High Bridge Wind Project

Case No. 18-F-0262

1001.4 Exhibit 4

Land Use

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EXHIBIT 4 LAND USE

(a) Map of Existing Land Uses

NYSORPS Land Use Classification

Figure 4-1 illustrates existing land uses within a 5-mile radius of all generating Facility components, interconnections and related facilities (i.e., the "5-mile Study Area"). This map was prepared using publicly available data from Chenango County and the land was classified based on codes developed by the New York State Office of Real Property Services (NYSORPS). The following land use classification codes occur within the 5-mile Study Area:

- 100 – Agricultural
- 200 – Residential
- 300 – Vacant Land
- 700 – Industrial
- 800 – Public Services, and
- 900 – Wild, Forested, Conservation Lands and Public Parks.

Vacant Land

Approximately 1,357 acres within the Facility Site have been classified as Vacant Land under the NYSORPS classification system. Approximately 919 acres of the vacant land is forested, 422 acres are row or field crops, 5 acres are successional old field, 6 acres are disturbed/developed (i.e., characterized by the presence of buildings, parking lots, paved and unpaved roads, lawns, gravel mines, and gas/oil infrastructure).[1] Approximately 840 acres of vacant land within the Facility Site is currently enrolled in a NYS Certified Agricultural District, discussed in greater detail below.

In addition, the Applicant consulted municipal Town of Guilford officials in June 2019 and discussed the existing use of land classified as "vacant" by NYSORPS. Based on the discussion and information received from these officials, it was confirmed these parcels were generally vacant and used for farming, hunting, and other recreational purposes.

480-a Forest Tax Law

In 1974, the State of New York enacted New York Real Property Tax Law Section 480a to encourage the long-term sustainable management of woodlands to produce forest crops and increase the likelihood of a stable forest economy. The law, known as the 480-a Forest Tax Law, provides property tax savings for landowners who enroll in the program. To be eligible, a forest tract must consist of at least 50 acres. The landowner must commit to follow a 10-year

[1] For additional information about vegetative communities at the Facility Site, see Exhibit 22.

management plan prepared by a forester and approved by the New York State Department of Environmental Conservation (NYSDEC). The management plan must identify scheduled commercial harvests, noncommercial thinning, road construction, and other management practices, and include a schedule that shows the work to be done each year. Failure to adhere to the annual commitment in the work schedule of the management plan will result in revocation of the certificate of approval by the NYSDEC, and the imposition of penalty or roll-back taxes by the County (NYSDEC, 2016a). The NYSORPS assigns the classification code "912" to parcels enrolled in the 480-a program. Based on review of the NYSORPS classification codes associated with the parcel data provided by Chenango County and Otsego County, one parcel within the 5-mile Study Area is enrolled in the 480-a program; however, this parcel is not located within the Facility Site.

As a follow-up to this initial analysis, the Applicant reviewed the 2018 Final Assessment Roll for the Town of Guilford and found two properties, with parcel identification numbers 185.-1-7 and 199.-1-24, subject to the 480-a forestry program within the Facility Site (see Figure 4-2). As shown in Table 4-1, both parcels enrolled in the 480-a forestry program within the Facility Site will have only a small proportion of their enrolled acreage impacted by the construction of the Facility. Overall, it is anticipated that both parcels would remain eligible for the 480-a forestry program.

Table 4-1. Impacts Parcels Currently Enrolled in the 480-a Forestry Program within the Facility Site.

Parcel	Currently Enrolled Acreage	Cleared Acreage[1]	Post-Construction Enrolled Acreage (est.)
185.-1-7	85	6	79
199.-1-24	116	16	100

[1]Acreage proposed to be cleared during the construction of the Facility.

New York State Agricultural Districts

State-certified Agricultural Districts cover 24,925 acres (63%) of the land within the Town of Guilford. Approximately 2,892 acres (74%) within the Facility Site are enrolled in a New York State Certified Agricultural District, established pursuant to Article 25-AA of the New York Agriculture and Markets Law. However, much of this area appears to be forested or otherwise not in production.[2] Figure 4-2 depicts agricultural district land within the Facility Site.

The purpose of agricultural districting is to encourage the continued use of farmland for agricultural production. The program covers land and on-farm buildings that contribute to the production of crops, livestock, and livestock products (e.g., field and row crops, orchards, livestock, poultry, Christmas trees, maple sap, apiary products, timber operation, nursery stock and flowers, commercial horse boarding, aquaculture, fur-bearing animals, and woody biomass). The

[2] As depicted in Figure 4-7.

program is based on a combination of landowner incentives and protections, all of which are designed to forestall the conversion of farmland to non-agricultural uses.

This designation does not wholly restrict substantial changes in land use. In fact, numerous wind farms have been built within Certified Agricultural Districts in New York State, and when appropriately designed and built, such projects are consistent with, and supportive of, agricultural land uses and districts and allow continued use of farmland for agricultural production. Table 4-2 summarizes impacts to soils within designated agricultural district lands within the Facility Site. Most of these impacts will be temporary and subject to restoration activities following construction. Measures to mitigate impacts to agricultural land are discussed in Exhibit 4(i).

Table 4-2. Facility Impacts to Soils within Agricultural District Lands

Agricultural District	Acres within Facility Site	Total Soil Impact (acres)	Temporary Soil Impact (acres)	Permanent Soil Impact (acres)
Chenango County District 01	2891.9	138.5	102.2	36.3
Total	**2891.9**	**138.5**	**102.2**	**36.3**

Two other agricultural districts are located outside of the Facility Site, but within the 5-mile Study Area (see Table 4-7).

Conservation Programs

To determine the location of conservation program lands near the Facility Site, the Applicant reviewed the National Conservation Easement Database (NCED), an initiative of the U.S. Endowment for Forestry and Communities to compile records from land trusts and public agencies throughout the United States. This public-private partnership brings together national conservation groups, local and regional land trusts, and state and federal agencies. The NCED contains records of 22 conservation easements in Chenango County and 137 conservation easements in Otsego County. None of these 159 conservation easements are within or abutting the Facility Site, however two easements in Chenango County are within the 5-mile Study Area. The closest conservation area is approximately 2.0 miles from the Facility Site. Facility turbines may be visible from the conservation easements in the 5-mile Study Area. However, there will be no direct impacts to these lands or to the ecological functions and values protected by the easements. Additional information on these conservation areas is provided in Table 4-3.

Table 4-3: Conservation Easements within the 5-mile Study Area.

Location	Easement	Year Established	Size (acres)	Holder
Town of Guilford, Chenango County	WRP[1]	2010	7.48	NRCS[2]
Town of Oxford, Chenango County	WRP	2002	55.85	NRCS

[1] Wetlands Reserve Program
[2] US Natural Resources Conservation Service
Source: National Conservation Easement Database (www.conservationeasement.us)

(b) Transmission Facilities Map

Figure 4-3 illustrates major overhead and underground electric, gas, and telecommunication facilities in the 5-mile Study Area, along with proposed Facility components.[3] Electric transmission line routes were identified based on a review of 2015 aerial imagery which indicate the cleared rights-of-way. In addition, gas and oil well data were acquired from the NYSDEC Division of Mineral Resources; natural gas and petroleum product pipeline data were obtained from the New York State Department of Public Service (NYSDPS). Figure 4-3 also indicates locations of proposed crossings and adjacent components. See Exhibit 12 for additional utility crossing information.

Additional details regarding crossing or adjacent components are shown on the Preliminary Design Drawings appended to Exhibit 11.

(c) Tax Parcel Map

Figure 4-1 illustrates existing boundaries of all parcels within the 5-mile Study Area. This map shows current land use, tax parcel number, owner of record, and any publicly known proposed land use plans for each of these parcels. Parcel and land use data were obtained from Chenango County.

(d) Zoning District Map

Zoning jurisdiction in Chenango County and Otsego County is at the city/town/village level. Figure 4-4 illustrates existing and proposed zoning districts in the 5-mile Study Area. The Town of Guilford and most of the municipalities within the 5-mile Study Area have no established zoning regulations. However, the Town of Oxford, the Villages of Oxford and Gilbertsville, as well as the City of Norwich are within or intersect the 5-mile Study Area, and these municipalities do have established zoning ordinances. Summaries of the zoning ordinances for these municipalities are presented below. These summaries describe permitted and prohibited uses in each zone. The level of detail contained in these summaries varies based on the level of detail included in each municipality's zoning ordinances.

[3] Note: no gas or hazardous liquid pipelines are located within the Facility Site.

Town of Oxford

The Town of Oxford is located west of the Facility Site. The zoning regulations, contained in the Town of Oxford Zoning Ordinance (Local Law No. 1-2015, revising Local Law No. 1-2007), divide land into the following seven districts:

- Agricultural (A-1),
- Residential (R-1),
- Residential-Recreational (RR-2),
- Residential – Mobile Home (RM-3),
- General Commercial (C),
- Commercial Excavation (C-E),
- Flood Plain (F-P).

Portions of all or most of these zoning districts fall within the 5-mile Study Area, as shown in Figure 4-4. Wind power development and utility towers are permitted by Special Exemption in all five of the primary zoning districts in the Town of Oxford.

The largest district in the Town of Oxford is the Agricultural (A-1) district, which delineates areas appropriate for agricultural and low-density residential use. Other permitted uses in this A-1 district include churches, public parks, forests, municipal or institutional uses, recreation, reservoirs, grange halls, public utilities, veterinary hospitals, accessory buildings, and mobile homes.

The Residential (R-1) district identifies areas that are primarily intended for residential use in the Town of Oxford. The R-1 district permits the following six uses: one-family dwellings, public or parochial schools, church or religious uses, public parks or playgrounds, home occupation, and accessory buildings.

The Residential-Recreational (RR-2) district delineates areas appropriate for residential or recreation uses. The following uses are permitted in the RR-2 district: R-1 district uses, hotels or motels, educational, religion, or philanthropic institutions, seasonal dwellings, group camps, or campgrounds, golf courses or other recreational uses, and mobile homes.

The Residential Mobile Home District (RM-3) identifies areas where mobile homes uses and developments are considered an appropriate and compatible land use. No other as-of-right uses are permitted in this district.

The General Commercial District (C) delineates areas appropriate for commercial uses, which are generally oriented towards retail or vehicle service uses. There are 16 types of uses permitted in the C zone including: existing residential, retail stores, personal service shops, laundry services, restaurants, taverns, or motels, automotive sales, garage or gas stations, office equipment, printing shops, animal hospitals or kennels, lumber or building supplies, heating, plumbing, or electrical services, public utilities, business signs, customary accessory uses, and agriculture.

Village of Oxford

The Village of Oxford occupies 1.6 square miles and is located west of the Facility Site in the Town of Oxford. The village zoning ordinance, which is set forth at Village of Oxford Code, Chapter 293, Zoning, designates the zoning districts presented in Table_ below. The zoning regulations establish a list of permitted uses and additional uses allowed by special permit in each of these districts (see Table 4-4). There are no regulations in the Village's Zoning Code that reference or relate specifically to wind power.

Table 4-4. Village of Oxford Zoning Districts and Uses

Zoning District	Permitted Uses	Special Permit Uses
R-1 Residential	One-family dwelling, public/parochial school, church/religious, public park/playground, customary home occupation, and accessory building.	Public utility station or structure and swimming pool.
R-2 Residential	R-1 District uses, two-family dwelling, 3-4 family dwelling by conversion of existing structure, public library/firehouse/other public building or use, customary home occupation, accessory building, medical clinic, and bed and breakfast.	Public utility station or structure, and swimming pool.
RM-3 Residential Mobile Home	Mobile home or one-family dwelling, mobile home court, and accessory use and building.	None listed.
PB-1 Public Buildings	Public building/library, church/religious, public/parochial school, institutional building or use, dwellings, funeral home, and professional or business office.	None listed.
C-1 Retail Commercial	Public building/library, institutional building or use, professional or business office, funeral home, retail store/market, personal service shop, launderette, restaurant/tavern, office equipment/business machines sales/service, club/lodge, household appliance sales/ service, antique sales/service, public utility station/structure, and customary accessory uses.	Gasoline station and dwellings.
C-2 General Commercial	C-1 district uses, motel/restaurant/tavern, vehicle, boat, farm implement, mobile home, trailer, snowmobile, or lawn equipment, garage/gas station, press/print shop, animal hospital/kennel, lumber or building supplies, heating/plumbing/electrical sales/service, and customary accessory uses.	Drive-in restaurant or refreshment stand, auto wash, and dwellings.
M-1 Manufacturing	C-2 district uses, manufacture of textile goods, manufacture of food products, machine shop/metal fabrication/welding shop, light manufacturing, wholesale/storage/warehouse,	Auto wash and truck terminal.

Zoning District	Permitted Uses	Special Permit Uses
	seed/fuel/seed/fertilizer sales/storage, and customary accessory building or use.	
O-S Open Space	Farm or nursery, municipal watershed/reservoir, forest practice, management, conservation, & wildlife protection, park, golf course, recreation, and camp/cottage/one family or seasonal dwelling.	None listed.
F-P Floodplain	Agriculture, recreation, and public utility structure/use.	Commercial/industrial involving minimum hazards to life/property.
Planned Development Districts	Mixed uses.[1]	

[1] Refer to Village Zoning regulations, Section 239-19 (https://ecode360.com/5152420)

Village of Gilbertsville

The Village of Gilbertsville occupies 1.0 square miles and is found east of the Facility Site in the Town of Butternuts. The Village zoning code (Village of Gilbertsville, Zoning Law, adopted August 12, 1996, revised April 20, 2011) establishes the following three zoning districts: Residential (R), Residential-Hamlet (R-H), and Planned Unit Development (PUD).[4] There are no regulations in the Village's Zoning Code that reference or relate specifically to wind power or stipulate any compatibility or incompatibility with a wind power facility on adjacent or nearby property

Permitted uses in the Residential (R) district include: One and two-family dwellings, home occupations, hobby farms, public facilities and recreational facilities, and bed and breakfasts. The Special permit uses allowed for this district are: multiple family dwellings, cluster subdivisions, condominiums, townhouse dwellings, public facilities/utilities, religious institutions, and cemeteries.

In the Residential-Hamlet (R-H) district, the permitted uses are the same as those in the Residential district. The Special permit uses in the R-H district include the seven uses allowed in the R district plus the following: cultural recreation, educational institutions, health care facility, animal hospital, building and farm supply, business and professional office, summer camp, car wash, club, commercial recreation, commercial storage, eating and drinking establishments, flea market, hotel, mixed use buildings, motel, motor vehicle and boat trailer sales, motor vehicle repair shop, public garage, retail trade, seasonal business, service establishment, shopping center, and light industry.

The Planned Unit Development district provides for a mixture of residential and non-residential land uses as set forth in Section 406 of the Village's zoning code. The PUD district is intended to provide flexibility with respect to land uses,

[4] Residential zoning designations have been grouped in Figure 4-4 to improve map clarity.

intensity and layout in order to achieve other benefits for a development such as environmental protections, open space, and community design.

City of Norwich

The City of Norwich occupies 2.1 square miles and is found north of the Facility Site in the Town of Norwich. The City of Norwich zoning ordinance, which is found at City of Norwich Code Chapter 575, Zoning, establishes the districts and permitted uses shown in Table 4-5. There are no regulations in the City of Norwich zoning code that reference or relate specifically to wind power.

Table 4-5. City of Norwich Zoning Districts and Uses

Zoning District	Permitted Uses	Special Permit Uses
R-1 Residential	Accessory structure/use, day-care centers, family day care, group adult day care, group family day care, park/playground, public school, and single-family dwelling.	Essential public services, home beauty parlor shop, home occupation, hospital, private school, religious institution, and two-family dwelling.
R-1A	R-1 permitted uses and home beauty parlor shop.	R-1 Special permit uses and multi-family dwellings.
R-2 Residential	R1 permitted uses and home beauty parlor shop.	R-1 Special permit uses, group care facility, mobile park home, multi-family dwelling, nursing home, professional office, and rooming houses.
R-3 Residential	R-2 permitted uses and professional office.	R-2 Special permit uses, club membership, cultural center, funeral establishment, library, office building, restaurant/cafeteria, and retail trade/general business.
B-1 General Business	Accessory structure/use, auto sales/repair, auto service station, bank/financial institution, day-care centers, family day care, group family day care, funeral establishment, garage, private & public, hospital, laundromat/dry cleaning, library, motel/hotel, multi-family dwellings, nursing home, office building, parks or playground, private school, professional office, public school, religious institution, restaurant/cafeteria, retail trade/general business, warehousing private, and wholesale trade	Club membership, cultural center, essential public service, general light industrial, group care facility, and theater.
B-2 Highway Business	B-1 Permitted uses (except for the following: multi-family dwelling, private school, and religious institution). Animal kennel, warehousing private, warehousing pubic, wholesale storage, building supplies, and wholesale trade.	B-1 Special permit uses.
RR Railroad	Railroad and trail.	None listed.
IN Industrial	Accessory structure/use, day-care center, family day-care center, general light industrial, group adult or	Adult entertainment, cultural center, and essential public service.

Zoning District	Permitted Uses	Special Permit Uses
	family day-care center, laundromat/dry cleaning, office building, professional office, recycling facility, warehousing private, warehousing pubic, wholesale storage, building supplies, and wholesale trade.	
Museum Overlay		Cultural center, restaurant/cafeteria, retail trade/general business, and rooming house.

Source: City of Norwich Zoning Code (https://ecode360.com/13206796)

(e) Comprehensive Plans

The Town of Guilford and Chenango County adopted comprehensive plans in 2014 and 2016, respectively.[5] These comprehensive plans are summarized below. The Town of Guilford has proposed updating the existing Comprehensive Plan. However, as of the filing date of this Application, no updates to the Town of Guilford Comprehensive Plan have been approved.

Town of Guilford Comprehensive Plan

The Town of Guilford issued a Comprehensive Plan in 2014 to serve as a foundation upon which the Planning Board and Town Board could prioritize future development objectives. The plan established the following vision statement for the town:

> *The future of the Township of Guilford will be a vibrant, rural community whose residents highly value the natural beauty of our area and take pride in our well-maintained homes and businesses. Our local government respects the property rights of residents, is responsive and carefully uses tax dollars to efficiently provide infrastructure and community services. We maintain a healthy environment and encourage the use of all energy sources. Our economy is grounded in agriculture and a diversity of local businesses. New growth in the area will provide jobs for our children and fits well with our rural character. Our hamlets continue to serve as community centers. The Township of Guilford has a strong sense of community. It encourages participation in volunteer organizations and government. The Township of Guilford is a friendly and safe place to live.*

In addition, the Plans sets forth broad community planning goals for the Town in the following categories:

1. Agriculture

[5] The Town of Guilford Comprehensive Plan is available at: https://www.guilfordny.com/government/comprehensive_plan; the Chenango County Comprehensive Plan is available at: https://www.co.chenango.ny.us/planning/planning-board/documents/Comprehensive%20Plan%20January%202016.pdf

- Maintain a strong agricultural economy where small and large farms are successful.
- Supports many traditional, niche, and value-added farm operations.

2. Economic Prosperity

    - Encourage and welcome a wide variety of local businesses to expand the economic base and provide jobs.
    - Provides a business environment where small and locally owned businesses are successful.
    - Promote businesses that are environmentally friendly and fit with the character of the Town.

3. Individual Freedoms

    - Protect the rights of individual property owners.

4. Environmental Health and Community Character

    - Conserve natural resources, including air, water, and open spaces.
    - Maintain the essential rural and small-town character.
    - Consider the use of alternative energy sources.
    - Preserve the natural beauty of the landscape.

5. Recreational Opportunities.

    - Promote recreational opportunities for all ages.

6. Community

    - Be a community with a strong sense of pride.
    - Be welcoming, where people know their neighbors and care for each other.
    - Have many citizen volunteers who are involved in their community.
    - Be a safe place.
    - Maintain buildings and landscapes.
    - Support quality educational programs.

7. Government

    - Have a local government that offers excellent public services in a way that carefully uses tax dollars.
    - Operate in a responsible manner and is careful in its expenditures.
    - Operate in an open manner.

It is notable that both the Town's Vision Statement and the Town's Planning Goals articulate support for the use of alternative energy sources. This is consistent with the survey results presented in the Alternatives Energy section of the Town Comprehensive Plan: 62% of respondents favor or strongly favor the development of a large wind facility, while 84% percent of respondents favor or strongly favor the use of small, personal use wind turbines. The survey also found 90% of respondents favor or strongly favor the development of a large solar facility.[6]

[6] At the time the Town of Guilford comprehensive plan was written, data from the Chenango County Planning Office indicated that there were "few promising sites for wind power installations in the Town [of Guilford]." Since that assessment, wind turbine technology and the economics of wind energy development have changed dramatically. The Applicant has conducted extensive feasibility analyses that show the proposed Facility is technically and economically viable (see Exhibit 6(d) and Exhibit 9(a)).

Given the general support for alternative energy indicated in the Town's Vision Statement, Planning Goals, and survey results, the development of a well-considered and appropriately sited wind energy facility, such as the proposed Facility, is consistent with the Town's Comprehensive Plan.

The Comprehensive Plan emphasizes the high value the Town places on supporting agriculture, promoting economic prosperity, and preserving community character. The proposed Facility is consistent with these values. The Facility will support agriculture in the Town of Guilford by limiting the conversion of land to non-agricultural uses, allowing the continued use of the non-built portion of the Facility site for agriculture and forestry purposes, supporting participating farmers through landowner payments, and limiting overall impacts to farmland through proper siting, and generally adhering to New York State Department of Agriculture and Markets (NYSDAM) guidelines for wind power projects (see NYSDAM Guideline discussion in Exhibit 4(i).

Chenango County Comprehensive Plan

The Chenango County Comprehensive Plan was adopted in 2016 and set forth the following Mission Statement as the basis for the plan: "*To improve the quality of life of all residents of Chenango County in harmony with the rural character of its environs through a constancy of purpose."*

The Chenango County Comprehensive Plan indicates that businesses and residents are "beginning to push towards utilizing a large amount of renewable energy resources, such as biomass, solar, and wind, for their energy needs." The comprehensive plan states that the county supports renewable energy initiatives for its businesses and residents.[7]

As detailed in the Chenango County Comprehensive Plan, there are four primary land uses within the county:

- Residential – 203,776 acres (35%)
- Vacant – 135,750 acres (23%)
- Forest Lands – 112,777 acres (19%)
- Agriculture – 103,295 acres (18%)

The comprehensive plan reports that farming in Chenango County has been in decline for at least the last two decades. For example, in 2002 there were 960 farms in Chenango County, while a decade later this number had fallen 14% to

[7] The plan suggests that the topography found in the county may hamper wind flow but defers to wind energy professionals in assessing site suitability. The comprehensive plan states that wind power facilities need to be carefully sited to limit potential noise and visual impacts. The Applicant has conducted extensive studies to design the Facility in a manner that minimizes noise and visual impacts to the maximum extent practicable. (see Exhibit 19 and Exhibit 24).

828 farms. This decline can be attributed to a variety factors, most of which are economic. The plan states that "Promoting and pursuing cost-saving and economic development opportunities to support agricultural industries, including the expansion of farmers markets, increased use of grazing on fallow lands, the legal cultivation and sale of industrial hemp fiber and its associated products, and the recycling of agricultural plastics, among others, should be promoted and pursued."

The County Comprehensive Plan identifies several development corridors within the county that have experienced increased traffic and development activity and are expected to continue to see growth. One of these corridors is the Unadilla River/NYS Route 8 corridor. This area extends from where the Unadilla River joins the Susquehanna River, northwards towards Utica, NY. The Town of Guilford falls within this corridor. As indicated in the plan, there is an increasing amount of vehicular traffic on NYS Route 8, and the State Department of Transportation has completed work to improve safety and enhance signage.

As detailed above, the Facility is consistent with the Chenango County Comprehensive Plan. The Facility will support agriculture in the Town of Guilford by limiting the conversion of land to non-agricultural uses, supporting participating farmers through landowner payments, and limiting overall impacts to farmland through proper siting and generally adhering to NYSDAM guidelines for wind power projects. In addition, the proposed Facility is consistent with the support that the County Comprehensive Plan articulates for renewable energy initiatives and that businesses and residents are moving towards.

(f) Map of Proposed Land Uses

The Applicant has investigated proposed land uses within the 5-mile Study Area via discussions with State and local planning officials (including inquiring about pending land-use applications), open houses, the public involvement program (PIP) implementation and preliminary scoping statement (PSS) development process, and other sources. No other specific proposed land uses were identified based on that investigation. Specifically, no other proposed wind turbines were identified within the 5-mile Study Area, nor has the Applicant identified any other plans/proposals to construct wind turbines within the 5-mile Study Area.

The Applicant has identified one permitted shale mine within in the Facility Site (see Figure 4-5). There are no known gas wells[8] or pipelines within the Facility Site. This conclusion is based on publicly available NYSDEC information and National Pipeline Mapping System[9] data.

(g) Map of Specially Designated Areas

Figures 4-2 and 4-6 illustrate specially designated areas, including inland waterways, agricultural districts, and special flood hazard areas within the 5-mile Study Area. Table 4-6 summarizes the sources of data used to prepare these maps and whether the type of area is found within the 5-mile Study Area.

Table 4-6. Mapping of Specially Designated Areas

Mapping Requirement	Data Source	Specially Designated Areas Present
Designated Coastal Areas	NYS GIS Clearinghouse, NYS Dept. of State	None
Inland Waterways	NYS GIS Clearinghouse, NYS Dept. of State	None
Local Waterfront Revitalization Program – Approved Plans	NYS GIS Clearinghouse, NYS Dept. of State	None
Groundwater management zones	NYS GIS Clearinghouse	None
Agricultural Districts	Cornell Institute for Resource Information Sciences (IRIS)	See Figure 4-2 and Table 4-6
Special Flood Hazard Areas	NYS GIS Clearinghouse, FEMA	See Figure 4-2
480-a Forest Management Programs	Guilford 2018 Final Assessment Roll	See Figure 4-2
NYS Open Space Conservation Plan – Priority Conservation Projects	NYSDEC	None
Critical Environmental Areas	NYSDEC	None

Special Flood Hazard Areas (SFHAs) are associated with the Chenango River, the Unadilla River, and several other waterways and water bodies within the 5-mile Study Area (e.g., Guilford Creek). There are no designated coastal areas, designated inland waterways, Local Waterfront Revitalization Program communities, groundwater management zones, priority conservation projects, or critical environmental areas in the 5-mile Study Area (NYSDEC, 2016a; NYSDEC, 2015; NYSDOS, 2012; NYSDOS, 2018).

Three Agricultural Districts are found in the 5-mile Study Area, as shown in Table 4-7.

[8] In this context, "known gas wells" includes all active or pending oil or gas wells in the NYSDEC dataset (i.e., wells with a status of "Active," "Application Received to Drill/Plug/Convert," "Drilling Completed," "Drilled Deeper," "Drilling in Progress," "Not Listed," "Permit Issued," "Temporarily Abandoned," or "Transferred Permit."

[9] Available at: https://www.npms.phmsa.dot.gov/.

Table 4-7. Agricultural Districts in the 5-mile Study Area.

Agricultural District	Acres within the 5-mile Study Area	Municipalities
Chenango County District 01	39,831	Towns of Guilford, Oxford, and Norwich; Village of Oxford
Chenango County District 03	3,100	Towns of Preston and New Berlin
Otsego County District 01	12,442	Towns of Unadilla and Butternuts; Village of Gilbertsville

New York State Agriculture and Markets Law § 303b allows land to be added to agricultural districts through an annual process; however, land can only be removed from districts as part of a mandatory eight-year review. Chenango County Agricultural Districts 01 and 03 were last certified on October 17, 2012 and November 03, 2016, respectively (Cornell IRIS, 2017). Otsego County Agricultural District 01 was last certified on March 03, 2019 (Cornell IRIS, 2019).

(h) Map of Recreational Areas and Other Sensitive Land Uses

Figure 4-6 illustrates recreation and other sensitive land uses known to the Applicant within the 5-mile Study Area. During the Phase 1B Archaeological Survey, archaeological sites were identified within the Facility Site; however, per National Historic Preservation Act § 304, 9 NYCRR § 427.8, and New York State Public Service Law § 15, the location of these sites are not disclosed in Figure 4-6. The location of these sites is confidential and will be included in reports provided to the New York State Office of Parks, Recreation and Historic Preservation.

Table 4-8 summarizes the sources of data used to prepare these maps and identifies whether the land use is found within the 5-mile Study Area.

Table 4-8. Mapping of Recreational and Sensitive Areas

Requirement	Source	Recreational and Sensitive Areas Present
Wild, Scenic and Recreational River Corridors	National Wild and Scenic Rivers System	None
Open Space[10]	NYS GIS Clearinghouse and local governments	See Figure 4-2
Wildlife management lands	NYS GIS Clearinghouse, NYSDEC, U.S. Fish and Wildlife Service	See Figure 4-2 and 4-6
Forest management lands	NYS GIS Clearinghouse, NYSDEC	See Figure 4-2 and 4-6
Conservation easement lands	National Conservation Easement Database; NYS GIS Clearinghouse	See Figure 4-2
State and federal scenic byways	NYSDOT; NYS GIS Clearinghouse	None

[10] The 2016 NYS Open Space Conservation Plan identifies no Region 7 – Central New York Priority projects within the 5-mile Study Area.

Requirement	Source	Recreational and Sensitive Areas Present
Nature preserves	NYS GIS Clearinghouse	None
Designated trails	NYS GIS Clearinghouse and local governments	See Figure 4-6
Public access fishing streams, camping areas	NYS GIS Clearinghouse, NYSDEC, Chenango County	See Figure 4-6
Oil and gas production	NYSDEC	See Figure 4-5
Gas and hazardous liquid pipelines[11]	Platts, NYSDEC, NYSDPS	See Figure 4-3
Major communication and utility uses and infrastructure	NYSDEC, Comsearch	See Figure 4-3
Institutional, community and municipal uses and facilities	ESRI; TIGER/line files; NYS GIS Clearinghouse	See Figures 4-2 and 4-6

Appendix 24-A, the Facility's Visual Impact Assessment (VIA) identifies visually sensitive resources, including recreational and other sensitive land uses that may be visually affected by the Facility. This assessment includes all visually sensitive resources within the Visual Study Area and also those with the highest probability of Facility visibility (i.e., those within the Area of Potential of Effect (APE); see Exhibit 3(a)(5) and Exhibit 24). Visually sensitive resources within the Visual Study Area with visibility of the Facility include: 17 sites listed on the State/National Register of Historic Places (NRHP); one state park (Bowman Lake State Park); 13 State Forests (Ambler, Basswood, General Jacob Morris, Hunts Pond, Ludlow Creek, Lyon Brook, McDonough, New Michigan, Pine Hill, South Hill, Wagner Farm, Whaupaunaucau, and Wiley Brook); six State boat launches or waterway access sites; three rivers or streams with Public Fishing Rights Easements; two villages (the Village of Oxford and the Village of Bainbridge); three hamlets (Holmesville, Mt. Upton, and Rockdale); various recreation trails; one golf club; 11 local parks and recreations areas; one interstate highway; eight state highways; and several public schools.

The Facility will have no direct impact on the resources identified in Figure 4-6 (i.e., the resources will not be removed or physically modified in any way). This includes minimal impacts on future oil, natural gas and mineral development within the Facility Site as all the Applicant's land lease agreements permit landowners the development of such natural resources, as well as the construction of and transportation of oil and gas gathering and transmission pipelines on such parcels. Such mineral development rights are allowed so long as such development lies outside a mutually agreed upon Exclusive Use Area and minimizes interference with the Facility's operations. The Facility's potential effect on any of the resources identified in Figure 4-6 is limited to a change in the visual setting resulting from the introduction of wind turbines. For more information regarding the anticipated visual impacts of the Facility and mitigation measures, see Exhibit 4(i) and Exhibit 24.

[11] There is one hazardous liquids pipeline within the 5-mile Study Area. However, this pipeline is not located within the Facility Site.

Appendix 19-A, the Preconstruction Noise Impact Assessment (PNIA) identifies sensitive sound receptors, which include residences (participating or non-participating, and full-time or seasonal), outdoor public facilities and areas, schools, hospitals, care centers, libraries, places of worship, public parks and public campgrounds, summer camps, and any historic resources listed or eligible for listing on the State or National Register of Historic Places, and Federal and New York State lands. These sensitive sound receptors are mapped in Figure 19-1. For more information regarding the anticipated noise impacts of the Facility and mitigation measures, see Exhibit 19 of this Application.

(i) Compatibility of the Facility with Existing and Proposed Land Uses

General Compatibility with Existing Land Use

According to the NYSORPS, the Facility Site consists of six distinct land use types. The majority of the Facility Site (approximately 34% in terms of acreage) is categorized as Vacant Land, which is defined as "property that is not in use, is in temporary use, or lacks permanent improvement." Wild, Forested, Conservation Lands and Public Parks constitutes approximately 26% of the Facility Site and is defined as “reforested lands, preserves, and private hunting and fishing clubs.” Residential land constitutes approximately 21% of the Facility Site and is defined as “property used for human habitation." Approximately 10% of the Facility Site is characterized as Agricultural, which is defined as “property used for the production of crops or livestock.” Industrial land constitutes approximately 5% of the Facility Site and is defined as “property used for the production and fabrication of durable and nondurable man-made goods." The remaining 4% of the land in the Facility Site is classified in the Public Services category, defined as “property used to provide services to the general public.” Table 4-9 summarizes land use impacts to each of these categories, based on the impact calculations detailed in Exhibit 22.

Table 4-9. Land Use Impacts

Land Use	Acres within the Facility Site	Temporary Impact (acres)	Permanent Impact[1] (acres)	Total Impact (acres)
100 - Agricultural	389.8	14.8	2.7	17.5
200 - Residential	815.3	62.0	12.1	74.1
300 - Vacant Land	1351.1	70.4	15.3	85.6
700 - Industrial	192.3	17.1	2.7	19.8
800 - Public Services	148.9	10.8	2.4	13.1
900 - Wild, Forested, Conservation Lands and Public Parks	1023.1	52.5	8.1	60.6
Total	3920.5	227.6	43.2	270.8

[1] Permanent disturbance will only be for the life of the proposed Facility (i.e., 30 years).

No substantial permanent changes in land use are anticipated because of Facility construction and operation, and no changes are predicted outside the Facility Site. The presence of the turbine bases, crane pads, access roads, substations, and the operation and maintenance (O&M) building will result in the cumulative conversion of approximately 43.5 acres—approximately 1% of the Facility Site—from its current use to built facilities.[12] Additional impacts to land associated with Facility operation will be temporary, infrequent, and minimal. Aside from occasional maintenance and repair activities, Facility operation will not interfere with ongoing land use (e.g., farming and forestry activities).

Compliance with NYSDAM Wind Power Project Guidance for Components Sited on Agricultural Lands

The NYSDAM has promulgated a guidance document that applies to wind power projects sited on agricultural lands. The *Guidelines for Agricultural Mitigation for Wind Power Projects* include siting goals, construction requirements, restoration requirements, and post-construction monitoring and remediation requirements. To minimize and/or mitigate impacts to active agricultural land and farming operations, Facility siting and construction will generally comply with NYSDAM agricultural protection guidelines (see Exhibit 22(q) for a full analysis of the impacts to agricultural land). As per typical NYSDAM requirements, the Applicant and/or Environmental Monitor will consult with NYSDAM during construction if deviation from the *Guidelines* is necessary (see Environmental Management & Compliance Plan in Appendix 22-C for additional information pertaining to environmental monitoring). The following mitigation measures will be implemented to minimize impacts to agricultural land:

- Road widths in agricultural fields will be limited and hedgerows and field edges will be followed where possible.[13]
- Roads that must cross agricultural fields will stay on ridge tops and other high ground, where feasible, to minimize cut and fill as well as potential drainage problems.
- Disturbance of surface and subsurface drainage features (ditches, diversions, tile lines, etc.) will be avoided where possible.
- Topsoil from agricultural areas used for vehicle and equipment traffic and parking will be stripped and stockpiled separately from other excavated material.
- Vehicular access to turbine sites will be prohibited until topsoil has been stripped and permanent access roads have been constructed.
- Vehicular access will be limited to construction roads only.

[12] Note, this acreage is slightly larger than the total permanent impact acreage presented in Table 4-9 as it also includes several small areas that do not have assigned land use codes (e.g., public road rights-of-way).
[13] The Applicant has coordinated with landowners to locate Facility components in mutually agreed upon locations. Additionally, efforts were made to avoid environmental (e.g., wetlands) and cultural resources, where feasible.

- Vehicle and equipment traffic and parking will be limited to the access road and/or designated work areas (e.g., tower sites, laydown areas, etc.). No vehicles or equipment will be allowed outside the work area without prior approval from the landowner and, when applicable, the Environmental Monitor.
- Blocking of surface water drainage due to road installation or stockpiled topsoil will be avoided.
- Farm access routes will be maintained throughout construction.
- Work areas in active pastureland will be temporarily fenced to protect livestock, consistent with landowner agreements.
- Excess concrete will be disposed off-site unless otherwise approved by the Environmental Monitor and the landowner. Excess concrete will not be buried or left on the surface of active agricultural areas.
- Concrete trucks will be washed as necessary outside of active agricultural areas in locations approved by the Environmental Monitor.
- Crane set-up, erection, and breakdown activities will be restricted to the laydown yard and designated access roads and work pads at the turbine sites.
- Restored agricultural areas will be stabilized in accordance with the Stormwater Pollution Prevention Plan (SWPPP) and in consultation with the landowner.
- All construction debris will be disposed off-site at the completion of restoration.
- Excess subsoil and rock will be relocated on-site in consultation with the landowner and the Environmental Monitor, with appropriate consideration given to any possible agricultural or environmental impacts.

Following construction, subsoil decompaction will be implemented in accordance with the project plans and the SWPPP, and in coordination with the landowner. The topsoil will be replaced to original depth and the original contours will be reestablished where possible. Impacts to surface and subsurface drainage features will be restored in accordance with commitments made to the landowner. No Facility restoration activities will occur in agricultural fields between the months of October through May unless favorable soil moisture conditions exist.

In addition to these measures, the Applicant will continue to consult with landowners and NYSDAM throughout the Article 10 process and during construction and operation of the Facility to ensure impacts to active agricultural land and farming operations are minimized and/or mitigated wherever practicable

Compatibility of Facility with Comprehensive and Regional Plans

The compatibility of the Facility with the Town of Guilford and Chenango County comprehensive plans is discussed in described Exhibit 4(e). In addition, there are several regional plans that apply to the area. Facility consistency with these regional plans is discussed in Table 4-10.

Table 4-10. Facility Consistency with Regional Planning Documents

Plan	Relevant Goals and Objectives	Facility Consistencies	Facility Inconsistencies	Uniform Resource Locator (URL)
New York Open Space Conservation Plan (2016)	- Maintain critical natural resource-based industries such as farming, forest products, commercial fishing and tourism. - Address global climate change (through various means). - Preserve, restore, and/or create a matrix of natural systems sufficiently complex and interconnected to be self-sustaining while performing the critical natural functions necessary to sustain us.	- Utilizes a renewable resource to generate electric power, without contributing to global climate change. - Preserves agricultural character of Facility Site and limits the conversion of participating land to non-agricultural uses. - No Region 7 – Central New York Priority projects are located in the 5-mile Study Area.	None	https://on.ny.gov/2vGiA6W
New York State Historic Preservation Plan (2015-2020)	- Enhance collaboration to advance preservation. - Integrate preservation into local and regional decision making.	- Coordinated with New York State Office of Parks, Recreation and Historic Preservation to develop site-specific work plans. - Coordinated with local representatives of Indian Nations regarding stone landscapes - Integrated design and field work to avoid impacts to cultural resources (see Exhibit 9)	None	https://on.ny.gov/2BdDtLQ

Plan	Relevant Goals and Objectives	Facility Consistencies	Facility Inconsistencies	Uniform Resource Locator (URL)
Statewide Comprehensive Outdoor Recreation Plan (2014-2019)	- Reconnect children and adults with nature and recreation by improving access to outdoor recreation opportunities. - Continue to develop a comprehensive, interconnected recreation-way, water trails, greenway and blueway trail system. - Continue efforts to restore, conserve and protect the biodiversity of state lands.	- Preserves agricultural character of Facility Site and limits the conversion of participating land to non-agricultural uses. - No direct impacts on known recreational resources.	None	https://on.ny.gov/2nADAHX
Southern Tier Upstate Revitalization Plan (2015)	- Focus on developing the advanced manufacturing and transportation sector through, in part, developing renewable energy and energy storage. - Support innovative and high-growth food and agriculture industries such as renewable energy through the Southern Tier Agriculture Development Fund.	- Provides opportunities for individuals in the Southern Tier to get hands-on experience working in the renewable energy field. - Aligns with renewable energy goals touched on throughout the plan, including developing renewable energy and energy storage.	None	https://on.ny.gov/2Ox3x6q

Plan	Relevant Goals and Objectives	Facility Consistencies	Facility Inconsistencies	Uniform Resource Locator (URL)
Cleaner Greener Southern Tier Regional Sustainability Plan (2013)	- Develop, produce, and deploy local renewable energy sources and advanced technologies across the Southern Tier. - Support farming and related businesses to reinvigorate the rural economy, enhance residents' incomes and standards of living, and promote local food and agriculture. - Create and retain more good paying jobs by building on the Southern Tier's regional strengths, including advanced energy and transportation technologies, globally competitive industry, and workforce development and technology transfer partnerships with educational institutions.	- Utilizes a renewable resource to generate electric power and provide local and regional economic benefits, including deploying advanced technologies (including battery storage). - Maintains and supports agriculture in the Facility Site. - Supports farms by supplementing farmer income. - Creates good paying temporary and permanent jobs.	None	https://bit.ly/2MLP06o
Southern Tier Central Comprehensive Economic Development Strategy (2016)	- Protect the resources and natural beauty of the region. - Act as a local clearinghouse in green site design, passive solar design, small scale energy production, sustainability, "new" agriculture, and environmental awareness.	- Utilizes a renewable resource to generate electric power. - Supports farms by supplementing farmer income.	- Some individuals may feel that wind facilities negatively impact natural beauty. This would be an inconsistency.	https://bit.ly/2Mi3IFz

Qualitative Assessment of Impacts to Land Use

The construction and operation of the Facility will result in certain unavoidable impacts that could affect land use. Most of these impacts will result from construction activities and will be temporary in nature. For example, although the Facility will not generate any unusual odors, there could be brief periods during construction where airborne dust levels could be elevated. Dust control procedures will be implemented to minimize the amount of dust generated by construction activities in a manner consistent with the Standards and Specifications for Dust Control outlined in the *New York State Standards and Specifications for Erosion and Sediment Controls* (NYSDEC, 2016b, pp. 16-17). See Exhibit 12 for additional information on potential dust-related impacts and control measures. Also, the Project may result in temporary impacts relating to stormwater discharges from the construction site. To address these impacts, the Applicant will develop and implement a SWPPP and otherwise comply with the requirements of NYSDEC's State

Pollutant Discharge Elimination System General Permit for Stormwater Discharges from Construction Activities. See Exhibit 23(c) for an additional discussion of stormwater issues; a preliminary SWPPP can be found at Appendix 21-4.

During construction of the proposed Facility, there will be a temporary increase in truck traffic on area roadways. A Route Evaluation Study was prepared to evaluate existing transportation conditions near the Facility Site and identify probable local traffic routes, constraints, and proposed improvements (see Appendix 25-1). This study determined that local traffic may experience minor delays due to slow moving construction vehicles and increased traffic related to the construction activities. However, local traffic flow should not be significantly impacted because existing traffic volumes are already low. To minimize any delays to local traffic during the construction phase, the Applicant will coordinate with the State, the County, and local municipalities to respond to any locations that may experience any traffic flow or capacity issues. See Exhibit 25 of this Application for more detailed information on traffic and transportation impacts from construction of the proposed Facility.

Long-term unavoidable impacts associated with operation and maintenance of the Facility are anticipated to be relatively limited, but will likely include turbine visibility, shadow flicker, and/or an increased level of sound at some receptor locations near the Facility Site, as well as very minor increases in traffic. Each of these impacts is discussed briefly below, with reference to the more detailed discussions found elsewhere in this Application.

The presence (i.e., visibility) of the turbines will likely result in a change in perceived land use from some viewpoints. The VIA (Appendix 24-1) identifies those locations within the Visual Study Area where there is potential for the proposed Facility to be seen from ground-level vantage points. Topography and vegetation block daytime views of the Facility from approximately 91.5% of the Visual Study Area (i.e., the Facility is likely to be visible from 8.5% of the Visual Study Area). Appendix 24-1 also describes visibility impacts on the sensitive sites listed above. The analysis presents the distance to the nearest turbine for each visually sensitive resource, along with results from the topographic and vegetation viewsheds, and identifies photographs taken from recreation sites and other sensitive areas during the field review.

Evaluations by registered landscape architects indicate that, while moderate/appreciable contrast is likely from some viewpoints, the overall contrast presented by the Facility will likely be minimal/moderate. The greatest perceived visual impact will likely occur where numerous turbines are visible, where the turbines are in close proximity to the viewer, or where the turbines appear out of place in their setting (e.g., in a residential context). Factors mitigating visual impact within the Visual Study Area include, 1) the rolling topography that limits the number of turbines visible from valley locations, 2) the relatively few viewers present on the elevated plateaus and ridgetops where views of numerous turbines and near foreground views will be available, 3) the substantial screening provided by existing foreground

landscape features in forested areas and areas of concentrated human settlement, and 4) the working agricultural character of much of the landscape in which the Facility would be viewed. Based on experience with currently operating wind power projects elsewhere, public reaction to the aesthetic qualities of the proposed turbines is likely to be highly variable. Reactions will be based on proximity to the turbines, the affected landscape, and personal attitude of the viewer regarding wind power. High contrast also does not always indicate adverse visual impact.

The panel of landscape architects evaluating the Facility indicated that, even where visual contrast is appreciable, the turbines are generally compatible with existing land use and viewer activity. Wind turbines are unlike most other energy/infrastructure facilities, such as transmission lines or conventional power plants, which are almost universally viewed as aesthetic liabilities. Wind turbines have a clean sculptural form that is considered attractive by some viewers (Pasqualetti et al., 2002). Visibility of the proposed turbines is not expected to affect the use and enjoyment of the Facility Site and surrounding areas for the current and planned land uses. For more information on turbine visibility and the anticipated visual impacts of the Facility, see Exhibit 24 of this Application.

A shadow flicker analysis has been prepared for the proposed Facility (see Appendix 15-A). This study indicates that for the most impactful turbine under consideration approximately 99% of receptors are predicted to receive less than 30 hours of shadow flicker per year and 85% of receptors are predicted to receive less than 10 hours of shadow flicker per year. Detailed viewshed analyses have not yet been conducted for all receptors predicted to receive more than 30 hours of flicker per year. Screening provided by mapped topography and vegetation, or to the orientation of the structure's windows relative to the turbine, may reduce the shadow flicker at these locations. This more refined analysis will be done for the final layout and wind turbine selected for the project. Regardless, available studies show that shadow flicker does not result in adverse health impacts. If shadow flicker is modeled to exceed 30 hours per year at a non-participating residence, the Applicant may: 1) work with the homeowner to provide reasonable mitigation alternatives including, as appropriate, shades, blinds, awnings, or plantings to significantly reduce the number of hours of shadow flicker inside the home, 2) coordinate with the landowner and sign a good neighbor agreement and become a Project participant, or 3) investigate operational controls at appropriate wind turbines contributing to greater than 30 hours per year of shadow flicker. See Exhibits 15 and 24 of this Application for more detailed information on shadow flicker impacts near the Facility Site.

Background sound monitoring was conducted at seven different monitoring sites near the Facility Site for two distinct periods (summer and winter) lasting at least 14 days each. Measured sound levels were variable, depending on the proximity to human activity and industry. The combined summer and winter equivalent average sound levels ranged from 46 to 66 dBA during the day, and from 45 to 58 dBA at night. The Facility is being designed to not exceed 45 dBA $Leq_{8hr\ night}$ outside non-participating permanent residences at night (averaged from 10:00 p.m. to 7:00 a.m.). This goal

is more stringent than established federal guidelines and is well below the level that can cause hearing impairment, according to the World Health Organization (WHO), the U.S Environmental Protection Agency (USEPA), and the Occupational Safety and Health Administration (OSHA). The 45 dBA $Leq_{8hr\ night}$ goal considers human health, hearing loss, and quality-of-life concerns. Various mitigation measures, such as sound waivers, blade design modifications and operating turbines in noise reduced operation modes, will be incorporated into the Facility to ensure compliance with the applicable local noise standard and consistency with the Facility design sound goal. See Exhibit 19 of this Application for more detailed information on the existing sound levels in the area, the potential noise impacts from the proposed Facility during construction and operation, and the mitigation measures to be implemented to minimize such impacts where necessary.

With respect to traffic, once the Facility is commissioned and construction activities are officially concluded, traffic will be negligible and likely concentrated around the O&M building. None of the potential traffic impacts are expected to affect the use and enjoyment of the Facility Site and surrounding areas for the current and planned land uses. See Exhibit 25 of this Application for more detailed information on traffic and transportation impacts from operation of the proposed Facility.

Assessment of Nearby Land Uses of Particular Concern to Community

Land uses of concern to the community include residential areas, schools, civic facilities, recreational facilities, commercial areas, and open space. No schools or civic facilities are located within one mile of Facility components, and no impacts to these land uses are anticipated. The North Guilford Church, a site of particular concern to the community, is located approximately 0.80 miles from the nearest Facility component (turbine T105). The Facility will have no direct impacts on this site. Impacts to areas classified as residential by the NYSORPS will total 815 acres, of which 62 acres will be temporarily impacted (subject to restoration following construction), and 12 acres will be converted to built facilities.

(j) Compatibility of Above-Ground Interconnection with Existing and Proposed Land Uses

The Applicant intends to install collection lines underground to the maximum extent practicable. The proposed Facility will connect the collection and point of interconnection substations using approximately 200 feet of aboveground transmission line. These aboveground lines will be located solely at a heavily developed section of the Facility Site (i.e., the substations) and so will have no significant environmental impact. The potential effects on visibility resulting from the short segment of overhead transmission line are described in Exhibit 24 and Appendix 24-1.

(k) Compatibility of Underground Interconnections with Existing and Proposed Land Uses

The Facility will include 33.4 miles of underground collection lines. A total of 1,280 acres will be located within 300 feet of the centerline of underground collection lines and related facilities, of which approximately 7 acres (1%) consists of public road rights-of-way that are not part of any parcel, and as such, have no NYSORPS land use code. Land use for the remaining 1,273 acres has been classified by the NYSORPS as follows: Agriculture, 108 acres (8%); Residential, 338 acres (26%); Vacant Land, 406 acres (32%);Industrial, 84 acres (7%); Public Services, 31 acres (2%), and Wild, Forested, Conservation Lands, and Public Parks, 305 acres (24%). Approximately 908 acres (71%) of the land within 300 feet of an underground collection line is currently enrolled in a NYS Certified Agricultural District. The Facility's proposed underground collection lines will not prohibit the continued use of the current adjacent land uses.

The construction of buried interconnects will result in a temporary disturbance. As discussed in Exhibit4(i), in agricultural fields, construction will be generally be conducted in accordance with the NYSDAM *Guidelines for Agricultural Mitigation for Wind Power Projects,* which require underground lines to be installed 48 inches or more below ground on agricultural lands. Otherwise, underground lines will be installed at least 36 inches below ground. At these depths, permanent land use impacts associated with underground interconnects are not anticipated. To minimize impacts in forested land, buried underground interconnects will be placed in areas of existing disturbance (e.g., existing farm roads and forest logging roads) to the maximum extent practicable. Where impacts to important environmental resources would otherwise be unavoidable (e.g., stream crossings), trenchless technologies (e.g., horizontal directional drilling and jack and bore) will be used to minimize impacts.

(l) Conformance with the Coastal Zone Management Act

The Facility Area is not located within a designated coastal area or in direct proximity of a designated inland waterway. Therefore, conformance with the Coastal Zone Management Act or the Waterfront Revitalization of Coastal Areas and Inland Waterways Act is not required.

(m) Aerial Photographs

Figure 4-7 contains aerial photographs within a 1-mile radius of the Facility. This mapping was prepared using 1-meter resolution natural color orthoimagery from the U.S. Department of Agriculture's (USDA) National Agriculture Imagery Program (NAIP) captured during the 2017 growing season. The aerial photograph mapping is depicted on multiple 11x17 inch sheets at a scale that allows identification and discrimination of natural and cultural features.

(n) Aerial Photograph Overlays

Figure 4-7 illustrates the Facility components along with the proposed limits of vegetation and soil disturbance overlaid on 1-meter NAIP imagery captured in the 2017 growing season. These maps were created using ArcGIS software. Line symbols are used to depict the centerlines of proposed access roads and electrical collection lines; point symbols to depict turbine and permanent meteorological tower locations; and polygon symbols to depict substations, the O&M building, and construction laydown areas. Buffers around each Facility component show the anticipated limits of clearing, limits of grading, and permanent impervious surfaces (i.e., built facilities).

(o) Source of Aerial Photographs

As previously noted, Figure 4-7 was prepared using 1-meter resolution natural color orthoimagery from the USDA's NAIP captured during the 2017 growing season.

(p) Community Character

The proposed Facility will be constructed in a rural portion of Chenango County that is characterized by a mix of agricultural and forested land. According to the *Chenango County Agricultural & Farmland Development Plan,* as of 2007, farms in Chenango County comprised approximately 177,267 acres of land, or approximately 30% of the county's land mass. The most common agricultural land uses included cropland (72,490 acres) and hay/forage (55,372 acres) (Chenango County Agriculture & Farmland Protection Board).

Photographs of landscape features and defining elements within the vicinity of the Facility Site are provided in a stand-alone photolog (Appendix 04-A).

The proposed Facility is consistent with the rural forested and agricultural character of the surrounding community. Approximately 2,892 acres of the 3,921-acre Facility Site are enrolled as NYSDAM certified agricultural districts. However, much of this area appears to be forested or otherwise not in production (see Figures 4-2 and 4-7). The Facility will permanently disturb 36.3 acres (approximately 1%) of agricultural district land within the Facility Site. Although active farmland within these permanently impacted areas will be taken out of agricultural use, the remaining farmland within the Facility Site can continue to be used for agricultural purposes. Moreover, lease payments paid to participating farmers will improve the long-term economic viability of those farms. These payments will likely have indirect positive effects on the agricultural character of the community by increasing farm profitability and thereby preserving normal farm operations.

The operation of wind turbines and other Facility components will generate sound (see Exhibit 19 and Appendix 19-A); however, these sound levels should not affect the character of the community. Operational noise levels of the Facility will comply with applicable noise standards and guidelines as outlined in Exhibit 4(i) and Exhibit 19. In addition, the Facility has been designed to avoid and minimize noise impacts by adhering to established setbacks (see Exhibit 6 for a further discussion of setbacks).

The Facility will introduce new visual elements (i.e., wind turbines) into the existing landscape, which could be considered a change in community character for the primarily rural residential areas that surround the Facility Site. However, the visibility and visual impact of the wind turbines will be highly variable based on distance, number of turbines in the view, weather conditions, sun angle, extent of visual screening from topography and vegetation, scenic quality, viewer sensitivity and/or existing land uses. See Exhibit 4(i), Exhibit 24, and Appendix 24-A for a further discussion of visual impacts.

Avoidance or mitigation measures that will minimize adverse impacts on community character include but are not limited to the following:

- Siting the Facility away from population centers and areas of residential development.
- Locating access roads and turbines to avoid or minimize disturbance of agricultural land, wetlands, streams, and cultural/historic resources.
- Using existing roads for turbine access whenever possible to minimize disturbance to agricultural land, wildlife habitat, wetlands, and streams.
- Burying electrical interconnection lines between turbines.
- Implementing agricultural protection measures to avoid, minimize, or mitigate impacts on agricultural land and farm operations.
- Working with Indian Nations to minimize and address impacts to stone landscapes and other cultural resources.
- Working with the New York State Historic Preservation Office to determine and implement, as needed, mitigation measures for historic resources.
- Consulting with various stakeholders to determine visually sensitive resources and appropriate viewpoints and addressing questions and concerns.
- Complying with the host municipalities' substantive laws regarding the construction and operation of the Facility.

There are numerous Facility-specific studies attached to this Application, such as a Visual Impact Assessment (see Appendix 24-A), a Preconstruction Noise Impact Assessment (see Appendix 19-A), Cultural Resources Studies (see

Appendices 20-B and 20-E), and a Shadow Flicker Assessment (see Appendix 15-A). In addition to evaluating potential effects on their respective resources, these studies can also be used to evaluate the Facility's potential effects on community character. See also Exhibit 25 of this Application for a discussion of Facility impacts on transportation, including any effect land use might have on the Lieutenant Warren E. Eaton Airport (OIC) along with local airstrips and heliports. These exhibits also outline the various mitigation measures that are being implemented to minimize and avoid impacts on the environment and the community where the Facility is proposed.

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