

Heritage Wind Project

Case No. 16-F-0546

1001.3 Exhibit 3

Location of Facilities

EXHIBIT 3 LOCATION OF FACILITIES

(a) Topographic Maps

Figure 3-1 shows the location of components of the major electric generation and interconnection facilities associated with the proposed Heritage Wind Energy Facility, including the wind turbines, access roads, electrical collection lines, collection substation, point of interconnection (POI) substation, permanent meteorological towers, operation and maintenance (O&M) building, and staging/laydown area which may include a potential temporary concrete batch plant. These components, collectively referred to as the “Facility,” are mapped on the most recent edition of U.S. Geological Survey (USGS) 1:24,000 topographic quadrangles printed at full-scale via topographic tile cache base map server. This map service combines the most current data (Boundaries, Elevation, Geographic Names, Hydrography, Land Cover, Structures, Transportation, and other themes) that make up The National Map (USGS, 2018). The National Map is a collaborative effort between the USGS and other federal, state, and local partners to improve and deliver topographic information for the United States (USGS, 2018). The USGS Topo Map Service is designed to provide a seamless view of the data in a geographic information system (GIS) accessible format and depicts information consistent with the USGS 7.5-minute (1:24,000) quadrangle topographic maps at large scales (USGS, 2018).

(1) Proposed Major Electric Generating Facility Locations

For the purposes of this Article 10 Application, the Facility Site is defined as those parcels currently under lease (or other real property agreement) by the Applicant for the location of all Facility components. Figure 3-1 depicts the location of all Facility components within the Facility Site displayed at a scale of 1:24,000, including:

- Wind turbines
- Access roads
- Electrical collection lines¹
- Collection substation
- POI substation
- Permanent meteorological towers
- O&M building
- Interconnection lines between the collection substation and the POI substation and between the POI substation and the existing National Grid transmission line
- Laydown and/or storage area, including potential temporary concrete batch plant.
- Ancillary feature locations²
- Facility Site parcel boundaries

¹ All electrical collection lines will be buried to maximum extent practicable.

² The only off-site ancillary features proposed are temporary road improvements.

Figure 3-2 separately depicts the collection substation, POI substation, and collection lines. Permanent stormwater features (e.g., large detention basins) will be utilized during operation of the Facility. See the Stormwater Pollution Prevention Plan (SWPPP) (Appendix 21-E) for a full discussion of these features and where they will be located.

The latitude, longitude, and ground surface elevation of all proposed turbines and permanent met towers are detailed in Table 3-1 below.

Table 3-1. Latitude, Longitude, and Elevation of All Proposed Turbines

Turbine/Met Tower Name¹	Latitude	Longitude	Elevation (feet)
T1	43.142514	-78.264601	633.11
T2	43.138258	-78.264579	640.19
T3	43.141745	-78.258554	657.4
T4	43.137718	-78.246352	634.54
T5	43.136818	-78.24029	644.68
T6	43.137489	-78.234444	631.61
T7	43.148826	-78.223892	639.81
T8	43.16111	-78.215135	643.97
T9	43.180615	-78.212944	659.79
T10	43.178209	-78.205761	661.62
T11	43.181232	-78.201646	655.68
T12	43.178219	-78.200839	654.04
T13	43.161768	-78.187157	649.91
T14	43.178338	-78.183775	665.84
T15	43.175171	-78.183294	653.58
T16	43.147127	-78.18252	646.31
T17	43.172512	-78.174671	649.34
T18	43.149504	-78.174986	643.08
T19	43.15769	-78.172849	642.08
T20	43.168313	-78.17143	651.23
T21	43.150474	-78.159497	671.1
T22	43.182079	-78.155781	670.95
T23	43.177056	-78.144446	653.36
T24	43.183329	-78.143973	652.04
T25	43.169774	-78.144359	644.93
T26	43.18033	-78.143412	655
T27	43.172783	-78.143256	680.9
T28	43.191157	-78.140284	666.56
T29	43.208521	-78.125761	668.86

Turbine/Met Tower Name ¹	Latitude	Longitude	Elevation (feet)
T30	43.203433	-78.125709	664.29
T31	43.194267	-78.12161	652.24
T32	43.202852	-78.119911	660
T33	43.207461	-78.119405	669.49
MET-1	43.180879	-78.218135	662.51
MET-2	43.191796	-78.145862	696.79

¹ T= Wind Turbine; MET = Permanent Met Tower

(2) Interconnection Location

All Facility components, including the interconnection facilities, will be located within the defined Facility Site and are mapped in Figures 3-1 and 3-2 as indicated in Section (a)(1), above. The Facility's O&M building will connect to existing water lines but will not require significant water withdrawals or an extension of the water district. There are no wastewater conveyance interconnections within the Facility Site.

(3) Location of Ancillary Features

Based on all studies and analyses conducted to date, the only known off-site ancillary features associated with the Facility are temporary public road improvements, which are depicted in Figure 3-3.

(4) Location of Article VII Transmission Lines Not Subject to Article 10

The Facility does not include any components (i.e., transmission lines) that are regulated under Article VII of the New York Public Service Law. As a result, this section is not applicable to the Facility. See Section (a)(1) above for information related to the Facility's interconnection.

(5) Study Area

The Facility has been the subject of numerous studies in support of this Article 10 Application. A single, universal study area has not been utilized for all studies/analyses. Rather, the various studies have applied resource-specific study areas, which are described briefly below along with a reference to the exhibit in which more information concerning the study area is provided.

- 5-mile Study Area (see Exhibit 4 for additional detail) – The area within a 5-mile radius of Facility components. Various land use characteristics (e.g., zoning, land use classifications, and existing utilities) were characterized within this study area.

- Area of Potential Effect (APE) for Direct Effects (see Exhibit 20 for additional detail) – The area containing all proposed soil disturbance potentially associated with the construction and operation of all Facility components, except for access roads, for which this area was expanded to include all proposed vegetation disturbance. Direct effects on archaeological resources were analyzed within this area.
- Area of Potential Effect (APE) for Indirect Effects (see Exhibit 20 for additional detail) – The area within a 5-mile radius of proposed turbines and within the potential viewshed (based on topography) of the Facility. Indirect effects on cultural resources (e.g., visual and auditory effects) were analyzed within this area.
- Bird and Bat Survey Area (see Exhibit 22 for additional detail) – A variety of surveys were implemented to support bird and bat studies. The specifics are study dependent. Transects were utilized for spring breeding bird surveys, radius plots were utilized for raptor migration surveys and eagle use surveys.
- Communications Study Area (see Exhibit 26 for additional detail) – The area within a 2-mile radius of Facility components. This baseline study area was used to assess the potential impact of the Facility on communications and was extended as necessary for some communication types (e.g., radio, television, microwave, radar, etc.) as required by 16 NYCRR § 1001.26.
- Environmental Justice Study Area (see Exhibit 28 for additional detail) – The area within a 0.5-mile radius of Facility components (consistent with the criteria set forth in 6 NYCRR § 487.4), the potential impact of the Facility on environmental justice (EJ) communities was assessed within this study area.
- Historic Resources Study Area - The area within 5 miles of the Facility Site. The Facility's potential effect on historic resources were studied within this area.
- Noise Study Area (see Exhibit 19 for additional detail) – The area within a 1-mile radius of proposed turbine locations and substations. The potential for noise impacts resulting from the construction and operation of the proposed Facility was assessed for all sensitive receptors within this study area.
- Shadow Flicker Study Area (see Exhibits 15 and 24 for additional detail) – The area within a 10-rotor-diameter (i.e., 5,315-foot³) radius of proposed turbine locations. The potential for impacts resulting from shadow flicker was assessed within this study area.
- Transportation Study Area (see Exhibit 25 for additional detail) – All proposed transportation routes, from State Route 98 at the Town of Barre border north to the delivery sites. Transportation impacts resulting from the construction and operation of the proposed Facility were assessed along these routes.
- Visual Study Area (see Exhibit 24 for additional detail) – The area within a 10-mile radius of Facility components. An additional 1.5-mile extension to the north of this area was added to capture the Lake

³ This is based on the largest turbine proposed in this Application, the Vestas V162.

Ontario shoreline. The potential for visual impacts resulting from the construction and operation of the proposed Facility was assessed within this area.

- Water Well Study Area (see Exhibits 21 and 23 for additional detail) – The area within a 1-mile radius of the Facility Site, for publicly available groundwater well data; and the area within a 500-foot radius of ground disturbing activities and within a 2,000-foot radius of blasting locations, for groundwater well data not publicly available (e.g., groundwater wells identified through water well surveys).
- Wetland Study Area (see Exhibit 22 and 23 for additional detail) – All areas in the Facility Site within 500 feet of areas to be disturbed by construction. Wetlands and streams were delineated within this area per the three-parameter methodology described in the U.S. Army Corps of Engineers (USACE) *Wetland Delineation Manual* (Environmental Laboratory, 1987), and further described by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: North Central and Northeastern Region* (USACE, 2012). Vernal pools were also identified within this area.

(b) Municipal Boundary Maps

Figure 3-3 depicts the location of the proposed Facility, the Facility Site, and the location of temporary road improvements in relation to village, town, county, and school district boundaries. These locational relationships are described in Section (c) below. Consistent with the discussion in that section, the mapping does not depict alternative locations.

(c) Description of Proposed Facility Locations

The Facility Site is located in Orleans County, entirely within the Town of Barre.⁴ The Facility Site is also located in the Albion Central School District and the Oakfield-Alabama Central School District (USCB, 2016). See Table 3-2 for a summary of the number of Facility turbines that are proposed within each of these jurisdictions. The Applicant is not aware of any other applicable municipal boundaries, taxing jurisdictions, or designated neighborhoods or community districts with jurisdiction intersecting the Facility Site. Other local districts (i.e., water, fire, etc.) which may overlap with the Facility Site and described in the following relevant exhibits. For example, the Facility components located with local water districts are discussed in Exhibits 4 Land Use and 38 Water Interconnection.

⁴ As shown in Figure 2-1, Albion and Holley, the closest villages to the Facility (NYSGPO, 2018), are located approximately 3 miles from the Facility Site.

Table 3-2. Number of Turbines by Municipal Boundary and Taxing Jurisdiction

Municipal Boundary/Taxing Jurisdiction		Number of Turbines
County	Orleans	33
Town	Barre	33
School District	Albion Central	32
	Oakfield-Alabama Central	1

Note, existing disturbances will be utilized wherever practicable in siting Facility components. For example, linear Facility components (e.g., access roads, electrical collection lines) will be sited on or adjacent to existing farming roads and other access roads in many locations. See Exhibit 12(c) for a full discussion of how the Applicant will avoid interference with existing utility systems.

With respect to reasonable and available alternative location sites, note that the Applicant, as a private facility applicant, does not have (and does not anticipate having) eminent domain authority. Exhibit 9 provides a discussion of alternatives and the process by which the proposed Facility was sited.

REFERENCES

NYS GIS Program Office (NYSGPO). 2018. *NYS Civil Boundaries* [shapefile]. Available at: <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=927>. (Downloaded April 19, 2018). Released April 2018.

United States Census Bureau (USCB). 2016. *Unified School Districts* [shapefile]. Available at: <ftp://ftp2.census.gov/geo/tiger/TIGER2016/> (Downloaded July 26, 2017). Released August 19, 2016.

USGS. 2018. *The National Map: Introduction to The National Map*. Available at: <https://nationalmap.gov/about.html>. (Accessed April 2018).