent with the requirements of Condition 61, shall abide by the following notification and public input processes for each of the periods and for the activities delineated below.

I. Documents to be Provided to NYSDEC Licensed Fisherman, the NYSDPS, NYSDEC, NYSDOS, and NYSAGM:

The Certificate Holder agrees to provide documents and other reports to marine commercial fishing license holders (the NYSDEC-Licensed Fishermen), the NYSDEC, NYSDPS, NYSDOS, and NYSAGM consistent with the dates, triggering events, and in conformance with the requirements set forth below. Further the Certificate Holder agrees that the notices and documents provided, as set forth below, will identify and include as appropriate (1) the general dates of work; (2) general types of work (e.g., survey, cable, HDD construction, etc.); (3) the general vicinity of the work, with a National Oceanic Atmospheric Administration (NOAA) work zone chart with coordinates or its closest equivalent; (4) the vessel(s) conducting the work (which are subject to change); and (5) contact information of an employee or agent of the Certificate Holder who will be knowledgeable about the noticed work and able to timely contact the appropriate person(s) conducting the work.

<b><u>Project Period:</u></b>	<b><u>Document(s) to be Provided:</u></b>	<b><u>Recipients:</u></b>	<b><u>Timeframe of issuance:</u></b>	<b><u>Single Instance or Reoccurring Obligation:</u></b>	<b><u>Method of Transmission or Submittal</u></b>	<b><u>Other Requirements or Criteria:</u></b>
Within 24 hours of filing the EM&CP	1 copy of the EM&CP	NYSDEC Licensed Fishermen, NYSDEC, NYSDPS, NYSDOS, & NYSAGM	Within 24 hours of filing the EM&CP with the Secretary to the Commission	Single Instance	E-mail	
After the EM&CP has been filed.	Any notice of proposed changes to the EM&CP which have the potential to impact fishing resources or activity	NYSDEC Licensed Fishermen, NYSDEC, NYSDPS, NYSDOS, & NYSAGM	Upon any applicable proposed change to the EM&CP	Reoccurring	E-mail	(1) describe the original conditions and the requested change; (2) state that documents supporting the request are available for inspection at a specified electronic location; and (3) state that persons may comment by writing or calling (followed by written confirmation) to the Commission within 21 days of

						the notification date.
Prior to Commencement of Construction	NOI to Commence Work	NYSDEC Licensed Fishermen and other recipients required by Condition 65	No less than fourteen (14) days before the Commencement of Construction	Single Instance prior to commencement of any approved, phased EM&CP	E-mail and mail to NYSDEC Licensed Fisherman	Provision of the NOI to Commence Work will comply with the Requirements of Condition 65.
During Construction	Status reports indicating construction activities and locations for the following 14 days	NYSDEC Licensed Fishermen, NYSDEC, NYSDPS, NYSDOS, & NYSAGM	Weekly during construction.	Reoccurring	E-mail	Schedule will be disseminated via securite calls on VHF channel 16 at 6 am, 12 pm, and 6 pm to announce intentions for the next 12 hours
Prior and during to any in-water research studies	Status reports indicating study activities and locations for the following 14 days	NYSDEC Licensed Fishermen, NYSDEC, NYSDPS, NYSDOS, & NYSAGM	Weekly during in-water research studies.	Reoccurring	E-mail	Schedule will be disseminated via securite calls on VHF channel 16 at 6 am, 12 pm, and 6 pm to announce intentions for the next 12 hours  Provide coordinates for any equipment that will be left on seafloor with anticipated dates

						of deployment and removal
Prior to and during in-water maintenance activities	Notice of in-water maintenance of the SRWEC-NYS indicating anticipated activities and locations scheduled for the following 14 days	NYSDEC Licensed Fishermen, NYSDEC, NYSDPS, NYSDOS, & NYSAGM	14 days before any in-water maintenance activities and once per week thereafter	Reoccurring	E-mail	Schedule will be disseminated via securite calls on VHF channel 16 at 6 am, 12 pm, and 6 pm to announce intentions for the next 12 hours
During Construction	Notice of commencement of any seabed preparation, HDD and HDD exit pit installation and backfill, and cable installation activities, as well as notice of recommencement if activities suspended for more than 14 days.	NYSDEC Licensed Fishermen, NYSDEC, NYSDPS, NYSDOS, & NYSAGM	At least seven days prior to commencement of any seabed preparation, HDD and HDD exit pit installation and backfill, and cable installation activities and again if activities are suspended for more than 14 days.	Reoccurring	E-mail	Schedule will be disseminated via securite calls on VHF channel 16 at 6 am, 12 pm, and 6 pm to announce intentions for the next 12 hours
During Construction and Operations	Notice of cable protection measures	NYSDEC Licensed Fishermen,	Within 10 days of installation	Reoccurring	E-mail	In addition to the reoccurring cable protection notice,

		<p>NYSDEC, NYSDPS, NYSDOS, &amp; NYSAGM; and the public, mariners, and recreational fishermen.</p>	<p>of cable protection</p>		<p>which shall include location and protection type, the Applicant will distribute a comprehensive “Notice of Protection Measures” at the end of construction of the SRWEC-NYS that will include: (i) all cable protection measure locations (including protection type); (ii) any areas where the identified burial depth is less than target burial depth as detailed in the EM&amp;CP; and (iii) any other potential temporary or permanent obstructions caused and/or created by the Project by posting a notice on the Project website,</p>
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						which shall include an accessible graphic/geo-referenced repository for all such information.
	NOI for Decommissioning	NYSDEC Licensed Fishermen, NYSDEC, NYSDPS, NYSDOS, & NYSAGM		Single	E-mail to all Recipients and mail to the NYSDEC Licensed Fisherman	Provision of the NOI for Decommissioning will comply with the requirements of conditions 209-210.

II. Notice to Certificate Holder’s Project Website

The Certificate Holder agrees to post any and all of the notices described above to its Project Website in conformance with the timelines for issuance, as set forth above.

III. Notice to United States Coast Guard Notice to Mariners

The Certificate Holder agrees to post any and all of the notices described above to the United States Coast Guard (USCG) in conformance with the timelines for issuance and contemporaneous to the service of the above notifications for the USCG to post such notices.

IV. Prior Consultation with Local Mariners

At least 90 days prior to commencing any construction activities in New York State Waters in each construction season, the Certificate Holder will consult with local mariners (i.e., mariners homeported in the communities in the area surrounding the Project) and the executive director of the LICFA or their designee regarding an approximate schedule of activities in New York State Waters and existing uses of the SRWEC-NYS corridor as shown in Appendix B to the Joint Proposal. The Certificate Holder will make good



faith efforts to accommodate those existing uses, including avoiding peak fishing activity to the extent practicable without causing undue delay to the Project's schedule. The results of these good faith consultations will be summarized in a report prepared by Certificate Holder and filed with the Secretary to the Commission prior to the start of each construction season.

V. Requests for Contact Information of New York State Commercial Fishing License Holders:

To facilitate the transmission of notice of upcoming activities including but not limited to survey, study, construction, or other such work, the following outlines the process for soliciting the list of mailing and e-mail addresses associated with NYSDEC-Licensed Fishermen:

- i. Beginning one month prior to filing a copy of the EM&CP with the Secretary to the Commission, the Certificate Holder shall make an initial request to NYSDEC seeking the list of mailing and email addresses associated with the NYSDEC-Licensed Fishermen.
- ii. On the 1<sup>st</sup> of every month following the initial request, the Certificate Holder shall request an updated list from NYSDEC. The Certificate Holder shall continue to make the request on the 1<sup>st</sup> of every month until the Project is energized.
- iii. Once the Project has been energized, the Certificate Holder shall request an updated list from the NYSDEC as needed to carry out mariner communications for any post-construction in-water activities. Absent emergent circumstances (i.e., to protect health and safety of persons and property), the Certificate Holder shall make the request for the updated list from NYSDEC at least 14 days prior to any post-construction mariner communication, and the Certificate Holder agrees to utilize the updated list for any post-construction mariner communications.
- iv. If NYSDEC fails to provide such notification information within 7 business days of Certificate Holder's request, the last available contact list will be used for notifications and once a new contact list has been provided, that list will be used for notifications

The Certificate Holder acknowledges that the list of mailing and email addresses associated with New York State marine commercial fishing license holders requested from NYSDEC shall remain confidential and must only be used to provide notice to license holders as required by the Certificate Conditions and the processes delineated in this Appendix.

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**Topic #2 – Information Needs & Technology**

- What information or technologies might help us overcome challenges discussed today?
- What data gaps create challenges for maritime/offshore wind industries?
- What baseline studies are most important to plan an offshore wind project’s cable route?

Optional materials that may be useful for this discussion:

*NYS Public Service Commission Article VII, Application Required Exhibits and Recommended Appendices for Offshore Transmission Projects*

*Excerpt from BOEM Draft COP NOI Checklist, 2022, available at <https://www.boem.gov/renewable-energy/draft-boem-noi-checklist>*

## **NYS Public Service Commission Article VII, Application Required Exhibits and Recommended Appendices for Offshore Transmission Projects**

### **REQUIRED EXHIBITS**

- Exhibit 1 - General Information Regarding Application
- Exhibit 2 - Location of Facilities
- Exhibit 3 - Alternatives
- Exhibit 4 - Environmental Impact
- Exhibit 5 - Project Design Drawings
- Exhibit 6 - Economic Effects of the Proposed Facility
- Exhibit 7 - Local Ordinances
- Exhibit 8 - Other Pending Filings
- Exhibit 9 - Cost of Proposed Facility
- Exhibit E-1 - Description of Proposed Transmission Line
- Exhibit E-2 - Other Facilities
- Exhibit E-3 - Underground Construction
- Exhibit E-4 - Engineering Justification
- Exhibit E-5 - Effects on Communications
- Exhibit E-6 - Transportation

### **RECOMMENDED APPENDICES**

- Agency Outreach and Correspondence, including consultations for protected species and historic resources
- Public Involvement Plan
- Acoustics Report(s)
- Electric and Magnetic Field Assessment Report
- Geotechnical and Geophysical Data Reports
- Sediment Transport Analysis Report
- Wetland Delineation Report
- Benthic Resource Characterization Report
- Essential Fish Habitat Assessment
- Marine/Terrestrial Archaeological Resources Assessments
- Analysis of Visual Effects to Historic Properties
- Visual Impact Assessment
- Coastal Zone Management Consistency Statement
- Copies of Local Ordinances
- System Reliability Impact Study (Confidential)

Excerpt from Bureau of Ocean Energy Management's

**DRAFT Information Needed for Issuance of a Notice of Intent (NOI) Under the National Environmental Policy Act (NEPA) for a Construction and Operations Plan (COP), 2022**

Full text available at <https://www.boem.gov/renewable-energy/draft-boem-noi-checklist>

**a. The NOI Checklist and FAST-41**

**b. Project Description**

**c. Detailed Description of Potential Impacts<sup>1</sup>**

**d. Identification of Layout and Design Options Considered for the Proposed Action<sup>2</sup>**

**e. Description and Confirmation of Meaningful Coordination with Agencies<sup>3</sup>**

**f. Viewshed Modeling and Visual Resource Assessment<sup>4</sup>**

**g. Benthic Habitat Assessment<sup>5</sup>**

**h. Marine Site Investigation Report (MSIR)<sup>6</sup>**

**i. Subsea Cables<sup>7</sup>**

Information included in the COP to describe the [Project Design Envelope] PDE for the subsea cable routings should include:

- Maximum and minimum number of export cables;
- Maximum length of cable;
- Easement width estimates and location if known;
- Minimum and maximum cable burial depths;
- Minimum amount of the cable routings that will meet the minimum burial depth;
- Estimate of the stable seabed depth in relation to the surveyed seabed; and
- Maximum amount of cable protection needed, and information on where cable protection may be necessary and how the determination was made.

Additionally, the COP should include an analysis of the risks that project subsea cables may present to other maritime users in the vicinity (e.g., shipping, fishing, dredging, and sand borrow activities). That analysis should include information on the vertical and horizontal extents of subsea cable risks and how the submarine cable PDE takes into consideration such risks over the project lifetime. Finally, the COP should include a description of all subsea cable installation methods and equipment types; seabed preparation activities; and potential mitigation methodologies for unexploded ordinance, where applicable.

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<sup>1</sup> 30 CFR § 585.627(a).

<sup>2</sup> 30 CFR §§ 585.621; 585.626(b)(15).

<sup>3</sup> 30 CFR § 585.626(b)(17).

<sup>4</sup> 30 CFR § 585.627(a)(7).

<sup>5</sup> 30 CFR § 585.626(a)(3) and 585.627(a)(5).

<sup>6</sup> 30 CFR §§ 585.626(a); 585.627(a)(1).

<sup>7</sup> 30 CFR § 585.626(b)(7).

**j. Navigation Safety Risk Assessment (NSRA)<sup>8</sup>**

The COP should include an NSRA that contains all the information required under the U.S. Coast Guard’s Navigation and Vessel Inspection Circular (NVIC) 01-19 for developing a navigation safety risk assessment of an offshore wind energy project.<sup>9</sup> Examples of what the NVIC requires include a comprehensive traffic survey, an assessment of navigation within the project area and within close proximity to a structure, effects of meteorological and oceanographic conditions on navigation risks within vicinity of the project, risk of incidents (collision, allision, and grounding), and impacts to vessel-based navigation aids. The document should be clear and understandable by the public. The data and analysis should be of sufficient quality for the public to adequately provide comment to BOEM during the scoping process.

**l. List of Solid and Chemical Waste to be Generated and Chemical Products to be Used (if Stored Volume Will Exceed EPA Reportable Quantities)<sup>10</sup>**

**m. National Historic Preservation Act Information and Reports<sup>11</sup>**

**n. Offshore Wind Project Pile Driving Sound Exposure Modeling and Sound Field Measurement<sup>12</sup>**

**o. Endangered Species Act (ESA) and NEPA Information<sup>13</sup>**

**p. Marine Mammal Protection Act and NEPA Information<sup>14</sup>**

**q. Supplemental Filing Schedule**

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<sup>8</sup> 30 CFR § 627(a)(8).

<sup>9</sup> Available at <https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/NVIC/2019/NVIC%2001-19-COMDTPUB-P16700-4-dtd-01-Aug-2019-Signed.pdf?ver=2019-08-08-160540-483>

<sup>10</sup> 30 CFR § 626(b)(9),(10)

<sup>11</sup> 30 CFR §§ 626(a)(5); 627(a)(6). *See also Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585* at <https://www.boem.gov/sites/default/files/documents/aboutboem/Archaeology%20and%20Historic%20Property%20Guidelines.pdf>

<sup>12</sup> 30 CFR §§ 626(b)(15) and 627(a)(3)-(4).

<sup>13</sup> 30 CFR § 627(a)(3)-(4)

<sup>14</sup> See e.g., 50 CFR § 216.31, et seq. *See also* NOAA’s Incidental Take website at: <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>

*Not for Distribution*

### **Topic #3 - Policy & Procedures**

- What considerations should be prioritized for coordinated offshore wind transmission?
- Should there be any additions or changes to the Constraints (Tables 2-4 and 2-5) or Siting Principles (Section 4.1) identified in the Cable Assessment?

Optional materials that may be useful for this discussion:

*NYSERDA Offshore Wind Cable Corridor Constraints Assessment, 2023  
DRAFT - IN REVIEW*

*Constraints Tables 2-4 and 2-5*

*Section 4.1*

**Table 2-4A. Summary of Constraints Ranking for the South Shore Approach Area**

	S-1	S-2	S-3	S-4	S-5
Resource	Smith Point	Robert Moses	Jones Beach	Long Beach	Rockaway
Geology & hydrology	L	L	L	L	L
Biological resources & habitats	L	L	L	L	L
Waterbody dimensions	L	L	L	L	L
Recreational & commercial fishing	H	M	H	H	H
Vessel traffic	L	L	L	L	L
Navigation areas	L	L	L	L	L
Other recreation	L	M	M	L	L
Borrow areas & ocean disposal	L	L	L	L	L
Archaeology & cultural	L	L	L	L	L
Linear utilities	M	L	L	H	L
Tunnels & bridges	L	L	L	L	L
Waterfront infrastructure	L	L	L	M	M
Sediment contamination & UXOs	L	L	L	L	M

**L** Low Constraints

**M** Medium Constraints

**H** High Constraints

DRAFT

**Table 2-4B. Summary of Ranking of Constraints for the Long Island Sound Approach Area**

	L-1	L-2	L-2a	L-2b	L-2c	L-3	L-4	L-5	L-6	L-7	L-8	L-9
	Block Island Sound	Harbor Hill Moraine	Valiant Rock to Little Gull Isl.	Great Gull Isl. to Plum Isl.	Eastern Plum Isl. Crossing	Eastern and Central LIS	Western LIS	Westernmost LIS	East River	Wildwood to Port Jefferson	Smithtown	Oyster Bay to Hempstead Harbor
Resource												
Geology & hydrology	L	H	H	H	H	M	L	M	H	L	L	M
Biological resources & habitats	M	H	H	H	H	H	H	L	L	M	H	H
Waterbody dimensions	L	L	L	L	M	L	L	M	H	L	L	M
Recreational & commercial fishing	H	M	M	L	L	H	M	L	L	M	M	M
Vessel traffic	L	L	M	L	L	L	L	L	L	L	L	L
Navigation areas	L	L	L	L	L	L	M	M	H	L	M	L
Other recreation	L	M	M	L	M	L	L	L	L	L	L	L
Borrow areas & ocean disposal	L	L	L	L		L	L	L	L	L	L	L
Archaeology & cultural	L	M	L	L	M	M	M	H	M	L	M	M
Linear utilities	L	M	M	M	M	M	M	H	H	L	L	L
Tunnels & bridges	L	L	L	L	L	L	L	L	L	L	L	L
Waterfront infrastructure	L	L	L	L	L	L	L	L	M	L	L	L
Sediment contamination & UXOs	M	L	L	L	M	L	L	M	M	L	L	M

**L** Low Constraints

**M** Medium Constraints

**H** High Constraints

DRAFT



**Table 2-4C. Summary of Constraints Ranking for the New York Harbor Approach Area**

	H-1	H-2	H-2a	H-2b	H-3	H-3a	H-3b	H-3c	H-4	H-5	H-6	H-7	H-8
Resource	Lower NY Bay/Atlantic	The Narrows	The Narrows East	The Narrows West	Upper NY Bay	Upper NY Bay Brooklyn	Upper NY Bay The Flats	Upper NY Bay Staten Island	Lower Hudson	East River	Raritan Bay	Arthur Kill/Kill Van Kull	Middle Hudson
Geology & hydrology	L	M	M	M	L	L	M	L	L	H	M	H	L
Biological resources & habitats	M	L	L	L	L	L	L	L	H	L	H	L	H
Waterbody dimensions	L	M	H	H	M	H	H	H	H	H	M	H	H
Recreational & commercial fishing	M	L	L	L	L	L	L	L	L	L	H	L	L
Vessel traffic	L	M	M	M	M	H	M	M	H	H	L	L	L
Navigation areas	L	H	M	M	H	H	H	H	M	H	M	H	L
Other recreation	L	L	L	L	L	L	L	L	L	L	M	L	L
Borrow areas & ocean disposal	M	L	L	L	L	L	L	L	L	L	L	L	L
Archaeology & cultural	L	L	L	L	L	M	L	L	M	M	L	M	L
Linear utilities	M	M	M	H	H	H	M	M	M	M	L	M	L
Tunnels & bridges	L	M	M	M	M	M	M	L	M	H	L	M	M
Waterfront infrastructure	L	M	M	L	H	H	L	H	H	H	M	M	H
Sediment contamination & UXOs	M	M	L	L	M	L	L	L	M	L	M	M	M

L Low Constraints  
M Medium Constraints  
H High Constraints

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**Table 2-5A. Summary of Constraints Ranking for the Landfall and Overland Area (South Shore Approach Area)**

	ON-8	ON-9	ON-10	ON-11	ON-12	ON-13	ON-14	ON-15	ON-16	ON-17	ON-18
Resource	Rockaway	Long Beach 1	Long Beach 2	Long Beach 3	Jones Beach 1	Jones Beach 2	Jones Beach 3	Robert Moses	Smith Point 1	Smith Point 2	Smith Point 3
Topography	L	M	M	L	L	M	L	L	L	M	M
Surface waters	L	L	L	L	L	L	L	L	L	L	L
Wetlands	L	L	L	M	L	L	L	L	L	L	L
Critical species & sensitive habitats	L	M	M	M	H	M	M	M	M	M	M
Terrestrial biological resources	L	L	L	L	H	M	M	M	L	L	H
Land use	M	M	M	L	L	L	L	L	L	M	L
EJ & disadvantaged communities	H	H	M	H	M	M	L	M	M	M	H
Cultural resources	L	L	L	L	L	L	L	L	L	L	L
Other recreation	L	L	L	L	H	H	H	M	L	L	L
Linear utilities/outfalls	L	L	L	L	L	L	L	L	L	L	L
Transportation	M	M	H	H	H	H	H	H	H	H	M
Areas of contamination	L	L	L	L	L	L	L	L	L	L	M
Shoreline protection	M	M	M	M	M	L	L	L	L	L	L

L Low Constraints  
M Medium Constraints  
H High Constraints

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**Table 2-5B. Summary of Constraints Ranking for the Landfall and Overland Area (Long Island Sound Approach Area)**

	ON-19	ON-20	ON-21	ON-22	ON-23	ON-24	ON-25
Resource	Shore Road	Hempstead Harbor	Bayville	Spring Harbor	Northport 1	Northport 2	Shoreham
Topography	M	H	M	M	M	M	M
Surface waters	L	L	L	L	L	L	L
Wetlands	L	L	L	L	L	L	L
Critical species & sensitive habitats	L	L	L	L	L	L	L
Terrestrial biological resources	L	L	L	L	L	L	L
Land use	M	L	M	M	M	M	L
EJ & disadvantaged communities	H	L	L	L	L	L	L
Cultural resources	L	L	L	L	L	L	L
Other recreation	L	L	L	L	L	L	L
Linear utilities/outfalls	L	L	L	L	L	L	L
Transportation	H	L	L	L	L	M	M
Areas of contamination	L	M	L	L	L	L	L
Shoreline protection	M	L	L	L	M	L	L

L Low Constraints  
M Medium Constraints  
H High Constraints

**Table 2-5C. Summary of Constraints Ranking for the Landfall and Overland Area (New York Harbor Approach Area)**

	ON-1	ON-2	ON-3	ON-4	ON-5	ON-6	ON-7
Resource	Freshkills	Goethals	Riverside	Academy	East 149th St.	Astoria and Rainey	Lower NY Bay
Topography	M	M	M	M	M	L	M
Surface waters	L	L	L	L	L	L	L
Wetlands	L	M	L	L	L	L	L
Critical species & sensitive habitats	L	M	L	L	L	L	L
Terrestrial biological resources	L	L	L	L	L	L	L
Land use	M	M	M	M	L	M	M
EJ & disadvantaged communities	M	H	H	H	H	H	H
Cultural resources	L	L	L	L	L	L	M
Other recreation	L	L	L	L	L	L	L
Linear utilities/outfalls	L	L	M	L	L	L	L
Transportation	L	L	L	L	L	L	H
Areas of contamination	L	L	L	L	L	M	L
Shoreline protection	L	L	M	M	L	M	M

L Low Constraints  
M Medium Constraints  
H High Constraints

*Not for Distribution*

- 4.1 Siting of cables should follow principles that support installation of multiple cables to minimize use of space and impacts to environmental, cultural, and social resources common to all approach areas to connect to the grid.

The combination of environmental, cultural, and social resources requires an organized approach to optimize the routing of transmission cables in New York State waters to meet the 9 GW of OSW mandated by the Climate Act, as well as consideration for potential future OSW goals. A thoughtful approach to siting that addresses energy goals and environmental, cultural, and social considerations will reduce the overall direct, indirect, and cumulative impacts of OSW cables. The process of evaluating constraints and analyzing impacts in Section 3 identified many standard industry practices in the U.S. and in Europe's OSW industry, as well as CWG experience that comprises principles for siting OSW cables.

The principles to optimize routing of multiple OSW cables in New York waters include:

1. Avoid sensitive resources to the maximum extent practicable, including, but not limited to, hard bottom habitat, cold water corals, submerged aquatic vegetation, emergent aquatic vegetation/marshlands, CEHAs, EMF-sensitive species aggregation areas and migration routes, clam beds, historic areas, T&E species habitat, and areas of potentially significant archaeological resources.
2. Limit footprint of combined linear infrastructure to minimize resource fragmentation in zones without space limitations.
3. Apply parallel routing with existing linear infrastructure (power and telecom cables, pipelines).
4. Bundle cables to minimize number of routes.
5. Limit crossings of other infrastructure and cross at right angles.
6. Avoid anchorage areas and navigation channels.
7. Minimize in-water transmission cable length to the extent that other environmental and anthropogenic resources and uses are not impacted disproportionately.

The principles to optimize routing of multiple OSW cables at landfalls and overland include:

1. Where possible, installation at landfall should be one HDD per bundled HVDC cable.
2. Use public ROWs, transmission corridors, transportation corridors, or railroad corridors that offer a continuous, more direct route.
3. Avoid residential neighborhoods.
4. Minimize crossings of active infrastructure and when crossings are necessary, use specialized crossing methods, including trenchless methods like HDD and jack-and-bore, at bridge crossings over water, other roadways, or railroads; existing utility crossings; and intersections with a major arterial roadway.
5. Minimize conflicts with environmental justice areas, disadvantaged communities, and underserved communities.

As the OSW industry develops and matures, these siting principles will evolve to reflect the lessons learned, and more siting principles may be appropriate, or revisions to the recommendation above may occur. As future cables are added, siting will shift to areas with more constraints and site-specific challenges. As discussed below, innovation and advances in technology will be required beyond prior projects to address site-specific and unique constraints.