New York City PPTN Information Request

Responses to Question #13 (Q13) of the Attachment B of the Public Policy Transmission Planning Process Manual

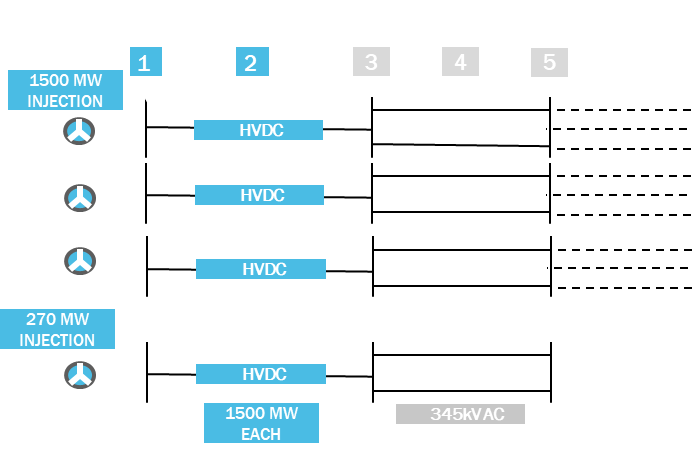
April 2, 2024

**Information below must be provided as a separate appendix to Attachment B in response to question 13 of Attachment B.**

**Do not include Confidential Information in this information request.**

Project Facility Summary Sheet

New York City Offshore Wind PPTN Illustrative Diagram



|  |  |
| --- | --- |
| 1 | Offshore wind interconnection point(s) |
| 2 | Offshore transmission (*i.e.*, submarine cables) |
| 3 | Onshore station (*e.g.*, onshore converter substations) |
| 4 | Onshore transmission path(s) (*e.g.*, terrestrial cables) |
| 5 | Necessary improvements to and/or expansion of the existing onshore transmission system/proposed substation/existing substation |

Project Facility Summary Sheet

**Information provided below must be consistent with the information provided in Attachment C under Project Descriptions and Location and Milestone Schedule**

|  | **COMPONENT** | **DESCRIPTION** | **IN-SERVICE DATE** |
| --- | --- | --- | --- |
| Offshore POI-Onshore Station-Onshore POI #X | Offshore Interconnection Point (Component 1) | Approximate location (e.g., latitude and longitude) of offshore interconnection point |  |
| Proposed connection to onshore collector/converter station system, configuration (e.g., symmetrical monopole, bipole with metallic return, AC cable etc.), nominal voltage, capacity |  |
| AC kV (from OSW Generator), HVDC kV, capacity |  |
| Onshore Collector/Converter Station  (Component 3) | Location of onshore converter station |  |
| Proposed AC connection(s) to component 5, nominal voltage |  |
| Onshore POI(s) (Component 5 - Existing Zone J POI) | Substation(s) name |  |
| Onshore AC connection (Component 5 - new Zone J AC substation) | Location of proposed new substation |  |
| POI(s) (connection to the existing transmission system), nominal voltage |  |
|  | | | |
|  | Additional Proposed Changes (Component 5 -necessary improvements to and/or expansion of the existing onshore transmission system) | List of additional proposed onshore facilities, nominal voltage |  |
|  | | | |
|  | Proposed offshore wind generation injection by | January 1, 2033 - \_\_\_\_\_ MW |  |
| January 1, 2036, if applicable - \_\_\_\_\_ MW |  |
| Project In-Service Date - \_\_\_\_\_\_ MW |  |

Project Facility Summary Sheet - Sample

|  | **COMPONENT** | **DESCRIPTION** |  | **IN-SERVICE DATE** |
| --- | --- | --- | --- | --- |
| Offshore POI-Onshore Station-Onshore POI #1 | Offshore Interconnection Point# X (Component 1) | Approximate physical location (e.g., latitude and longitude) of offshore interconnection point | Coordinates | **XX-20XX** |
| Proposed connection to onshore collector/converter station system, configuration (e.g., symmetrical monopole, bipole with metallic return, AC cable etc.), nominal voltage, capacity | 320 kV symmetrical monopole | **XX-20XX** |
| AC kV (from OSW Generator), HVDC kV, capacity | 230 kV AC connection  320 kV HVDC 1,200 MW | **XX-20XX** |
| Onshore Collector/Converter Station #X (Component 3) | Location of onshore converter station | Location | **XX-20XX** |
| Proposed AC connection(s) to component 5, nominal voltage | 1-345 kV line to existing S#1  1-345 kV line to existing S#2 | **XX-20XX** |
| Indicate status of converter station site(s) (e.g. brownfield status) |  | **XX-20XX** |
| Onshore POI(s) (Component 5 - Existing Zone J POI) | Substation name | Existing S#1 345 kV Existing S#2 345 kV | **XX-20XX** |
|  | | | | |
| Offshore POI-Onshore Station-Onshore POI #2 | Offshore Interconnection Point# X (Component 1) | Approximate physical location (e.g., latitude and longitude) of offshore interconnection point | Coordinates | **XX-20XX** |
| Proposed connection to onshore collector/converter station system, configuration (e.g., symmetrical monopole, bipole with metallic return, etc.), nominal voltage, capacity | 320 kV symmetrical monopole | **XX-20XX** |
| AC kV (from OSW Generator), HVDC kV, capacity | 230 kV AC connection  320 kV HVDC 1,200 MW | **XX-20XX** |
| Onshore Collector/Converter Station #X (Component 3) | Location of onshore converter station | Location | **XX-20XX** |
| Proposed AC connection(s) to component 5, nominal voltage | 2-345 kV lines to a proposed S#4 substation | **XX-20XX** |
| Onshore AC connection (Component 5 - new Zone J AC substation) | Location of proposed new substation | Location | **XX-20XX** |
| POI(s) (connection to the existing transmission system), nominal voltage | 2-345 kV lines to existing S#5 345 kV | **XX-20XX** |
|  | | | | |
|  | Additional Proposed Changes (Component 5 -necessary improvements to and/or expansion of the existing onshore transmission system) | List of additional proposed onshore facilities | Proposed line from S#9-S#10 | **XX-20XX** |
| Proposed line from S#9-S#11 | **XX-20XX** |
| Proposed line from S#9-S#12 | **XX-20XX** |
|  | | | | |
|  | Proposed offshore wind generation injection by | January 1, 2033 - \_\_\_\_\_ MW |  | - |
| January 1, 2036, if applicable - \_\_\_\_\_ MW |  | - |
| Project In-Service Date - \_\_\_\_\_\_ MW |  | - |

**Facility Characterization Summary**

**Information provided below must be consistent with the information provided in Attachment B under the Cost Estimate section and Attachment C under the Project Descriptions and Location section.**

**Add facility characterizations (*i.e.*, NEW, Public Polic Transmission Upgrade, or potential Network Upgrade Facilities [“NUF”]) for each proposed facility identified in the submittal.**

| **ID** | **SUB ID** | **SUBSTATION FACILITY** | **DEVELOPER’S FACILITY CHARACTERIZATION (Public Policy Transmission Upgrade, NEW, Potential NUF)** |
| --- | --- | --- | --- |
| S# | **Existing \_\_ kV Substation (TO Name)** | |  |
| B1 | Breaker and a half GIS installation |  |
| B2 | Ring bus GIS installation |  |
| B3 | Double Ring Bus GIS installation |  |
| B4 | Breaker and a half AIS installation |  |
| B5 | Ring bus AIS installation |  |
| B6 | Double Ring Bus AIS installation |  |
| B7 | Breaker installation |  |
| B8 | Additional bay(s) installation |  |
| P1 | PAR(s) installation on terminal of existing line(s) |  |
| P2 | PAR(s) installation on terminal of proposed line(s) |  |
| R | Relay work |  |
| SHR1 | Shunt reactor(s) installation on proposed line |  |
| SHR2 | Shunt reactor(s) installation on existing line |  |
| SR | Series reactor(s) installation on existing line(s) |  |
| T | Transformer(s) installation |  |
| SHC | Shunt capacitors(s) installation |  |
| H | HVDC station(s) |  |
|  | Other Equipment, as applicable |  |
| S# | **Proposed \_\_kV Substation (TO Name)** | |  |
| B1 | Breaker and a half GIS installation |  |
| B2 | Ring bus GIS installation |  |
| B3 | Double Ring Bus GIS installation |  |
| B4 | Breaker and a half AIS installation |  |
| B5 | Ring bus AIS installation |  |
| B6 | Double Ring Bus AIS installation |  |
| B7 | Breaker installation |  |
| B8 | Additional bay(s) installation |  |
| P1 | PAR(s) installation on terminal of existing line(s) |  |
| P2 | PAR(s) installation on terminal of proposed line(s) |  |
| R | Relay work |  |
| SHR1 | Shunt reactor(s) installation on proposed line |  |
| SHR2 | Shunt reactor(s) installation on existing line |  |
| SR | Series reactor(s) installation on existing line(s) |  |
| T | Transformer(s) installation |  |
| SHC | Shunt capacitor(s) installation |  |
| H | HVDC station(s) |  |
|  | Other Equipment, as applicable |  |

|  |  |  |
| --- | --- | --- |
| **ID** | **TRANSMISSION FACILITY** | **DEVELOPER’S FACILITY CHARACTERIZATION (Public Policy Transmission Upgrade, NEW, Potential NUF)** |
| L# | Substation Name (proposed) - Substation Name \_\_ kV line(s) |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
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|  |  |  |

**Project Modeling Files**

**Information provided below must be consistent with the information provided in Attachment C under “Project Descriptions and Location” and the results included in Attachment C.8.**

**Provide project model files for the following:**

1. **For injection of 4,770 MW of incremental offshore wind generation by January 1, 2033:**
2. Project facilities that will be in service by January 1, 2033 to inject 4,770 MW of incremental offshore wind generation,
3. Generator model(s) to inject 4,770 MW of incremental offshore wind generation at each proposed offshore POI(s) by January 1, 2033,
4. Associated contingency files, and
5. Table documenting acceptable adjustments to bring back underground cable circuit loading below LTE rating if using the NYSRC reliability rules criteria allowing underground cable circuit to be loaded up to its STE rating post contingency.
6. **For injection of incremental offshore wind generation higher than 4,770 MW:**
7. Additional project facilities that will be in service after January 1, 2033 to inject incremental offshore wind generation higher than 4,770 MW, if applicable (do not include facilities identified in File 1A),
8. Generator model(s) to inject incremental offshore wind generation in excess of the 4,770 MW at each proposed POI(s), if applicable,
9. Associated contingency files, and
10. Table documenting acceptable adjustments to bring back underground cable circuit loading below LTE rating if using the NYSRC reliability rules criteria allowing underground cable circuit to be loaded up to its STE rating post contingency.

**Project Modeling Files - Project Facilities Modeling Data Format**

1. **Bus Numbering**

**Use the following range when assigning bus numbers in modeling information for facilities connecting into Zone J:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **From** | **To** | **Area** | **Zone\*** | **Owner** |
| **700409** | **700458** | **10** | **159 (CONED)** **170 (NYPA)** | **999** |

**\* Use Zone 170 (NYPA) if connecting into Astoria Annex 345 kV substation**

1. **Project Facilities**

/Please ensure every line (empty lines, comments, etc.) is commented so that PSS/E does not throw "invalid argument" / "error"

/Please add comments after command line to identify its purpose

/This is a sample file format to add project facilities

/Developers should submit 2 files, as applicable:

/File #1A. File to add transmission facilities proposed to be in service by Jan 1, 2033, to accommodate 4770 MW of OSW

/File #2A. File to add transmission facilities proposed to be in service after Jan 1, 2033, to accommodate OSW higher than 4770MW, /if applicable, in addition to facilities added by File#1A. Do not include facilities identified in File 1A.

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*NEW BUSES\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

BAT\_BUS\_DATA\_3 /Add 345kV bus

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*NEW AC LINES\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

BRANCH\_DATA\_3 /Add 345kV line S#1-S#2

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*NEW HVDC LINES MODEL\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*NEW HVDC LINES GEN PAIR MODEL\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*NEW 2W/3W Transformers\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

BAT\_TWO\_WINDING\_DATA\_5 /Add PAR on line from S#1-S#2

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*SHUNTS\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ADD SERIES REACTORS, IF ANY \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*OUT OF SERVICE\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

**Project Modeling Files – Generator Modeling Data Format**

1. **Future offshore wind generator model**

/Please ensure every line (empty lines, comments, etc.) is commented so that PSS/E does not throw unnecessary "invalid argument" / /"error"

/ Please add comments after command line to identify its purpose

/ This is a sample file format to add future OSW generation at the Offshore POI(s)

/ Developers should submit 2 files:

/File #1B. File to add 4770 MW of future OSW at the offshore POI(s)

/ File #2B. File to add future OSW in addition to the 4770MW added by File#1B, if applicable.

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*FUTURE OSW GENERATION\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Network Adjustments \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

/System adjustments (e.g. generation to be dispatched down, PAR schedule changes) to accommodate proposed 4,770 MW of /offshore wind generation under applicable reliability standards

/For all generation changes, area swing bus should be within its MW limits

/Include changes to intra-area interchange

**Project Modeling Files – Contingency File Format**

**Developers must submit separate contingency files associated with facilities that will be in service before January 1, 2033 to accommodate 4,770 MW of incremental offshore wind generation listing the following:**

**1.C.1 - new contingencies (contingency definitions associated with new proposed facilities)**

**1.C.2 - modified contingencies (contingency definitions included in the existing NYISO CON deck that need to be modified to accommodate the project)**

**1.C.3 - retired contingencies (contingency definitions included in the existing NYISO CON deck that need to be removed/retired, but not modified, to accommodate the project)**

**Provide the following table (please note that this is a sample file format):**

| **PROJECT**  **FILE**  **NAME** | **SINGLE** | | **MULTIPLE** | | **RETIRED CON** | **CON FILE NAME** | **N-1 SINGLES** | **N-1 MULTIPLES** | **N-1-1 LEVEL 1** | **N-1-1 LEVEL 2 SINGLES** | **N-1-1 LEVEL 2 MULTIPLES** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **NEW** | **MODIFIED** | **NEW** | **MODIFIED** |
| Project\_Singles New | Con 1 | - | - | - | - | - | ü | - | ü | ü | - |
| Con 2 | - | - | - | - | - | ü | - | ü | ü | - |
| Con 3 | - | - | - | - | - | ü | - | ü | ü | - |
| Project\_Singles Modified | - | Con 4 | - | - | - | NYISO contingency file name in which the original contingency can be found | ü | - | ü | ü | - |
| - | Con 5 | - | - | - | ü | - | ü | ü | - |
| - | Con 6 | - | - | - | ü | - | - | - | - |
| Project\_Multiple New | - | - | Con 7 | - | - | - | - | ü | - | - | ü |
| Project\_Multiple Modified | - | - | - | Con 8 | - | NYISO contingency file name in which the original contingency can be found | - | ü | ü | - | ü |
| - | - | - | Con 9 | - | - | ü | ü | - | ü |
| Project\_Retired | - | - | - | - | Con 10 | NYISO contingency file name in which the contingency can be found | - | - | - | - | - |
| - | - | - | - | Con 11 | - | - | - | - | - |

**Developers must submit separate contingency files to accommodate the incremental offshore wind generation in excess of 4,770 MW, if applicable, listing the following:**

**2.C.1 - new contingencies (contingency definitions associated with new proposed facilities)**

**2.C.2 - modified contingencies (contingency definitions included in the existing NYISO CON deck which need to be modified to accommodate the project)**

**2.C.3 - retired contingencies (contingency definitions included in the existing NYISO CON deck which need to be removed/retired, but not modified, to accommodate the project)**

**Provide the following table (please note that this is a sample file format):**

| **PROJECT FILE NAME** | **SINGLE** | | **MULTIPLE** | | **RETIRED CON** | **CON FILE NAME** | **N-1 SINGLES** | **N-1 MULTIPLES** | **N-1-1 LEVEL 1** | **N-1-1 LEVEL 2 SINGLES** | **N-1-1 LEVEL 2 MULTIPLES** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **NEW** | **MODIFIED** | **NEW** | **MODIFIED** |
| Project\_Singles New | Con 1 | - | - | - | - | - | ü | - | ü | ü | - |
| Con 2 | - | - | - | - | - | ü | - | ü | ü | - |
| Con 3 | - | - | - | - | - | ü | - | ü | ü | - |
| Project\_Singles Modified | - | Con 4 | - | - | - | NYISO contingency file name in which the original contingency can be found | ü | - | ü | ü | - |
| - | Con 5 | - | - | - | ü | - | ü | ü | - |
| - | Con 6 | - | - | - | ü | - | - | - | - |
| Project\_Multiple New | - | - | Con 7 | - | - | - | - | ü | - | - | ü |
| Project\_Multiple Modified | - | - | - | Con 8 | - | NYISO contingency file name in which the original contingency can be found | - | ü | ü | - | ü |
| - | - | - | Con 9 | - | - | ü | ü | - | ü |
| Project\_Retired | - | - | - | - | Con 10 | NYISO contingency file name in which the contingency can be found | - | - | - | - | - |
| - | - | - | - | Con 11 | - | - | - | - | - |

**Project Modeling Files – Adjustments**

**If proposing to use the NYSRC reliability rule allowing underground cables circuit to go to STE rating post-contingency for one or more of the eligible facilities, the Developer must provide acceptable system adjustments, as needed and allowed for the contingency type, for every underground cable element and contingency pair to reduce the cable loading to its LTE rating.**

**Acceptable system adjustments must be provided in form of an automation script (e.g., .idev file) and listed in the table below.**

**1.D Acceptable adjustments to accommodate 4,770 MW of incremental offshore wind generation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MONITORED FACILITY** | **CONTINGENCY NAME** | **FILE NAME (AUTOMATION SCRIPT)** | **PRE-ADJUSTMENT FLOW (% LOADING OF STE RATING)** | **POST-ADJUSTMENT FLOW (% LOADING OF LTE RATING)** |
|  |  |  |  |  |
|  |  |  |  |  |

**2.D Acceptable adjustments to accommodate incremental offshore wind generation in excess of 4,770 MW, if applicable**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MONITORED FACILITY** | **CONTINGENCY NAME** | **FILE NAME (AUTOMATION SCRIPT)** | **PRE-ADJUSTMENT FLOW (% LOADING OF STE RATING)** | **POST-ADJUSTMENT FLOW (% LOADING OF LTE RATING)** |
|  |  |  |  |  |
|  |  |  |  |  |

**Geospatial Data Files**

**Developers must provide information in .pdf, .kmz file formats and a summary of infrastructure crossings for each route in the requested format as part of Attachment C.2B. Specific to this NYC PPTN, Developers must also provide geospatial data of proposed project components/infrastructure in shapefile (.shp) format as part of Attachment C.2B in addition to the information requested in Attachment C.2B.**

**Data provided must be consistent with information provided in Attachments C.2A, C.3A, C.3B, C.3C, C.3D, and C.3E, as well as other information provided in the project proposal.**

**Data in the .kmz and .shp file should include:**

1. **Proposed cable routes**
2. **Manholes and vaults**
3. **Offshore platforms/offshore POI(s)**
4. **Substations (including connections to existing substations)**
5. **Transition stations**
6. **HVDC converter stations**
7. **HDD pullback areas, crossings**

**The data must meet the following requirements:**

1. **Polylines must be used to represent proposed cable routes.**
2. **If multiple cables are proposed along the same route, one polyline feature for each cable may be appropriate. Bundled cables can be shown as a single polyline. Bundled cables should report a spacing of 0 ft in the attribute table.**
3. **Parallel cables not installed in one bundle should be shown as multiple polylines. Where parallel cables are proposed, the spacing of the cables, measured from center of one cable to center of the next cable, must be reported in the attribute table.**
4. **Single cables not installed in a series of parallels should also report a spacing of 0 ft.**
5. **Only one installation method is allowed for each feature in the attribute table. Where installation methods change along a route, one polyline must be ended and another must begin.**
6. **Polygons must be used to represent approximate footprints of proposed platforms/offshore POI(s), manholes, substations, transition stations, HVDC converter stations, HDD pullback areas, crossings, and splice vaults. The attributes must clearly indicate whether a facility (polygon) represents construction on a new footprint, the expansion of an existing facility’s footprint, or be located within an existing facility’s footprint.**
7. **Points shall be used to represent HDD entry and exit locations.**

**At a minimum, the following attributes are to be provided for each feature, respective of type.**

**Polylines:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **LINE NAME** | **NUMBER**  **OF CABLES per CIRCUIT** | **SPACING OF**  **CABLES (FT.)** | **LIMIT OF DISTURBANCE WIDTH (FT.)** | **INSTALLATION METHOD** | **kV RATING** | **CIRCUIT MVA RATING**  **(Normal/ LTE/STE** | **CABLE TYPE** | **CABLE SIZE** | **HVDC vs. AC** |
| Example | 2 | 5 ft | 12 ft | Open Trench | 345kV | 490/636/880 | Tri-Core | 1400mm2 | AC |
|  |  |  |  |  |  |  |  |  |  |

**Polygons:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CONSTRUCTION FOOTPRINT**  **(new/ expansion of existing/ upgrade within existing)** | **AREA**  **((Acres)** | **Voltage (kV)** | **HEIGHT OF NEW STRUCTURES ABOVE GROUND SURFACE**  **(FT.)** | **HIGHEST ELEVATION OF NEW STRUCTURES (NAVD88)** |
|  |  |  |  |  |
|  |  |  |  |  |

**Developers must provide .kmz file with the requested attributes. Sample .kmz file is attached below and will be made available at the time of solicitation.**

****

**Developers must use following LEGENDs in the geospatial files, as applicable:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **OFFSHORE POI** |  |  | **TRANSMISSION DC** |  |
| **ONSHORE COLLECTOR/ CONVERTER STATION** |  |  | **SUBMARINE TRANSMISSION AC (345 kV)** |  |
| **ONSHORE SUBSATION (345 kV)** |  |  | **SUBMARINE TRANSMISSION AC (Lower than 345 kV)** |  |
| **ONSHORE SUBSATION (138 kV)** |  |  | **TERRESTRIAL TRANSMISSION AC (345 kV)** |  |
|  |  |  | **TERRESTRIAL TRANSMISSION AC (138 kV)** |  |

**Developers must provide a table listing the GIS layers used in their analysis as part of Attachment C.2A. Developer must use GIS data sources included in Appendix A of the** [**NYSERDA Offshore Wind Cable Corridor Constraints Assessment Report, January 2023**](https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.nyserda.ny.gov%2F-%2Fmedia%2FProject%2FNyserda%2FFiles%2FPublications%2FResearch%2FBiomass-Solar-Wind%2FMaster-Plan%2F17-25e-OSW-Cable-Landfall-Permitting-Study.pdf&data=05%7C02%7CSTawde%40nyiso.com%7C73c032f2fdde43a5e3d108dc41ca206e%7C7658602af7b94209bc62d2bfc30dea0d%7C0%7C0%7C638457583592753057%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=Pvjn3vTy3ZRp8BEw9xnMAqtF1n6fhpYr9f57Y0pjGF4%3D&reserved=0) **for their analyses. In the event more recent data on a particular Appendix A Resource/Area can be obtained or if an additional GIS layer in the analysis is used but is not included in Appendix A, then updated information per Table A-1/2 (Resource/Area, Year, Category, Description, Web link/source) for this data must also be provided. Data provided must be consistent with Attachment C.2B.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Resource/Area** | **Year** | **Description** | **Web link/Source** | **Project Component Crossing** |
|  |  |  |  |  |
|  |  |  |  |  |

**Include information and/or maps/figures regarding the resilience of the infrastructure against climate change and sea level rise. This can include, but not be limited to, details on the placement of key infrastructure with reference to mapped flood zones or projected areas of inundation.**

**Cost Estimate Information**

**The following costs must be included in the cost estimate details that must be provided in response to question 14 of Attachment B. Please note that cost estimate information should only be included in Attachment B and not as part of this information request.**

1. **Offshore geotechnical costs must be included.**
2. **Sediment sampling for physical and chemical parameters for both offshore and terrestrial areas, if required, must include the scope and costs for the same.**
3. **For purposes of a Public Policy Transmission Project, a Developer is expected to complete a desktop analysis that evaluates routing and infrastructure and to submit that desktop analysis with its submittal. More detailed site and engineering evaluations will be required to further refine routes. Given the complexity of New York City, Developers must also include details, costs, and timeline on how they will refine their routes.**
4. **A large number of studies are expected for the permitting of a Public Policy Transmission Project to address the NYC PPTN some of which require significant field work as well as investigations necessary for route refinement. Developers must include a detailed list of anticipated studies or investigations with a general overview of their anticipated scope and costs that the Developer believes will be necessary.**