Bluestone Wind Project

Case No. 16-F-0559

1001.4 Exhibit 4

Land Use

TABLE OF CONTENTS

EXHIBIT 4 LAND USE 1
(a) Map of Existing Land Uses 1
(b) Transmission Facilities Map 3
(c) Tax Parcel Map 3
(d) Zoning District Map 4
(e) Comprehensive Plans 11
(f) Map of Proposed Land Uses and Known Gas Wells and Permitted Bluestone Mines 16
(g) Map of Specially Designated Areas 16
(h) Map of Recreational Areas and Other Sensitive Land Uses 18
(i) Compatibility of the Facility with Existing and Proposed Land Uses 19
(j) Compatibility of Above-Ground Interconnection with Existing and Proposed Land Uses 28
(k) Compatibility of Underground Interconnections with Existing and Proposed Land Uses 28
(l) Conformance with the Coastal Zone Management Act 28
(m) Aerial Photographs 29
(n) Aerial Photograph Overlays 29
(o) Source of Aerial Photographs 29
(p) Community Character 29
(1) Property Value 31
REFERENCES 35

EXHIBIT 4 LAND USE

(a) Map of Existing Land Uses

NYSORPS Land Use Classification

Figure 4-1 illustrates existing land uses in the area 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 the Broome County GIS Department and the Delaware County Planning Department 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; 400 – Commercial; 500 – Recreation and Entertainment; 600 – Community Services; 700 – Industrial; 800 – Public Services; and 900 – Wild, Forested, Conservation Lands and Public Parks.

Vacant Land

Approximately 1,840 acres within the Facility Site have been classified as Vacant Land under the NYSORPS classification system. Approximately 1,519 acres of the vacant land are forested, 135 acres are row or field crops, 156 acres are successional old field, 28 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), and 2 acres are open water.[1] Of the 1,840 acres of Vacant Land, approximately 772 acres are currently enrolled as a NYS Certified Agricultural District, discussed in greater detail below.

In addition, the Applicant consulted municipal officials on the existing use of land classified as "vacant" by NYSORPS during a meeting on June 19, 2018. Based on the discussion and information received from these officials, it was confirmed these parcels were generally vacant and used for hunting and/or 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 contiguous acres. The landowner must commit to follow a 10-year 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

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

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 Broome County and Delaware County, four parcels within the 5-mile Study Area are enrolled in the 480-a program; however, none of these four parcels are located within the Facility Site. The Applicant also conducted a more detailed analysis of tax designations for parcels within the Facility Site and found that, according to the 2018 Final Assessment Roll for the Towns of Sanford and Windsor, there are four properties subject to the 480-a forestry program within the Facility Site (see Figure 4-2).

New York State Agricultural Districts

State-certified Agricultural Districts cover a third of the land within the towns of Sanford and Windsor. Approximately 2,419 acres (43%) of 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, most of these areas appear to be forested or otherwise not in production (see Figure 4-9). Figure 4-2 depicts agricultural district land on 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 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 4-1 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 Section (i).

Table 4-1. 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)
Broome County District 3	2,418.6	150.4	122.4	28.0
Total	2,418.6	150.4	122.4	28.0

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

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 351 conservation easements in Broome and Delaware counties; four of which are within the 5-mile Study Area (see Figure 4-2). Although none of these conservation easements are within the Facility Site, three are adjacent to the Facility Site, with boundaries within 0.15 miles of the nearest proposed turbine site.[2] The fourth conservation easement is approximately 4 miles from the nearest proposed turbine site. All four easements are held by the Delaware Highlands Conservancy. Facility turbines may be visible from the conservation easements in the 5-mile Study Area and from some of the conservation easements in Broome and Delaware counties. However, there will be no direct impacts to these lands or to the ecological functions and values protected by the easements.

(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. 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 4-4 illustrates existing boundaries of all parcels within 2,000 feet of Facility components. 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 the Broome County GIS Department.

[2] Note, although legally distinct, these three easements are connected and geographically unified.

(d) Zoning District Map

Zoning jurisdiction in Broome County and Delaware County is at the city/town/village level. Figure 4-5 illustrates existing and proposed zoning districts in the 5-mile Study Area for the Towns of Sanford, Windsor, and Colesville and the Villages of Deposit and Windsor in Broome County, based on data obtained from these municipalities.[3] Summaries of the zoning ordinances for these towns and villages 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. See Exhibit 31 for additional details regarding zoning within the Facility Site.

Town of Sanford

In 1992, the Town of Sanford adopted "Land Use Management Law #1" to regulate land use. This law establishes eight land use management districts: Residential (R), Residential Multiple (RM), Agricultural (A), Mobile Home (R-MH), Travel Trailer (R-TT), Commercial (C), Special (S), and Limited Industrial (L).

Permitted uses in Residential (R) and Residential Multiple (RM) Districts include: one and two-family dwelling units, religious institutions, schools, hospitals, nursing homes, public buildings and uses, public parks, and community centers. Electrical distribution structures, public utility structures, and other special uses are permitted by special permit from the Town Zoning Board of Appeals ("Board of Appeals"). Professional residence-office uses are also permitted in RM Districts. One accessory building is permitted in these districts.

Permitted uses in the Agricultural (A) District include agricultural use, one and two-family dwelling units, religious institutions, schools, hospitals, outdoor recreation, wildlife refuges, stables, cemeteries, mobile homes (one per parcel), and special uses as permitted by the Board of Appeals. Customary incidental accessory buildings and uses not conducted as a business (e.g., private garage, tool house, farm buildings, etc.) are permitted. The following uses are also permitted after issuance of a special use permit by the Board of Appeals: home occupation, stone extraction, public utility substations, aircraft landing strips, family units, public garages, rental stores, sawmills, resorts, gun and rod clubs, combination resorts and hunting camps, boys and girls camps, golf courses, recreation clubs, Commercial Wind Energy Conversion Systems (WECS), Commercial Solar Energy Production Facilities (SEPF), and other uses.

[3] Note, the Towns of Masonville, Tompkins, and Deposit in Delaware County fall within the 5-mile Study Area, but town zoning maps and ordinances have not been established in these Towns.

Permitted uses in the Mobile Home (R-MH) District include mobile homes and mobile home parks and any uses permitted in the Agricultural District. Permitted uses in the Travel Trailer district include travel trailers, travel trailer parks and any uses permitted in the Agricultural District.[4]

Permitted uses in a Commercial (C) District include professional offices and home occupations, hospitals, restaurants and bars, funeral homes, clubhouses for fraternal and civic organizations, second story dwelling units, public utilities, appliance sales and services, clothing stores, furniture stores, shoe stores, department and specialty stores, hotels, theaters or other types of indoor recreation, bowling alleys, banks, automobile sales and services, animal hospitals, machinery and equipment sales, drive-in theaters, drive-in food service, community centers, and any use permitted in Residential Multiple districts. Shopping plazas, gasoline stations, car washes, motels, adult uses, and other uses may be allowed after review by the Board of Appeals and issuance of a special permit.

Permitted uses in the Special (S) District include summer cottages or residences and year-round single residences. The following uses are also permitted after issuance of a special use permit by the Board of Appeals: summer resorts, rod and gun clubs, combination resorts and hunting camps, boys and girls camps, golf courses, recreation clubs, fishing supply stores, bathhouses, accessory uses, and other uses.

Permitted uses in the Limited Industrial (L) District include laboratories, research institutes, blue printing, photo staining, warehouses, wholesale business, public utility structures, trucking terminals, truck sales, auto and equipment sales, repair and service shops, accessory uses, and any uses permitted in the Commercial District, except for residential uses. Gasoline stations, industrial parks, car washes, sawmills, and other uses may be allowed after review by the Board of Appeals and issuance of a special permit.

The Facility will be located exclusively in the Agricultural (A) District. As set forth more fully in Exhibit 31, the Town of Sanford has determined that the basic requirements of the Town Zoning Code are superseded by the more specific requirements for WECS included in the Town's Wind Energy Law, set forth at Local Laws No. 1 and 2 of 2017.

Town of Windsor

The Town of Windsor enacted a Zoning Ordinance in 1972. This ordinance established five zoning districts: Residential District (R-14), Agriculture District (A), Commercial District (C), Industrial District (I) and Flood Hazard District (FHD).

[4] Uses requiring a special permit in an Agricultural district will also require a special permit in a Mobile Home or Travel Trailer district.

Permitted uses in the Residential (R-14) District include one and two-family residences, boarding houses, churches and other places of worship, public and private parks, funeral homes, tourist homes, cemeteries, electrical distribution substations, libraries, and nursing and/or convalescent homes. Trailers are not allowed to be used as residences in the Residential District. Other uses permitted in this district include accessory structures (e.g., private garages) and customary agriculture operations; however, no odor or dust-producing substances shall be permitted within 100 feet of a residence.

Permitted uses in the Agriculture (A) District include agriculture, residences, churches and other places of worship, schools, public and private parks, cemeteries, hospitals, philanthropic institutions, veterinarian hospitals, public buildings, saw and lumber mills, quarry operations, creameries and feed mills, golf courses, skiing facilities, electrical distribution substations and other public utility structures and business signs for agriculture purposes. One trailer may be used as a dwelling on a lot or plot, and mobile home parks may be permitted under a special use permit.

Permitted uses in the Commercial (C) District include retail uses, service uses, offices, one, two and multiple family dwellings, motels, gasoline service stations, churches and other places of worship, public buildings, theaters and other places of public amusement, electrical distribution substation and other public utility structures, fraternal organizations, and self-storage facilities. All commercial development projects are subject to site plan review from the Town of Windsor Planning Board.

Permitted uses in the Industrial (I) District include the assembly of machinery, appliances, instruments and similar products; food-processing plants, including creameries, bakeries and bottling works; laundries and dry-cleaning plants; printing, lithographic, typesetting and binding establishments; laboratories and clinics; warehouses, wholesale establishments, feed mills, or lumber and mill supplies; gasoline service stations, repair garages, automobile, truck and trailer sales; any manufacturing, fabricating, processing or maintenance establishments; and electrical distribution substations and other public utility structures. Prohibited uses include the manufacture of heavy chemicals or other corrosives, automobile wrecking yards, scrap iron and junkyards.

Permitted uses in the Flood Hazard District (FHD) include agricultural uses such as general farming, pasture, grazing, outdoor plant nurseries, truck farming, forestry and storage; private and public recreational uses such as golf courses, tennis courts, golf driving ranges, archery ranges, picnic grounds swimming areas, parks, wildlife or nature preserves, game farms, hunting and fishing areas, hiking and horseback riding trails; and uses such as lawns, gardens and play

areas which are accessory to residential uses. These uses are permitted, provided they do not require structures,[5] fill, or the storage of material or equipment except for agricultural purposes.[6]

The Facility will be located exclusively in the Agriculture (A) District and no aboveground components will be located in any FHD.[7] As discussed in Exhibit 31, the permitted principal uses in the A District include "[e]lectrical distribution substations and other public utility structures." The turbines are a permitted use in this district under the Town of Windsor Zoning Code.

Town of Colesville

The Town of Colesville enacted a Land Use Local Law in 1984. This law established four zoning districts: Commercial District (C), Industrial District (I), Residential District (R), and Rural Agricultural District (R/AG).

Permitted uses in the Commercial District (C) include mobile home lots, 1-2 family dwellings, public buildings/uses, churches, boarding/rooming homes, funeral homes, lodges and grange halls, restaurants, retail and service stores, offices, theatres, vehicle service, freight terminal, wholesale business, limited agriculture, and motels.

Permitted uses in the Industrial District (I) include food processing, manufacturing, other processing, assembly junkyards, vehicle service, adult entertainment/book stores.

Permitted uses in the Residential District (R) include 1-2 family dwellings, lodges and grange halls, boarding and rooming homes, parks and playgrounds, limited agriculture, multi-family dwelling, funeral homes, nursing homes, schools, churches and temples, and public buildings/uses.

Permitted uses in the Rural Agricultural District (R/AG) include multi-family dwellings, mineral extraction, agriculture, 1 mobile home per lot, funeral homes, retail and service stores, car wash, automobile or mobile home sales, vehicle service, retail and service stores, lodges and grange halls, boarding and rooming homes, churches and temples, golf courses and other similar recreation uses, public buildings and uses, nursing homes, cemeteries, schools, parks and playgrounds, and sawmills.

[5] Except an addition not exceeding fifty percent (50%) of the building or industrial structure, provided that the additions conform with all ordinance provisions.
[6] The flood damage potential of which is proven significantly low and having non-obstructing flood flow qualities.
[7] Underground collection lines will cross Oquaga Creek, which is in a FHD; however, the installation of these collection lines will not require structures or fill.

Sanitary landfills, sludge disposal, landspreading, leachate treatment, toxic waste facilities, and similar uses are prohibited in all districts.

Village of Deposit

Chapter 140 of the Code of the Village of Deposit, entitled Zoning, was enacted in 1998. This law established seven districts: Agricultural (AGR), Residential Single-family (RSR-7), Residential Two-family (RTF6), Residential Multi-family (RMF-6), Central Business District (CBD), Commercial Highway Oriented (CHO), and Industrial (IND).

Permitted uses in the Agricultural District (AGR) include animal husbandry and veterinary hospitals, mobile home dwellings, one-family detached dwellings, two-family detached/semi-attached dwellings, institutions (e.g., churches, private schools, nursing homes, cemeteries, and mausoleums), kennels, stables, and riding academies, mobile home parks, nurseries and greenhouses, public utility buildings, and publicly owned buildings.

Permitted uses in the Residential Single-family District (RSR-7) include one-family detached dwellings, institutions (e.g., churches, private schools, nursing homes, cemeteries, and mausoleums), open field agriculture, public utility buildings, and publicly owned buildings.

Permitted uses in the Residential Two-family District (RTF-6) include one-family detached dwellings, one-family semi-attached dwellings, two-family detached or semi-attached dwellings, institutions (e.g., churches, private schools, nursing homes, cemeteries, and mausoleums), open field agriculture, public utility buildings, and publicly owned buildings.

Permitted uses in the Residential Multi-family District (RMF-6) include one-family detached dwellings, one-family semi-attached dwellings, two-family detached or semi-attached dwellings, multi-family dwelling units, one-family attached dwelling units, institutions (e.g., churches, private schools, nursing homes, cemeteries, and mausoleums), open field agriculture, public utility buildings, and publicly owned buildings.

Permitted uses in the Central Business District (CBD) include auto/vehicle sales or rental, banks, medical/dental professional and business offices, bulk sales and rental, dance halls, theaters, bowling alleys, indoor recreation, private clubs, fast food restaurants, gasoline service stations, headquarters for education, fraternal, professional, religious and other nonprofit organizations, hotels, motels, and tourist homes, institutions (e.g., churches, private schools, nursing homes, cemeteries, and mausoleums), mortuaries, motor vehicle parking lots, printing and publishing of books and

newspapers, public utility buildings, publicly owned buildings, residential apartments over commercial uses, restaurants, banquet halls, bars, lounges, taverns, retail/personal service stores and shops, and wholesale trades.

Permitted uses in the Commercial Highway Oriented District (CHO) include adult entertainment businesses, auto and vehicle sales or rental, banks, medical/dental, professional and business offices, bulk sales and rental, car washes, conference/meeting centers, contractor's and building material storage yards, creameries, dance halls, theaters, private clubs, bowling alleys, indoor recreation, farm supply and feed stores, fast-food restaurants, gasoline service stations, headquarters for educational, fraternal, professional, religious and other nonprofit organizations, hotels, motels, and tourist homes, institutions (e.g., churches, private schools, nursing homes, cemeteries, and mausoleums), laundromats, lumberyards, mobile home parks, mortuaries, motor vehicle repair garages, motor vehicle parking lots, nursery schools, printing and publishing of books and newspapers, public utility buildings, publicly owned buildings, residential apartments over commercial uses, restaurants, banquet halls, bars, lounges, and taverns, retail/personal service stores and shops, shopping centers, warehouses, and wholesale trades.

Permitted uses in the Industrial District (IND) include the assembly of previously manufactured goods and services, auto/vehicle sales and rental, bottling works, bulk sales and rental, cold storage, contractor's and building material storage yards, creameries, farm supply and feed stores, food-processing plants, baking plants, foundries, blacksmithing and boilerworks, general manufacturing, institutions (e.g., churches, private schools, nursing homes, cemeteries, and mausoleums), junkyards, laundries and dry-cleaning plants, lumbermills, lumberyards, motor vehicle parking lots, motor vehicle repair garages, plastics modeling, printing and publishing of books and newspapers, public utility buildings, publicly owned buildings, research, development, experimental or testing laboratories, sewing of fabrics plants, stone crushing plants, refineries, gasoline storage tanks, vehicle body/fender works, warehouses, and wholesale trades.

Village of Windsor

Chapter 200 of the Code of the Village of Windsor, entitled Zoning, was enacted in 1967. This law established six districts: Residence District (RA), Residence District (RB), Commercial District (C), Commercial Downtown District (CD), Industrial District (I), Residence/Commercial Transition Zone (RA/C).

Permitted uses in the RA Residence District include one-family dwellings, but excluding a trailer used for a dwelling; churches or similar places of worship; cemeteries and the buildings and structures incidental thereto; public schools and private schools; public parks, playgrounds and recreational areas (i.e., golf course, country club, etc.) and similar uses when operated by membership organizations for the benefit of their members and not for gain; public libraries

and public hospitals; electrical distribution substations and other public utility structures of a similar nature necessary for the service of the area; philanthropic or eleemosynary institution other than a camp; professional offices; and customary home occupations.

Permitted uses in the RB Residence District include all uses permitted in RA Residence Districts; multiple dwellings; trailers; trailer parks; hotels, motels and the necessary accessory service areas or accessory buildings; and two-family dwellings.

Permitted uses in the Residence/Commercial Transition District (RA/C) include all uses permitted in the RA Residence District, antique shops, art galleries, restaurants, microbreweries, personal service shops, retail shops, bed and breakfast operations, theaters, and other similar service and/or retail uses.

Permitted uses in the Commercial District (C) include all uses permitted in RB Residence Districts; stores and shops for the conducting of any retail businesses; personal service shops; banks, theaters, offices, restaurants, and similar community service; garages and filling stations; places of public amusement; places of business; and accessory buildings and uses customary for commercial purposes.

Permitted uses in the Commercial Downtown District (CD) include all uses permitted in Commercial District save that no dwellings or residences shall be permitted on the first or ground floor of any structure located in a Commercial Downtown District.

Permitted uses in the Industrial District (I) include any use permitted as a matter of right or on a special permit in any other district subject to all specification and requirements for such use; baking plants; coal, coke or lumber yards; laundry; veterinary hospital; motor vehicle repair shops; cold storage plants; creameries; dry-cleaning plants; meat packing; and uses of a light manufacturing nature. The following uses are prohibited in the Industrial District: abattoirs; dead animals and offal reduction; fat rendering; petroleum storage; power forges; rock crushers; scrap paper or rag storage; scrap iron or junk storage; cement batching; boilermaking; bone distillation; petroleum refining and tar distillation; stockyards; curing, tanning, and storage of hides; manufacture of asphalt, ammunition, brick, carbon, disinfectant, fireworks, glucose, paper, plaster, scrap, tile, vinegar, etc., acids, ammonia, cement, chlorine, fertilizer, glue, gypsum, lime, soda, dyestuffs, grease, lard or tallow, matches, rubber, plaster of paris, etc; and those industries that emit excessive or frequent smoke, gas, noise, odor vibration, and dust or other substances or conditions that constitute a nuisance or detriment to public safety, convenience, or welfare.

(e) Comprehensive Plans

The Town of Sanford adopted a Comprehensive Plan in 1992 while the Town of Windsor adopted a plan in 2006 and amended it in 2015. Broome County adopted a Comprehensive Plan in 2013. Each of these Plans are reviewed below.

Town of Sanford Comprehensive Plan

The Town of Sanford issued a Comprehensive Plan in 1992 to serve as a foundation upon which the Planning Board and Town Board could prioritize future development objectives. The plan established the following broad planning goals for the Town of Sanford:

1. Maintain the rural residential community, with an emphasis on agricultural quality;
2. Foster continued residential growth in the community;
3. Foster sensitive development that preserves the quality of the natural features that attract people to the area;
4. Encourage development to broaden the tax base, provide employment, and provide goods and services to residents;
5. Maintain the transportation system; and
6. Entertain investigations to ensure that the delivery of public goods and services is maintained or expanded at reasonable cost to the public.

In addition, the plan outlines a land use plan that establishes categories of land use (i.e., zoning districts), and provides the following recommendations, based on how the goals outlined above interact with the land use plan:

1. Adopt the Comprehensive Plan as the Master Plan for development in the Town of Sanford;
2. Promote development in areas identified for such use;
3. Preserve the agricultural character of the Town by encouraging compatible agricultural uses and limiting inappropriate, non-agricultural uses;
4. Create flexibility for development in the resort/recreational areas to allow small-lot seasonal home uses, while respecting the sensitive environment of waterfront properties; and
5. Promote the preservation of agricultural and recreational assets, the extension and development of public utilities, the centralization of Town services, and consideration of limitation on tax abatement.

The plan does not specifically contemplate wind energy development, nor does it discuss other sources of renewable or conventional energy. Nevertheless, the proposed Facility is consistent with the goals of preserving the rural residential community while fostering development. The Facility will not physically impact any agriculturally related structures, and aside from temporary disturbance during construction activities (subject to restoration), will be largely

compatible with farming practices. Furthermore, the presence of wind turbines will help preserve agricultural character and limit the conversion of land to non-agricultural uses. The Facility also will broaden the tax base, provide jobs to individuals in the region, and promote the long-term economic viability of participating farmers through lease agreements. A digital copy of the Town of Sanford's Comprehensive Plan will be provided on a compact disc with the filing of this Application.

Town of Windsor Comprehensive Plan

In 2015, the Town of Windsor amended its 2006 Comprehensive Plan to provide municipal officials and residents with direction and guidance for future development of the Town. The plan is designed to: maintain the rural residential community with emphasis on agricultural quality; foster sensitive development that will preserve the quality of the natural features that attract people; encourage development to broaden the tax base, provide employment and goods and services to the region and residents; allow for and encourage the responsible development of natural gas, oil, hydro power, geothermal, wind, solar and other energy deriving technologies as an economic driver; encourage and assist development of basic utilities such as water, sewer, communications technology, electric, and natural gas within its borders to aid general development; and entertain investigations on its own behalf (or with other local governments and public institutions) to ensure that the delivery of public services is maintained (and/or expanded) at reasonable cost.

The plan describes the Town's physical features and natural resources, along with existing land use, transportation, and housing, and identifies the following goals:

Overall appearance

1. Maintain a rural atmosphere;
2. Ensure residential properties and structures are well maintained;
3. Continue to provide for the appropriate development of nonresidential structures and projects; and
4. Protect natural resources, specifically the Susquehanna River and forested lands.

Local Economy

1. Identify businesses/industries that are desirable candidates for the Town of Windsor;
2. Promote the Town of Windsor as a location for commercial and light industrial development;
3. Maintain the remaining agricultural economy;
4. Encourage new alternative agricultural endeavors;
5. Encourage home-based businesses;

6. Encourage tourism and recreational enterprises;
7. Promote Windsor as a recreational and tourist area; and
8. Support mining and timbering as viable industries in the Town.

The Population

1. Strengthen the sense of the Town as one community;
2. Encourage youth activities by creating opportunities for the youth as members of the community; and
3. Address needs of the aging and senior population.

The Susquehanna River Corridor

1. Promote protection of the Susquehanna River corridor and its tributaries;
2. Redefine floodplain and floodway areas along the corridor; and
3. Discourage development adjacent to the river and tributary streams that would compromise the integrity of the water quality.

Recreational Facilities

1. Promote existing recreational facilities including parks, trails and school facilities;
2. Protect recreational opportunities along the Susquehanna River;
3. Work with the private lake associations to protect the integrity of those lakes for recreational use by the residents;
4. Continue to work with the Windsor School District to encourage use of the recreational facilities and programs offered by the school; and
5. Continue to work will the Village of Windsor to promote community use and activities at Klumpp Park.

Local and Regional Government

1. Continue to cooperate with the Village and School Boards;
2. Amend zoning laws to encourage desired development;
3. Provide consistent and fair implementation of local planning and zoning regulations;
4. Encourage shared services with neighboring towns and the Village; and
5. Use services provided by the Broome County Offices.

Natural Resources

1. Protect the integrity of all natural resources;
2. Encourage best management practices for timber harvesting and mining; and

3. Protect all waterways, including rivers, streams, lakes and ponds.

New York State Route 17 (Interstate 86)

1. Encourage development along the corridor, concentrating on interchanges; and
2. Work with the New York State Department of Transportation to ensure continued use and maintenance of all five interchanges in the Town.

Town of Windsor Transportation Network

1. Support highway department assessment of needed repairs and maintenance;
2. Develop driveway and private road standards; and
3. Amend zoning laws to incorporate all types of transportation.

Land Use

1. Develop hamlet area zoning;
2. Develop subdivision regulations supporting large lot zoning;
3. Protect agricultural land uses in the Town;
4. Encourage commercial and industrial development along highway corridors; and
5. Encourage economic growth and energy development throughout the Town.

In outlining the purpose of this plan, the Windsor Planning Board states explicitly that "[t]he Town will allow for and encourage the responsible development of natural gas, oil, hydro power, geothermal, wind, solar and other energy deriving technologies as an economic driver" (Windsor Comprehensive Plan, p. 2). Furthermore, in goal five under Land Use, the Windsor Planning Board outlines the following Town objectives specific to wind energy development: "[d]evelop standards that allow solar and wind power applications through both residential and commercial applications;" "[d]evelop local laws to allow and regulate the development of energy deriving practices in a manner that is responsible and in concert with current technologies, future technologies, and the local rural atmosphere;" and "[d]evelop standards that will allow the building of energy-generating facilities with green or conventional technologies" (Windsor Comprehensive Plan, p. 59). The plan also discusses the importance of maintaining the remaining agricultural economy (Windsor Comprehensive Plan, p. 50).

The proposed Facility is consistent with and will meaningfully contribute to goals established in the Town of Windsor Comprehensive Plan. The Facility will encourage economic growth and energy development through the responsible development of wind energy deriving technologies while maintaining rural properties. The construction and operation of the Facility will not result in a change in land use, and by supplementing the income of participating farmers, will help

maintain the remaining agricultural economy. The Town of Windsor's 2015 Comprehensive Plan will be provided on a compact disc with the filing of this Application.

Broome County Comprehensive Plan

The Broome County Comprehensive Plan was prepared in 2013 by the Broome County Planning Board in coordination with a Steering Committee comprised of representatives from the local communities. This plan was developed to protect resources, give validity to local land use decisions, guide infrastructure investments, support grant writing, and foster economic development. The plan discusses the general attributes of Broome County (e.g., resources, demographics, land use, and infrastructure), how these attributes have changed in recent years, and the county's current economic profile. The plan also provides a set of planning tools and an action plan to achieve county goals. These goals include:

1. Making Broome County an inviting place to live, work, and play;
2. Engaging students and young professionals;
3. Taking pride in the County's urban and village centers;
4. Taking pride in its scenic beauty;
5. Investing in legacy sites;
6. Making a commitment to high standards in services;
7. Making a commitment to high standards in building design and renovation;
8. Becoming more resilient; and
9. Investing in the workforce, entrepreneurship, and innovation.

The proposed Facility is consistent with and will meaningfully contribute to the goals and vision outlined in the Broome County Comprehensive Plan. As the plan states, Broome County residents "know the importance of fostering diverse, newly emerging industries such as renewable and clean energy…" (Broome County Comprehensive Plan, p. 272). Furthermore, the Target Industry Analysis in the plan identifies wind energy production as part of one of the principal growth sectors with the potential to drive the economy in the Broome County area.

The plan also discusses the importance of agriculture to the county economy. As the Facility will not result in land use changes and will supplement the income of participating farmers, it may contribute to the long-term economic viability of farms on the Facility Site. In addition, the presence of wind turbines will help limit the conversion of agricultural land to non-agricultural uses. Overall, the construction and operation of the Facility will be consistent with the Broome County Comprehensive Plan, which will be provided on a compact disc with the filing of this Application.

(f) Map of Proposed Land Uses and Known Gas Wells and Permitted Bluestone Mines

The Applicant has investigated proposed land uses within the Study Area via discussions with State and local planning officials (including inquiring of 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 known gas wells[8] and permitted bluestone mines in the Study Area (see Figure 4-6). This information is based on publicly available NYSDEC data. As shown on Figure 4-6, no known gas wells are located within one mile of the Facility Site. Permitted bluestone mines are located within the Facility Site; however, the Applicant is working with the owners of these mines to ensure the Facility is compatible with these uses. See Exhibit 12(c) for a discussion of how Facility crossings of known gas pipelines and transmission infrastructure, including discussion of methods to avoid interference with the proposed Constitution pipeline's cathodic protection system, and Exhibit 13(c) for a discussion of mineral rights issues.

(g) Map of Specially Designated Areas

Figure 4-7 illustrates specially designated areas, including inland waterways, agricultural districts, and special flood hazard areas within the 5-mile Study Area. Table 4-2 summarizes the sources of data used to prepare these maps and whether the type of area is found within the 5-mile Study Area.

[8] In this context, "known gas wells" includes all active or pending oil or gas wells in the New York State Department of Environmental Conservation (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."

Table 4-2. 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	See Figure 4-8
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 4-7
Special Flood Hazard Areas	NYS GIS Clearinghouse, FEMA	See Figure 4-7[9]
NYS Open Space Conservation Plan – Priority Conservation Projects	NYSDEC	None
Critical Environmental Areas	NYSDEC	None

The Susquehanna River is on the western edge of the 5-mile Study Area and is a designated inland waterway. Special Flood Hazard Areas (SFHAs) are associated with the Susquehanna River and several other waterways and water bodies within the 5-mile Study Area (e.g., Oquaga Creek). There are no designated coastal areas, 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).

As discussed in Section (a), three Agricultural Districts are found in the 5-mile Study Area. Broome County Agricultural District 3 has 14,843 acres, all of which are in the Town of Sanford and within the 5-mile Study Area. Broome County Agricultural District 4 has 66,314 acres, 18,924 acres of which are within the 5-mile Study Area in the Towns of Colesville and Windsor, and the Village of Windsor. Delaware County Agricultural District 12 has 29,762 acres, 6,984 of which are within the 5-mile Study Area in the Towns of Deposit, Tompkins, Masonville, and the Village of Deposit. 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. The next eight-year reviews for Broome County Agricultural Districts 3 and 4 are December 10, 2023 and June 24, 2024, respectively (Cornell IRIS, 2011). The next eight-year review date for Delaware County Agricultural District 12 is April 12, 2026 (Cornell IRIS, 2017).

[9] The Broome County Special Flood Hazard Area (SFHA) map is currently being reviewed by the County; Figure 4-7 will be updated as this information becomes available.

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

Figure 4-8 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 4-8. 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 only.

Table 4-3 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 4-3. 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	NYS GIS Clearinghouse and local governments	See Figure 4-8
Wildlife management lands	NYS GIS Clearinghouse, NYSDEC, U.S. Fish and Wildlife Service	None
Forest management lands	NYS GIS Clearinghouse, NYSDEC	See Figure 4-8
Conservation easement lands	National Conservation Easement Database; NYS GIS Clearinghouse	See Figure 4-2
State and federal scenic byways	NYSDOT; NYS GIS Clearinghouse	None
Nature preserves	NYS GIS Clearinghouse	See Figure 4-8
Designated trails	NYS GIS Clearinghouse and local governments	See Figure 4-8
Public-access fishing areas, camping areas	NYS GIS Clearinghouse, NYSDEC, Broome County	See Figure 4-8
Oil and gas production	NYSDEC	None
Gas pipelines	Platts, NYSDEC, NYSDPS	See Figure 4-8
Major communication and utility uses and infrastructure	NYSDEC, Comsearch	See Figure 4-8
Institutional, community and municipal uses and facilities	ESRI; TIGER/line files; NYS GIS Clearinghouse	See Figure 4-8

Appendix ZZ, 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 visually sensitive resources of potential statewide significance within 10 miles of the proposed Facility (i.e., the 10-mile Study Area), as well as a more detailed assessment (including potential locally significant resources) of the 5-mile Study Area. Aesthetic resources of statewide significance located within the 10-mile Study Area include: five sites and

two districts listed on the National Register of Historic Places (NRHP); one state park (Oquaga Creek); one State Forest Preserve (Catskill Forest); and one hiking trail of statewide significance (Finger Lakes Trail). Aesthetic resources located in the 5-mile Study Area that may be regionally or locally significant include two villages (Deposit and Sanford), five hamlets (Damascus, Stilesville, East Windsor, Ouaquaga, and Center Village), various recreation trails, two golf clubs, three public fishing access points, one local park (Klumpp Park), nine state forests, seven Public Fishing Rights areas, one interstate highway, five state highways; and numerous public schools.

The Facility will have no direct impact on the resources identified in Figure 4-8 (i.e., the resources will not be removed or physically modified in any way). The Facility's potential effect on these resources could include 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 Section (i) and Exhibit 24 of this Application.

Appendix X, the Facility's Preconstruction Noise Impact Assessment (PNIA) identifies sensitive sound receptors, which include residences (participating, non-participating, full-time, and seasonal), outdoor public facilities and areas, schools, hospitals, care centers, libraries, places of worship, cemeteries, 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 five distinct land use types. The majority of the Facility Site (approximately 63% in terms of acreage) is categorized as Residential, which is defined as "property used for human habitation." Vacant land constitutes approximately 33% of the Facility Site and is described as "property that is not in use, is in temporary use, or lacks permanent improvement." Agricultural land constitutes approximately 2% of the Facility Site and is described as "property used for the production of crops or livestock." Approximately 2% of the Facility Site is characterized as Community Services, which is described as "reforested lands, preserves, and private hunting and fishing clubs." The remaining 1% of the land in the Facility Site is classified in the "Industrial" land use category. Table 4-4 summarizes land use impacts to each of these categories, based on the impact calculations detailed in Exhibit 22.

Table 4-4. Land Use Impacts

Land Use	Acres within the Facility Site	Temporary Impact (acres)	Permanent Impact (acres)	Total Impact (acres)
Residential	3,578.4	219.6	28.5	248.1
Vacant	1,840.8	150.8	20.3	171.1
Community Services	106.3	1.7	0.3	2.0
Agricultural	85.2	3.7	0.7	4.4
Industrial	46.3	3.7	0.7	4.4
Total	5,657.0	379.6	50.6	430.2

[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 O&M building will result in the cumulative conversion of approximately 53.6 acres—less than 1% of the Facility Site—from its current use to built facilities.[10] 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 to the maximum extent practicable (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 (see Environmental Management & Compliance Plan in Appendix Q for additional information pertaining to environmental monitoring) will consult with NYSDAM during construction if deviation from the *Guidelines* is necessary. 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.[11]

[10] Note, this acreage is slightly larger than the total permanent impact acreage presented in Table 4-4 as it also includes several small areas that do not have assigned land use codes.
[11] 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.

- 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.
- Vehicle and equipment traffic and parking will be limited to the access road and/or designated work areas such as tower sites and laydown areas. 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

Each of the host Towns has adopted a Comprehensive Plan, which are described Section (e) above. In addition, there are several regional plans that apply to the area, Facility consistency with these regional plans is discussed in Table 4-5.

Table 4-5. Facility Consistency with Regional Planning Documents

Plan	Relevant Goals and Objectives	Facility Consistencies	Facility Inconsist -encies	Uniform Resource Locator (URL)
Broome County Intermunicipal Waterfront Public Access Plan (2011)	- Enhance the biodiversity of the region. - Enhance the health and quality of life for all residents and visitors. - Stimulate economic revitalization in Broome County's riverfront communities.	- Utilizes a renewable resource to generate electric power and provide local and regional economic benefits. - Improves the economic sustainability of participating farms.	None	https://bit.ly/2B28QJr
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.	None	https://on.ny.gov/2vGiA6W

Plan	Relevant Goals and Objectives	Facility Consistencies	Facility Inconsist -encies	Uniform Resource Locator (URL)
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
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
New York State Office of Parks, Recreation and Historic Preservation Sustainability Plan (2009)	- Advance a new agency-wide sustainability initiative to adopt green practices - Outline a plan to reduce impacts that the agency's daily activities have on natural resources - Adopted a goal of reducing greenhouse gases 30% by 2030	- The plan is primarily focused on internal agency operations. The Facility is aligned with the plan's stated goal of reducing greenhouse gases 30%.	None	https://on.ny.gov/2MEzJ7G

Plan	Relevant Goals and Objectives	Facility Consistencies	Facility Inconsist-encies	Uniform Resource Locator (URL)
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
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 (in particular, battery storage). - Maintains and supports agriculture in the Facility Site. - Supports farms by supplementing farmer income. - Creates 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 inconsist-ency.	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 KK.

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 AAA). 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 ZZ) identifies those locations within the 10-mile 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 82.6% of the 5-mile Study Area and approximately 89.2% of the 10-mile Study Area (i.e., the Facility is likely to be visible from 17.4% and 10.8% of the 5-mile and 10-mile study areas). Appendix ZZ 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 appreciable to strong contrast is likely from some viewpoints, the overall contrast presented by the Facility will likely be 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 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 Project would be viewed. Based on experience with currently operating wind power projects elsewhere and the apparent lack of controversy associated with this Facility, public reaction to the aesthetic qualities of the proposed Bluestone Wind turbines is likely to be highly variable but generally positive. 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, that 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 T). This study indicates that approximately 95% of receptors are predicted to receive less than 30 hours of shadow flicker per year and 75% of receptors are predicted to receive less than 10 hours of shadow flicker per year. Detailed viewshed analyses conducted for all receptors predicted to receive more than 30 hours of flicker per year indicate that 2 of the 13 non-participating receptors will not have views of the turbines or experience shadow flicker effects due to screening provided by mapped topography and vegetation or to the orientation of the structure's windows relative to the turbine. 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 26-42 dBA during the day to 24-43 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 11:00 p.m. to 7:00 a.m). This goal is more stringent than local noise standards established in Article XIV of the Town of Sanford's Land Use Management Local Law, as well as 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.

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. As no schools, civic facilities, recreational facilities, or commercial areas will be located within one mile of Facility components, no impacts to these land uses are anticipated. Impacts to areas classified as residential by the NYSORPS will total 248.1 acres, of which 219.6 acres will be temporarily impacted (subject to restoration following construction) and 28.5 acres will be converted to built facilities.

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

The proposed Facility will connect the collection and POI substations using approximately 1,000 feet of aboveground transmission lines. Otherwise, the Applicant intends to install underground collection lines. The 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 ZZ.

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

The Facility will include 39 miles of underground collection lines. A total of 1,713 acres will be located within 300 feet of the centerline of underground collection lines and related facilities, of which approximately 19 acres (1.1%) 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 1,694 acres has been classified by the NYSORPS as follows: Residential, 951.2 acres (56.2%); Vacant Land, 678.1 acres (40.0%); Agriculture, 27.7 acres (1.6%); Industrial, 18.3 acres (1.1%); Community Services, 10.5 acres (0.6%); Public Services, 5.5 acres (0.3%), and Wild, Forested, Conservation Lands, and Public Parks, 2.7 acres (0.2%). Approximately 812 acres (47.4%) 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 Section (i) above, in agricultural fields, construction will be generally be conducted in accordance with the NYSDAM *Guidelines for Agricultural Mitigation for Wind Power Projects*. Therefore, 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 forest logging roads) to the maximum extent practicable. Where impacts to important environmental resources would otherwise be unavoidable (e.g., stream crossings), horizontal directional drilling 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 4-9 contains aerial photographs within a 1-mile radius of the Facility. This mapping was prepared using 0.5-meter resolution natural color orthoimagery from the U.S. Department of Agriculture's (USDA) National Agriculture Imagery Program (NAIP) captured during the 2015 growing season.

(n) Aerial Photograph Overlays

Figure 4-9 illustrates the Facility components along with the proposed limits of vegetation and soils disturbance overlaid on 0.5-meter NAIP imagery captured in the 2015 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 limits of clearing and disturbance required, based on Table 22-2. There have been no major changes to land use since 2015 within the Facility Site based on a comparative analysis between 0.5-meter NAIP imagery captured in the 2015 growing season and 1-meter NAIP imagery captured in the 2017 growing season. Between 2015 and 2017, no new farmland was cleared, and logging operations appear to have been selective, i.e., wholesale changes to land use do not appear to have occurred. There have been some minor changes to land use associated with the day-to-day operations of bluestone mines between 2015 and 2017; however, within the Facility Site, these alterations appear to have been small, with the largest less than 4 acres in size.

(o) Source of Aerial Photographs

As previously noted, Figure 4-9 was prepared using 0.5-meter resolution natural color orthoimagery from the USDA's NAIP captured during the 2015 growing season.

(p) Community Character

The proposed Facility will be in a rural portion of Broome County that is characterized by a mix of agricultural and forested land, interspersed with bluestone and sand and gravel mines. According to the *Broome County Agricultural Economic Development Plan,* farms in Broome County comprise approximately 79,676 acres of land, or approximately 18% of the county's land mass. The most common agricultural land uses include cropland (38,075 acres) and pastureland (10,358 acres) which account for 62% of all agricultural land uses (EDR, 2016). Farms in Broome County have become progressively smaller in the last twenty years: 40% are 100-500 acres and 57% are less than 100 acres

(EDR, 2016). Relative to the rest of Broome County, the 5-mile Study Area contains large forested blocks and a limited amount of active farmland.

The proposed Facility is consistent with the rural forested and agricultural character of the surrounding community. Approximately 2,419 acres of the 5,657.0-acre Facility Site are enrolled as NYSDAM certified agricultural districts. The Facility will permanently disturb 28.0 acres (approximately 1.2%) of agricultural district land within the Facility Site. Although this land will be taken out of agricultural use, 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 have noise impacts (see Exhibit 19 and Appendix X); however, these impacts should not affect the character of the community. Operational noise levels of the Facility will comply with applicable local noise standards and WHO guidelines as outlined in Section (i) above. 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 Town of Sanford, which will host approximately 90% of Facility wind turbines, has adopted regulations to promote the effective and efficient use of the local wind resource by explicitly allowing wind turbines as a permitted use with a special use permit. This law reflects a determination by the Town that wind energy facilities are consistent with existing community character. Although the Town of Windsor does not explicitly allow for wind turbines in its laws, wind energy conversion systems are not prohibited, and the proposed Facility comports with the prerequisites for special use permits. In both towns, special use permits are issued by a town's legislative body following a determination that a use is compatible with the community.

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 Section (i) of this Exhibit, Exhibit 24, and Appendix ZZ 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 incorporate questions and concerns.
- Complying with the host municipalities' substantive laws regarding the construction and operation of the Facility.

There are also numerous Facility-specific studies attached to this Application, such as a Visual Impact Assessment (see Appendix ZZ), Noise Impact Assessment (see Appendix X), Cultural Resources Studies (see Appendices Z through GG), and a Shadow Flicker Assessment (see Appendix T). 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 Greater Binghamton Airport (BGM) 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.

(1) Property Value

A literature review of existing peer reviewed articles, technical journals, and papers prepared by government agencies related to the potential effects of wind energy projects on nearby property values in the United States has been conducted. The results of this review are summarized below. This summary includes methods, results, conclusions, and context relevant to the proposed Facility.

The Lawrence Berkeley National Laboratory's report *The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis,* was released in December 2009. The study took a broad

approach to assessing potential impacts on property values of residences near wind facility projects, and, as of 2009, was the "most comprehensive and data-rich analysis to date in the U.S. or abroad on the impacts of wind projects on nearby property values" (Hoen et al., 2009, p. xi). This study's analysis is based on information from 10 communities surrounding 24 wind power facilities spread across nine states. The study included the Fenner Wind Farm in Madison County, New York and Waymart Wind Farm in Wayne County, Pennsylvania, two facilities that are comparable to the Facility Site in terms of land use and rural condition and which have turbines with maximum hub heights of 213 feet and 262 feet, respectively.[12] While the Fenner Wind Farm is considerably smaller than the proposed Facility, the study area is similar in composition and land use. Homes included in the study were located from 800 feet to over five miles from the nearest wind turbine. This study used a methodology based on the hedonic pricing model to identify the marginal impacts of different housing and community characteristics on residential property values. Analysis of possible impacts on property values was undertaken by dividing the impacts into three non-mutually exclusive categories, area stigma, scenic vista stigma, and nuisance stigma. Area stigma addresses the impact of the mere presence of a wind facility on property values. Scenic vista stigma is based on the concern that a home may be devalued because a wind facility is within view and/or interrupts an existing scenic vista. A nuisance stigma can occur because of the potential for extenuating factors from a nearby wind facility, such as noise or shadow flicker, regardless of whether they actually occur. The study explored the effects of all three stigmas and found no persuasive evidence that the view of the wind facilities and the distance of the home to the facilities had any significant effect on home sales prices. The study recognized the possibility that the value of an individual home (or small numbers of homes) has been or could be negatively impacted by a nearby wind facility (Hoen et al., 2009). However, even if such occurrences do exist "they are either too small or too infrequent to result in any widespread, statistically observable impact" (Hoen et al., 2009, p. iii).

As previously mentioned, Hoen et al. (Hoen et al., 2009) categorized three types of wind turbine stigmas that could affect property values. A site-specific study conducted in Ford and McLean County, Illinois, identified a fourth stigma—wind farm anticipation stigma (Hinman, 2010). This stigma decreases property values due to the uncertainty surrounding where turbines will be placed and what effect the wind facility will have on area residents when the development is initially proposed. The study examined 3,851 residential property transactions in these two Illinois counties from 2001 through 2009 (Hinman, 2010). The study found that when the 240-turbine wind facility[13] was initially announced, property values near the prospective wind facility decreased compared to elsewhere in the county. However, after the wind facility entered the operational stage, property values near the wind facility increased faster than those located elsewhere in the county.

[12] Maximum blade tip heights were not disclosed in this study.
[13] Turbines in this facility have a hub height of 262 feet and a maximum blade tip height of 398 feet.

In 2014, Hoen et al. built upon their 2009 study and other existing literature to analyze property value effects in particularly close proximity to wind turbines by using a fixed-effect model on national datasets available and accounting for home values before the announcement of the facility, home values after the announcement but before construction, and potential spatial dependent factors affecting home values. The study used home value data from over 50,000 home sales within 10 miles of 67 existing wind power facilities in 27 counties across nine states, and divided property transaction impacts into four distance-from-turbine categories: < ½ mile, ½-1 mile, 1-3 miles, and 3-10 miles. Turbine maximum blade tip heights in this study ranged from 290 feet to 476 feet. Within this extensive dataset, the study found that there was no statistical evidence that home prices near wind turbines were affected in either the post-construction or post-announcement/preconstruction periods. If effects do exist, either the average impacts are relatively small (within the margin of error in the models) and/or sporadic (impacting only a small subset of homes) (Hoen et al., 2014).

A property value study in the vicinity of Mendota Hills Wind Farm (62 wind turbines, maximum blade tip height of 297 feet), GSG 1 Wind Farm (40 wind turbines, maximum blade tip height of 399 feet), and Lee-Dekalb Wind Center (145 wind turbines, maximum blade tip height of 388 feet) within Lee County, Illinois, also examined wind farm anticipation stigma (Carter, 2011). The study examined 1,298 real estate transactions from 1998 to 2010. The study suggests that following announcement of the wind project, property values near the proposed wind facility initially decline. However, the analysis indicates that residential properties located near wind turbines in Lee County have not in fact been negatively affected by the installation of a wind energy facility. Assuming the wind facility is appropriately sited using modern, industry standard setbacks, and that it minimizes impacts to nearby residences, property values eventually rebound once the uncertainty surrounding how homeowners are affected by the development disappears. The study acknowledges one shortcoming of property value studies, which is that the results presented are not able to state anything about whether being in close proximity to a wind facility affects the ease of selling a home. It could be that homes near wind turbines are not for sale or selling and consequently would not be included in the studies evaluating real estate transaction data (Carter, 2011). However, the 2009 Hoen study estimated a sales volume model and concluded that sales volumes did not decrease with wind energy development (Hoen et al., 2009).

Heintzelman and Tuttle (2012) examined 11,331 property transactions (including agricultural property) over nine years in the northern New York counties of Lewis, Franklin and Clinton to explore the effects of new wind facilities on property values. The study—which covered 461 transactions within three miles of a wind turbine—examined 194 turbines (maximum blade tip height of 395 feet) in Lewis County located on top of a large plateau, as well as 85 turbines in Franklin County and 186 turbines in Clinton County (maximum blade tip height of 390 feet) located within a broad river valley with small hills. Similar to the Hoen (2006), Hoen et al. (2009), Hinman (2010), and Carter (2011), the study found that in Lewis County turbines appear to have had little effect, or in some instances a positive effect, on property values. In contrast, property values in Clinton and Franklin Counties were negatively impacted by nearby wind energy

facilities, with the magnitude of this effect dependent on the distance between homes and the nearest turbine. For Franklin and Clinton Counties, properties within 0.5 mile experienced an 8.8% to 15.8% decline, respectively. At a range of three miles the decline was between 2% and 8%, respectively. The study states that in Lewis County, landowners appear to be receiving sufficient compensation to prevent a decline in property values. In addition, the Clinton and Franklin County projects became operational in 2008 and 2009, at the very end of the nine-year study period, while the Lewis County project became operational in 2006, resulting in a much larger set of property sales and thus, more robust analysis (Heintzelman & Tuttle, 2012).

Numerous property value studies based on statistical analysis of real estate transactions have found that wind facilities have no consistent significant impact on property values (Sterzinger et al. 2003; Hoen 2006; Hoen et al. 2009; Hinman 2010; Carter 2011). Given the results of these studies, it is reasonable to conclude that the proposed Facility will not have a significant adverse impact on local property values.

REFERENCES

Carter, J., 2011. The effect of wind farms on residential property values in Lee County, Illinois. Illinois State University.

Cornell Institute for Resource Information Sciences, 2011. *Agricultural Districts, Broome County.* Available at: http://cugir.mannlib.cornell.edu/datatheme.jsp?id=2 (Accessed April, 2018).

Cornell Institute for Resource Information Sciences, 2017. *Agricultural Districts, Delaware County.* Available at: http://cugir.mannlib.cornell.edu/datatheme.jsp?id=2 (Accessed April, 2018).

Environmental Design and Research, Landscape Architecture and Engineering, P.C. 2016. *Broome County Agricultural Economic Development Plan.* Available at: (Accessed April 2018).

Heintzelman, M. D., & Tuttle, C. (2012). Values in the Wind: A Hedonic Analysis of Wind Power Facilities. Land Economics, 88, 571–588.

Hinman, J., 2010. "Wind Farm Proximity and Property Values: A Pooled Hedonic Regression Analysis of Property Values in Central Illinois." Thesis. Illinois State University. May 2010. 143 pages. Available online: http://renewableenergy.illinoisstate.edu/downloads/publications/2010%20Wind%20Farm%20Proximity%20and%20Property%20Values.pdf Accessed February 2017.

Hoen, B. 2006. Impacts of Windmill Visibility on Property Values in Madison County, New York. Master's thesis. Bard Center for Environmental Policy. April, 2006.

Hoen, B. et al. 2009. The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis. Lawrence Berkeley National Laboratory, Environmental Energy Technologies Division. December, 2009.

Hoen B. et al. 2014. Spatial Hedonic Analysis of the Effects of US Wind Energy Facilities on Surrounding Property Values. Journal of Real Estate Finance and Economics 51: 22-51

New York State Department of Environmental Conservation (NYSDEC). 2015. *Critical Environmental Areas in New York State.* Available at: http://gis.ny.gov/gisdata/fileserver/?DSID=1330&file=Critical_Env_Areas_20160708.zip (Accessed June, 2018).

New York State Department of Environmental Conservation (NYSDEC). 2016a. *New York State Open Space Conservation Plan*. Available at: https://www.dec.ny.gov/docs/lands_forests_pdf/osp2016final1.pdf (Accessed June, 2018).

New York State Department of Environmental Conservation (NYSDEC). 2016b. *New York State Standards and Specifications for Erosion and Sediment Control*. Available at: https://www.dec.ny.gov/docs/water_pdf/2016nysstanec.pdf (Accessed June 2018).

New York State Department of State (NYSDOS). 2012. *Environmental Protection Fund Local Waterfront Revitalization Program List of Coastal Waterbodies and Designated Inland Waterways.* Available at: https://www.dos.ny.gov/opd/programs/pdfs/WaterwaysList_07-12.pdf (Accessed April 2018).

NYSDOSs. 2018. *Local Waterfront Revitalization Programs*. Available at: https://www.dos.ny.gov/opd/programs/WFRevitalization/LWRP_status.html (Accessed June, 2018).

Pasqualetti, M.J., P. Gipe, and R.W. Righter (eds.). 2002. *Wind Power in View: Energy Landscapes in a Crowded World*. Academic Press, San Diego, CA.

Stanton, C. 1996. *The Landscape Impact and Visual Design of Windfarms.* ISBN 1-901278-00X. Edinburgh College of Art, Heriot-Watt University. Edinburgh, Scotland.

Sterzinger, G. et. al. 2003. The Effect of Wind Development on Local Property Values. Published by the Renewable Energy Policy Project. May, 2003.

United States Department of Agriculture (USDA). 2012. *Census of Agriculture*. Available at: https://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/New_York/ (Accessed April, 2018).