Bluestone Wind Project

Case No. 16-F-0559

1001.27 Exhibit 27

Socioeconomic Effects

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EXHIBIT 27 SOCIOECONOMIC EFFECTS

A Socioeconomic Report has been prepared that quantifies the potential countywide and statewide socioeconomic impacts of the Facility based on current socioeconomic conditions of the area (see Appendix LLL). The Facility is located within the Towns of Sanford and Windsor in Broome County. Information regarding population, educational attainment and race within these Towns is summarized in Table 27-1.

Table 27-1. Demographic Information

Population	*Windsor*	*Sanford*
2010 Total Population[1]	6,274	2,407
2015 ACS 5-Year Population Estimate	6,136	2,567
Median Age	42.5 yrs	45.2 yrs
Educational attainment		
% high school graduate or higher	92.5%	86.8%
Total housing units	2,941	1,739
Median household income	$62,167	$45,089
Foreign born population[1]	.3%	2.2%
Individuals below poverty level	6.6%	10.1%
Veterans	420	309
Race and Hispanic Origin		
White alone	6,100	2,365
Black or African American alone	27	12
American Indian and Alaska Native alone	9	3
Asian alone	22	2
Native Hawaiian & other Pacific Islander	2	0
Some other race alone	30	9
Two or more races	91	16
Hispanic or Latino (of any race)	98	38
White alone, not Hispanic or Latino	63	32

[1] Demographic profile of 2010 US Census. All other data from the 2009-2013 American Community Survey 5-Year Estimates

The proposed Facility is anticipated to have local, regional, and statewide economic benefits. Wind power development, like other commercial development projects, can expand the local, regional, and statewide economies through both direct and indirect means. Income generated from direct employment during the construction and operation phases of a wind energy generating facility is used to purchase local goods and services, creating a ripple effect throughout the state.

The economic impacts of the Facility were assessed countywide and statewide using the Job and Economic Impact (JEDI) wind model. The JEDI model was created by the National Renewable Energy Laboratory (NREL)[1] to assess the economic impacts of proposed wind energy generating facilities during both the construction and operation phases (USDOE NREL, 2017). This model allows users to estimate jobs, earnings, and economic output by impact level (described below) using facility-specific data provided by the Applicant and geographically-defined multipliers. These multipliers are produced by IMPLAN Group, LLC using a software/database system called IMPLAN (IMpact analysis for PLANning), a widely-used and widely-accepted general input-output modeling software and data system that tracks each unique industry group in every level of the regional data (IMPLAN Group, 2015).

This report analyzes three levels of impact that the proposed Facility may have on the economy:

On-site labor impacts: These are the direct impacts experienced by the companies/individuals residing in New York State engaged in the on-site construction and operation of the Facility. These values represent expenditure of dollars on labor (wages, salaries and associated expenses) by Facility on-site construction personnel as well as operation and maintenance (O&M) personnel. On-site labor impacts do not reflect material expenditures. Most other input-output models consider this level as "direct impacts," referring to changes in jobs, economic activity and earnings associated with the immediate impacts created by the investment, which would include the equipment installed on-site, the concrete used on-site, etc. However, the immediate economic impacts of the physical items used on-site, normally included in direct impacts, typically occur at some geographic distance from the project itself. Because of JEDI's focus on the local impacts of a project, only the labor associated with the on-site location of the Facility (Construction, Construction-Related Services and On-site Labor during Operational Years) is counted at this level.

Turbine, local revenue, and supply chain impacts: These impacts measure the estimated increase in demand for goods and services in industry sectors that supply or otherwise support the companies engaged in construction and operation (also known as "backward-linked" industries). These measures account for the demand for goods and services such as turbine components, project analysis, legal services, financing,

[1] A national laboratory of the United States Department of Energy

insurance, etc. Most other input-output models consider this level as "indirect impacts," referring to economic impacts associated with linked sectors in the economy that are upstream of the direct impacts, such as suppliers of hardware used to make the equipment installed on-site or the concrete used on-site. However, because of JEDI's focus on the local impacts of the Facility, labor for components of this Facility (e.g., turbine manufacturers) occurring at off-site locations is also counted in this level as a turbine, local revenue, and supply chain impact.

Induced impacts: Induced impacts measure the estimated effect of increased household income resulting from the project. Induced impacts reflect the reinvestment of earned wages, as measured throughout the first two levels of economic impact. This reinvestment can occur anywhere throughout the local, regional, or state economy on household goods, entertainment, food, clothing, transportation, etc.

Each of these three levels of impact can be measured in terms of three indicators:

Jobs: Jobs refer to the increase in employment demand because of project development. These positions are measured across each level of impact, so that they capture the estimated number of jobs on site, in supporting industries, and in the businesses that benefit from household spending. For the purposes of this analysis, this term refers to the total number of year-long full-time equivalent (FTE) positions created by the Facility. Persons employed for less than full time or less than a full year are included in this total, each representing a fraction of a FTE position (e.g., a half-time, year-round position is 0.5 FTE).

Earnings: This measures the wages and salary compensation paid to the employees described above.

Output: Output refers to the value of industry production in the state economy, across all appropriate sectors, associated with each level of impact. For the manufacturing sector, output is calculated by total sales plus or minus changes in inventory. For the retail sector, output is equal to gross profit margin. For the service sector, it is equal to sales volume. For example, output would include the profits incurred by those businesses that sell electrical transmission line, concrete, or motor vehicle fuel to the Applicant.

Calculating the number of jobs, earnings, and output generated estimated to be generated by a proposed facility using the JEDI model is a two-step process. The first step requires facility-specific data inputs (e.g., year of construction, size of facility, turbine size, and location). These facility-specific data are used to provide a baseline set of assumptions to produce a conservative estimate of the total positive jobs and economic impacts likely to be produced by the facility.

For purposes of the JEDI model, the Applicant has assumed the following inputs:

- Location: Broome County and New York State

- Year of Construction: 2020
- Total Project Nameplate Capacity: 121.8 MW[2]
- Number of Projects: 1
- Number of Turbines: 29[2]

Using the facility-specific data provided, the JEDI model creates a list of default values, which include facility cost values, default financial parameter values, default tax values, default lease payment values, and default local share of spending values. These default values are derived from research on large-scale wind facilities by NREL and stem from various sources, including interviews and surveys of leading project owners, developers, engineering and design firms, and construction firms active in the wind energy sector. The second step of the JEDI model methodology requires the review and, if warranted, the customization of default facility cost values and financial parameter values to reflect the most accurate estimates. In this case, the Applicant reviewed the following default facility cost values (subtotaled by categories in the JEDI model) to determine whether they were on par with the real costs as experienced by the Applicant's team of development and financial experts: Equipment during Construction, Balance of Plant Construction, Labor during Operation & Maintenance (O&M), Materials and Services during Operation & Maintenance, Financial Parameters, Tax Parameters, Land Lease Parameters and Payroll Parameters. The Applicant's team then made specific adjustments to improve accuracy (see Table 27-2). The remaining actual cost values were unknown at the time of analysis (May 2018); therefore, the remaining JEDI default values were reviewed by the Applicant and determined to be reasonable.

Table 27-2. Adjustments Made to JEDI Model Cost Inputs

JEDI Cost Items (Annual Estimates)	Default Value	Adjusted Value	Change
Construction Equipment Costs	$153,664,902	$[redacted]	[redacted]
Construction Materials Costs	$32,200,273	$[redacted]	[redacted]
Construction Labor Total Costs	$14,314,933	$[redacted]	[redacted]
Development/Other Costs	$5,731,286	$[redacted]	[redacted]
Sales Tax for Construction Materials and Equipment	$6,776,921	$[redacted]	[redacted]
Operating/Maintenance Labor Costs	$495,661	$[redacted]	[redacted]
Operating/Maintenance Materials and Services	$2,427,539	$[redacted]	[redacted]
Sales Tax for Operating/Maintenance Materials and Equipment	$71,429	$[redacted]	[redacted]
Revenues for Local Tax Jurisdictions ($/MW)	N/A	$[redacted]	[redacted]
Land Payments (during Operation)	$365,400	$[redacted]	[redacted]

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018); Applicant customization

[2] Note that although the Applicant presents a turbine layout of up to 33 turbines for Article 10 permitting purposes, the economic analysis for the socioeconomic report assumes a 29-turbine layout. This is to both to be consistent with the economic benefit information presented in the Applicant's NYSERDA Application and to avoid overestimating the Facility's economic benefits in the Article 10 Application. The economic analysis assumes 29 rather than 33 turbines, and as such the maximum project nameplate capacity also has been reduced (from up to 124 MW identified elsewhere in the Application to 121.8 MW).

Estimated non-payroll expenditures estimated to be made both within New York State and within Broome County are listed in Table 27-3 (Construction Period) and Table 27-4 (Operation and Maintenance Period).

Table 27-3. Estimate of Annual Direct Non-Payroll Expenditures during Construction

Construction Cost Item	Project Expenditures	State Share	Statewide Expenditures	County Share	County Expenditures
Equipment Costs					
Turbines (excluding blades and towers)	$[redacted]	0%	$[redacted]	0%	$[redacted]
Blades	$[redacted]	0%	$[redacted]	0%	$[redacted]
Towers	$[redacted]	0%	$[redacted]	0%	$[redacted]
Transportation	$[redacted]	0%	$[redacted]	0%	$[redacted]
Balance of Plant Materials	$[redacted]		$[redacted]		$[redacted]
Construction (concrete, rebar, equip, roads and site prep)	$[redacted]	90%	$[redacted]	49%	$[redacted]
Transformer	$[redacted]	0%	$[redacted]	0%	$[redacted]
Electrical (drop cable, wire)	$[redacted]	100%	$[redacted]	0%	$[redacted]
HV line extension	$[redacted]	70%	$[redacted]	0%	$[redacted]
Development/Other Costs	$[redacted]		$[redacted]		$[redacted]
HV Sub/Interconnection Materials	$[redacted]	90%	$[redacted]	0%	$[redacted]
Engineering	$[redacted]	0%	$[redacted]	0%	$[redacted]
Legal Services	$[redacted]	100%	$[redacted]	0%	$[redacted]
Land Easements	$[redacted]	100%	$[redacted]	100%	$[redacted]
Site Certificate/Permitting	$[redacted]	100%	$[redacted]	100%	$[redacted]
Sales Tax (Material and Equipment Purchases)	$[redacted]	100%	$[redacted]	100%	$[redacted]

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018); Applicant customization

Table 27-4. Estimate of Annual Direct Non-Payroll Expenditures during Operation and Maintenance

Operation & Maintenance Cost Item	Project Cost	State Share	Statewide Expenditures	County Share	Countywide Expenditures
Materials and Services					
Vehicles	$[redacted]	100%	$[redacted]	48%	$[redacted]
Site Maintenance/Misc. Services	$[redacted]	80%	$[redacted]	9%	$[redacted]
Fees, Permits, Licenses	$[redacted]	100%	$[redacted]	100%	$[redacted]
Utilities	$[redacted]	100%	$[redacted]	100%	$[redacted]
Insurance	$[redacted]	0%	$[redacted]	0%	$[redacted]
Fuel (motor vehicle gasoline)	$[redacted]	100%	$[redacted]	100%	$[redacted]
Consumables/Tools & Misc. Supplies	$[redacted]	100%	$[redacted]	17%	$[redacted]
Replacement Parts, Equipment, Spare Parts Inventory	$[redacted]	2%	$[redacted]	0%	$[redacted]
Sales Tax (Materials & Equipment Purchases)	$[redacted]	100%	$[redacted]	100%	$[redacted]
Other Taxes/Payments	$[redacted]	100%	$[redacted]	100%	$[redacted]
Revenues for Local Tax Jurisdictions	$[redacted]	100%	$[redacted]	100%	$[redacted]
Land Payments (during Operation)	$[redacted]	100%	$[redacted]	100%	$[redacted]

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018); Applicant customization

The analysis presented here used the most currently available multiplier data specific to New York (2016) and specific to Broome County (2016) to estimate potential impacts on a statewide and countywide basis. A summary of this analysis, estimated for both the construction and operation and maintenance phases of the proposed Facility, are presented in Tables 27-5 and 27-6.

Table 27-5. Summary Results of Statewide Jobs and Economic Impact Analysis

	Jobs	Earnings (Millions)	Output (Millions)
Construction Impacts			
Project Development and Onsite Labor Total	150	$11.4	$12.4
Construction & Interconnection Labor	141	$10.3	-
Construction-Related Services	9	$1.1	-
Turbine & Supply Chain Impacts	297	$21.8	$62.1
Induced Impacts	109	$8.2	$21.7
Total Impacts	556	$41.4	$96.2
Annual Operation and Maintenance Impacts			
Onsite Labor Impacts	7	$0.6	$0.6
Local Revenue & Supply Chain Impacts	11	$0.9	$3.3
Induced Impacts	6	$0.5	$1.3
Total Impacts	24	$2.0	$5.2

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018)
Note: Impact totals and subtotals are independently rounded, and therefore may not add up directly to the integers shown in this table.

Table 27-6. Summary Results of Countywide Jobs and Economic Impact Analysis

	Jobs	Earnings (Millions)	Output (Millions)
Construction Impacts			
Project Development and Onsite Labor Total	19	$1.3	$1.3
Construction & Interconnection Labor	19	$1.3	-
Construction-Related Services	0	$0.0	-
Turbine & Supply Chain Impacts	87	$4.6	$14.3
Induced Impacts	41	$1.9	$6.3
Total Impacts	147	$7.8	$21.9
Annual Operation and Maintenance Impacts			
Onsite Labor Impacts	7	$0.4	$0.4
Local Revenue & Supply Chain Impacts	6	$0.3	$2.0
Induced Impacts	5	$0.2	$0.8
Total Impacts	18	$0.9	$3.1

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018)
Note: Impact totals and subtotals are independently rounded, and therefore may not add up directly to the integers shown in this table.

(a) Construction Workforce

Based upon JEDI model computations, it is anticipated that construction of the proposed Facility will generate employment of an estimated 150 FTE onsite Construction and Construction-Related positions for New York State residents, 141 of which will be for Construction and Interconnection labor and 9 of which will be Construction-Related Services (engineers and other professional services). At the county level, the Facility is estimated to generate employment of an estimated 19 FTE onsite Construction and Construction-Related positions for County residents, all of which will be for Construction and Interconnection labor.

The Applicant's construction management team has further evaluated the estimated peaks of 141 FTE statewide construction jobs and 19 FTE countywide construction jobs to provide the following estimated distribution of average work force, by discipline, for each quarter during the construction year 2020. The results are summarized in Tables 27-7 and 27-8.

Table 27-7. Estimated Quarterly Statewide Labor Averages

Quarterly Period	Construction and Interconnection Labor Quarterly Average FTE Jobs	Construction-Related Services (Engineers and Other Professional Services) Quarterly Average FTE Jobs
Q1 (Jan-Mar)	27	3
Q2 (Apr-Jun)	95	7
Q3 (Jul-Sep)	120	8
Q4 (Oct-Dec)	34	5

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018), Evaluation by Applicant's Construction Management Team

Table 27-8. Estimated Quarterly Countywide Labor Averages

Quarterly Period	Construction and Interconnection Labor Quarterly Average FTE Jobs	Construction-Related Services (Engineers and Other Professional Services) Quarterly Average FTE Jobs
Q1 (Jan-Mar)	5	0
Q2 (Apr-Jun)	14	0
Q3 (Jul-Sep)	17	0
Q4 (Oct-Dec)	5	0

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018), Evaluation by Applicant's Construction Management Team

(b) Construction Payroll

The JEDI model estimates a total of $11.4 million for annual earnings of the 150 onsite construction jobs for New York State residents; $1.3 million of which is the estimated for annual earnings of the 19 onsite construction jobs for Broome County residents. These estimates of the annual construction earnings by trade are listed in Tables 27-9 and 27-10. Estimated earnings represent total wages and salary compensation paid to New York State and Broome County employees (i.e., wages plus 37.6% average annual overhead costs including SSI, Medicare, workers' compensation, and disability). Project Development and Onsite Labor earnings are realized by New York State and Broome County residents who are engaged in the construction of the Facility, including the Construction, Engineering and Professional Services trades. Turbine, Local Revenue, and Supply Chain earnings are estimated for New York State and Broome County residents based on the increased demand for goods and services in industry sectors that supply or otherwise support the companies engaged in construction and operation (known as "backward-linked industries"). Induced earnings reflect the estimated increase in household spending by onsite employees due to an increase in their earnings, which is subsequently used to purchase local goods and services, creating a ripple effect throughout the County and State.

Table 27-9. Annual Earnings by Trade Statewide During Construction Period (in $ Millions)

Trade	Project Development and Onsite Labor Earnings	Turbine & Supply Chain Earnings	Induced Earnings
Agriculture	$0.0	$0.0	$0.0
Mining	$0.0	$0.0	$0.0
Construction	$10.3	$9.9	$3.6
Manufacturing	$0.0	$4.1	$1.1
Fabricated Metals	$0.0	$0.0	$0.0
Machinery	$0.0	$0.0	$0.0
Electrical Equipment	$0.0	$0.0	$0.0
Transport., Communication & Utilities	$0.0	$0.0	$0.0
Wholesale Trade	$0.0	$0.0	$0.0
Retail Trade	$0.0	$3.3	$0.9
Finance, Insurance, and Real Estate	$0.0	$0.4	$0.1
Misc. Services	$0.0	$3.5	$0.9
Engineering & Professional Services.	$1.1	$0.3	$0.4
Government	$0.0	$0.2	$1.2
Total	$11.4	$21.8	$8.2

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018)
Note: Earnings are independently rounded, and therefore may not add up directly to the integers shown in this table.

Table 27-10. Annual Earnings by Trade Countywide During Construction Period (in $ Millions)

Trade	Project Development and Onsite Labor Earnings	Turbine & Supply Chain Earnings	Induced Earnings
Agriculture	$0.0	$0.0	$0.0
Mining	$0.0	$0.0	$0.0
Construction	$1.3	$4.1	$1.0
Manufacturing	$0.0	$0.0	$0.0
Fabricated Metals	$0.0	$0.0	$0.0
Machinery	$0.0	$0.0	$0.0
Electrical Equipment	$0.0	$0.0	$0.0
Transport., Communication & Utilities	$0.0	$0.0	$0.0
Wholesale Trade	$0.0	$0.0	$0.0
Retail Trade	$0.0	$0.0	$0.0
Finance, Insurance, and Real Estate	$0.0	$0.2	$0.1
Misc. Services	$0.0	$0.0	$0.0
Engineering & Professional Services.	$0.0	$0.0	$0.0
Government	$0.0	$0.2	$0.9
Total	$1.3	$4.6	$1.9

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018)
Note: Earnings are independently rounded, and therefore may not add up directly to the integers shown in this table.

(c) Secondary Employment and Economic Activity Generated by Facility Construction

As estimated by the JEDI model, turbine manufacturing and supply chain industries could in turn generate an additional 297 jobs (with a total $21.8 million in earnings) in New York State and 87 jobs (with a total $4.6 million in earnings) in Broome County over the course of Facility construction. In addition, Facility construction could induce demand for 109 jobs (with a total $8.2 million in earnings) statewide and 41 jobs (with a total $1.9 million in earnings) countywide through the spending of additional household income. The total estimated impact of 556 new jobs statewide during construction could result in up to $41,400,000 of earnings, assuming a 2020 construction schedule and wage rates consistent with statewide averages. County residents are estimated to obtain 147 of those construction jobs, resulting in up to $7.8 million of earnings countywide. Facility construction labor wages for similar positions within New York State range from approximately $21 to $32 per hour for laborers, and $44 per hour for project management. Local, regional, and statewide employment during the construction phase will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. Facility construction will also require workers with specialized skills, such as crane operators, turbine assemblers, specialized excavators, and high voltage electrical workers. It is anticipated that many of the highly-specialized workers will come from outside the area and will remain only for the duration of construction.

In addition to jobs and earnings, the construction of the Facility is expected to have a positive impact on statewide economic output, a measurement of the value of goods and services produced and sold by backward-linked industries. As described in the definition above, output provides a general measurement of the amount of profit earned by manufacturers, retailers, and service providers connected to a given project. The value of economic output associated with Facility construction is estimated to be $96,200,000 statewide and $21,900,000 countywide. Between workers' additional household income and industries' increased production, the impacts associated with the Facility are likely to be experienced throughout many different sectors and regions of the statewide economy.

(d) Workforce, Payroll, and Expenditures During Facility Operation

Based upon JEDI model computations, the operation and maintenance of the proposed Facility is estimated to generate seven full-time jobs for NYS residents with combined estimated annual earnings of approximately $600,000. Broome County residents are anticipated to hold all seven of these onsite operational jobs. These seven positions have been verified as reasonable by the Applicant based on actual job numbers at other facilities in New York, and are anticipated to be comprised of technicians, project management and administrative personnel. Projected wage rates are anticipated to be consistent with statewide averages, which are estimated to range from approximately $17 for administrative personnel per hour to approximately $27 per hour for technical personnel to approximately $43 per hour

for facility management. Table 27-11 provides an overview of annual wages of each full-time job position. These seven full-time local jobs generated by the wind energy facility comprise the Facility's onsite long-term employment impact.

Table 27-11. Hourly and Annual Wages of Onsite Labor during Operational Years

Positions	Number of Positions	Hourly Wage per Job	Annual Wages per Job[3]
Technicians	5	$29.25	$60,846
Administrative/Secretarial	1	$18.72	$38,941
Site Management	1	$46.80	$97,353

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2018)
Note: Wages and number of positions are independently rounded, and therefore may not equate directly to the totals shown.

Annual non-payroll expenditures made during operations and maintenance are shown in detail in Table 27-4. These expenditures would total approximately $[redacted] statewide and $[redacted] countywide. This includes materials and services purchased for the operation and maintenance of the Facility, sales tax, payments to local landowners, and payments to tax jurisdictions, i.e., PILOT agreement payments (see Section (i) below).

Payment to local landowners would be made in association with lease and easement agreements executed to host Facility components and good neighbor agreements (GNAs) executed with certain adjacent properties.[4] These annual lease, easement, and GNA payments would offer direct benefits totaling $[redacted] annually to participating landowners. Further, as the construction and operation of the Facility is not anticipated to result in any substantive changes to land use (see Exhibit 4), this income would be in addition to any income generated from the current use of the land (e.g., agricultural production, timber production, and bluestone mining).

(e) Secondary Employment and Economic Activity Generated by Facility Operation

Operation and maintenance should also generate new jobs in other sectors of the statewide economy through secondary employment, consisting of turbine, local revenue, and supply chain impacts and the expenditure of new and/or increased household earnings. In total, while in operation, the Facility is estimated to generate a secondary employment demand of 17 jobs statewide with annual earnings of approximately $1,400,000 and 11 jobs countywide with annual earnings of approximately $500,000. This secondary employment is estimated to have an economic output of $4.6 million annually statewide and $2.8 million annually countywide. Total economic output is projected to increase

[3] Note that hourly and annual wages of onsite labor during operational years do not include total employer costs (employee wages plus 37.6% average annual overhead costs including SSI, Medicare, workers' compensation, and disability). Total employer costs are represented in the total of annual earnings of onsite labor during operational years (see Tables 27-6 and 27-7).
[4] Good neighbor agreements are typically developed to provide compensation to landowner's in return for the landowner's consent and waiving of certain requirements applicable to the landowner's property.

by an estimated $5.2 million statewide and $3.1 million countywide as a result of Facility operation and maintenance (see Tables 27-5 and 27-6).

(f) Incremental School District Operating and Infrastructure Costs

The Facility is not expected to result in any additional operating or infrastructure costs to the local school districts, which include the Deposit and Windsor Central School Districts. Although it's possible that some of the long-term Facility operation employees may have school-aged children, increases in school district services and expenditures would likely be recovered through those employees' property tax payments and the respective district's state aid. Moreover, as discussed in 1001.27(i) below, the affected school districts will receive a considerable share of the PILOT Agreement payments. These payments will more than offset any possible increase in expenses incurred by the districts because of Facility employee children entering the school districts.

(g) Incremental Municipal, Public Authority, or Utility Operating and Infrastructure Costs

The Facility is not expected to result in any additional operating or infrastructure costs to local municipalities, authorities, or utilities. The Facility may place limited (if any) demand on municipal services, however this demand will be recovered through fees and payments. For example, if long-term Facility operation employees live in the municipalities, their required services will be paid for through property taxes and utility fees.

Although transportation of major facility components during construction could potentially impact certain roadways, the Applicant has committed to addressing/mitigating these impacts in accordance with Road Use Agreements entered into with the towns or separately under Host Community Agreements (HCA). The HCAs and RUAs will require the Applicant to restore any roadways impacted by the transportation of facility components during construction and operation of the Facility. By these agreements, the towns in which the Facility is located will not incur any additional highway maintenance costs related to the Facility other than normal wear and tear associated with the use of non-oversized/overweight vehicles required to transport workers and equipment to and from the Facility Site for operation and maintenance purposes.

(h) Jurisdictions that Will Collect Taxes or Benefits

The Facility is anticipated to result in economic benefits for the following taxing jurisdictions:

- Broome County
- Town of Windsor

- Town of Sanford
- Deposit Central School District
- Windsor Central School District

(i) Incremental Amount of Annual Taxes or Payments

In exchange for a partial real property tax exemption, the Applicant expects to execute a PILOT Agreement, which will require annual PILOT payments to each taxing jurisdiction identified in Table 27-12 for the next 25 years. Although the terms of the PILOT Agreement have not been finalized, similar to other wind projects in New York State, the Applicant plans to enter into a PILOT with an estimated total annual payment rate of $[redacted] per megawatt installed during the term of the PILOT. Over the expected 25-year term of the PILOT, the estimated annual PILOT amount would total $[redacted] per year, accumulating up to $[redacted] (in 2018 dollars) over 25 years. The total amount will be distributed across five taxing jurisdictions. Within the $[redacted] /MW PILOT, the Applicant expects a portion of that rate to be allocated to HCAs with host municipalities. Final HCAs will consider the capacity for each turbine installed by the Applicant in the municipality as part of this project. However, at the time of this report, the exact amount of these HCAs is unknown due to ongoing negotiations with local municipalities. The Applicant also estimates that a total of $[redacted] will be paid annually to the Town of Windsor Fire District 3 and an estimated $[redacted] will be paid annually to the Town of Sanford Fire District 1. Over 30 years, the Applicant estimates that the taxes will total $[redacted] for the Town of Windsor Fire District 3, and $[redacted] for the Town of Sanford Fire District 1.

Table 27-12. Estimated Annual and Total PILOT Amounts[5]

Taxing Jurisdictions Receiving PILOTs	Full Value 2017 Tax Rates[6]	Number of Turbines within Jurisdiction	Estimated Annual Installed Capacity (MW) within Jurisdiction[7]	Payment per MW	Share of Total	Annual PILOT Estimate	25-Year PILOT Estimate
Town of Sanford	0.29%	25	16.8	$[redacted]	15.7%	$[redacted]	$[redacted]
Town of Windsor	0.47%	4	105.0	$[redacted]	1.3%	$[redacted]	$[redacted]

[5] All values in this table, apart from number of turbines within jurisdictions, are independently rounded, and therefore may not directly add up to the totals shown. All calculations utilized unrounded values.

[6] These represent 2017 tax obligations to each type of taxing jurisdiction within the Study Area. This approach is utilized to provide a reasonable estimate at this time only. Final PILOT rates for all jurisdictions have yet to be determined.

[7] Annual nameplate capacity within jurisdictions is calculated by multiplying the number of turbines located within each jurisdiction by the turbine nameplate capacity (4.2 MW/turbine).

Taxing Jurisdictions Receiving PILOTs	Full Value 2017 Tax Rates[6]	Number of Turbines within Jurisdiction	Estimated Annual Installed Capacity (MW) within Jurisdiction[7]	Payment per MW	Share of Total	Annual PILOT Estimate	25-Year PILOT Estimate
Deposit Central School District	1.29%	23	96.6	$[redacted]	40.7%	$[redacted]	$[redacted]
Windsor Central School District	2.09%	6	25.2	$[redacted]	13.5%	$[redacted]	$[redacted]
Broome County	0.76%	29	121.8	$[redacted]	28.8%	$[redacted]	$[redacted]
Facility Total	N/A	29	121.8	$[redacted]	100.0%	$[redacted]	$[redacted]

The structure of the PILOT Agreement, as outlined above, will be guaranteed for the 25-year period of the agreement. Upon expiration of the PILOT Agreement, tax payments will be dependent upon the depreciated value of the Facility's generating assets and the appraised value of the Facility at that time.

(j) Comparison of Incremental Costs and Incremental Benefits

As discussed above, the Facility is not expected to result in any incremental costs to local tax jurisdictions but will instead result in significant benefits through implementation of a PILOT Agreement.

(k) Equipment or Training Deficiencies in Local Emergency Response Capacity

The local emergency responders are not expected to have specialized equipment to respond to a fire, hazardous substance, or medical emergency beyond the typical first aid, medical emergency and fire vehicles and equipment that would be at a local fire department. Exhibit 18, along with the Preliminary Health and Safety Plan and Emergency Action Plan, provides specific details on the emergency equipment that the Applicant will keep on site to respond to a fire or medical emergency. These documents also contain fire and emergency responder training and communication plans that will address any training deficiencies.

Local first responders (i.e. Town fire departments, Broome County Emergency Services Department) were provided with a copy of the preliminary EAP on June 25, 2018, for review and comment. These agencies will also be provided with copies of the final EAP. The final EAP will include a list of all fire and emergency medical equipment that will be maintained at the Facility and describe the emergency response training provided to Facility personnel. Local emergency responders are not expected to have the equipment or training to climb the turbine tower and assist in lowering injured/ill individuals to the ground. Responsibility for this task rests solely with the Applicant and/or affiliated

workers. Once the Facility is operational, the nacelle of each turbine will likely be equipped with an emergency descent for use in lowering sick or injured employees to the ground.

(l) Consistency with State Smart Growth Public Infrastructure Criteria

The New York State Smart Growth Public Infrastructure Policy Act is meant to maximize the social, economic, and environmental benefits from public infrastructure development by minimizing the impacts associated with unnecessary sprawl. State infrastructure agencies, such as the NYSDOT, shall not approve, undertake, or finance a public infrastructure project, unless, to the extent practicable, the project is consistent with the smart growth criteria set forth in ECL § 6-0107.

Although the Facility will not result in the construction or operation of public infrastructure and will not result in unnecessary sprawl, approvals from the NYSDOT may be required due to facility components traveling on and crossing state highways (e.g., State Route 17). Therefore, this section provides a detailed statement regarding the Facility's consistency with smart growth criteria. As discussed below, the Facility is consistent with five of the ten criteria, while the remaining five criteria do not apply to the Facility.

1) Criterion 1: To advance projects for the use, maintenance, or improvement of existing infrastructure

The purpose of the Facility is to create an economically viable wind-powered electrical-generating facility that will provide a source of renewable energy to the New York State grid, and in doing so, improve the State's existing energy infrastructure. Facility components include up to 33 wind turbines, access roads, collection lines, permanent meteorological towers, an operations and maintenance (O&M) facility, a laydown area, a collection substation, and a point of interconnection (POI) substation that will include battery storage. While these Facility components are not public infrastructure and are generally not expected to promote the operation of public infrastructure, the Facility will contribute up to 124 MW of renewable energy to the New York State grid. As reported in the Preliminary Scoping Statement (August 2017), the Facility is expected to generate enough electricity to meet the average annual consumption of tens of thousands of households in New York State. The Facility will also use portions of existing State highway infrastructure to transport equipment. These activities are not anticipated to have any long-term detrimental impacts on existing infrastructure.

After careful consideration of its contribution to and utilization of the New York State power grid, and its utilization of the transportation routes identified above, it has been determined the Facility and any necessary changes associated with its construction and operation are consistent with this smart growth criterion.

2) Criterion 2: To advance projects located in municipal centers

"Municipal centers" are defined in the Smart Growth Act as “areas of concentrated and mixed land uses that serve as centers for various activities, including, but not limited to, central business districts, main streets, downtown areas, brownfield opportunity areas, downtown areas of local waterfront revitalization program areas, transit-oriented development, environmental justice areas, and hardship areas,” as well as “areas adjacent to municipal centers, which have clearly defined borders, are designated for concentrated development in the future in a municipal or regional comprehensive plan, and exhibit strong land use, transportation, infrastructure and economic connections to a municipal center; and areas designated in a municipal or comprehensive plan, and appropriately zoned in a municipal zoning ordinance, as a future municipal center.”

Large-scale wind energy projects, such as the Facility, require extensive land; moreover, the requirement for setbacks from residences and other structures restricts large-scale wind energy generating facilities to comparatively isolated rural areas. No municipal centers are found within the Facility Site. Therefore, this criterion does not apply to the Facility.

3) Criterion 3: To advance projects in developed areas or areas designated for concentrated infill development in a municipally approved comprehensive land use plan, local waterfront revitalization plan and/or brownfield opportunity area plan

See discussion of Criterion 2 above. Large-scale wind energy projects such as the Facility cannot be located within areas designated for concentrated infill development nor are they well-suited to developed waterfront areas and/or brownfield opportunity areas. No developed areas, areas designated for concentrated infill development, waterfront areas, or brownfield opportunity areas are located within the Facility Site. Therefore, this criterion does not apply to the Facility.

4) Criterion 4: To protect, preserve and enhance the state’s resources, including agricultural land, forests, surface and groundwater, air quality, recreation and open space, scenic areas, and significant historic and archaeological resources

The Facility will generate up to 124 MW of renewable energy while largely preserving the vacant, agricultural and forested land that comprise the Facility Site. This Application provides a detailed analysis of the potential environmental impacts and benefits, including analyses specifically associated with agricultural land, forests, surface and groundwater, air quality, recreation and open space, scenic areas, and significant historic and archaeological

resources. In addition, a Visual Impact Assessment (VIA) has been prepared which assesses potential visual impacts within a 10-mile radius of the Facility Site. As documented throughout this Application, the Applicant will continue to work with local stakeholders to identity potential opportunities for avoidance, minimization, and mitigation to preserve the state's resources. Based on these analyses, the Applicant believes that the Facility has avoided and minimized impacts to these resources to the maximum extent practicable (based on the layout as currently proposed), and that any remaining impacts are outweighed by mitigation and the benefit provided by the Facility's generation of up to 124 MW of renewable energy. Therefore, the Facility is consistent with this criterion.

5) Criterion 5: To foster mixed land uses and compact development; downtown revitalization; brownfield redevelopment; the enhancement of beauty in public spaces; the diversity and affordability of housing in proximity to places of employment, recreation, and commercial development; and the integration of all income and age groups.

See response to Criterion 2 above. The nature of wind projects requires that the Facility be sited in a rural area that does not include any areas that would potentially experience compact development, downtown revitalization, or an increase in more affordable and convenient housing, etc. (e.g., villages and cities). Therefore, this criterion is not applicable.

6) Criterion 6: To provide mobility through transportation choices including improved public transportation and reduced automobile dependency

The Facility is does not directly or indirectly affect transportation options. Therefore, this criterion is not applicable.

7) Criterion 7: To coordinate between state and local government and inter-municipal and regional planning

The Applicant has conducted extensive public outreach to local government and planning agencies throughout the development and review of the Facility. This has included the public outreach conducted in accordance with the requirements of the Article 10 process and the Public Involvement Program (PIP) plan prepared specifically for the Facility, which includes frequent stakeholder consultation and other forms of engagement, public education, public meetings, ample notification periods, and public comment periods at key milestones. The Applicant also has reached out individually to each of the local governments that will be directly affected by the Facility. Moreover, the Article 10 process specifically requires outreach and coordination between the Applicant and state agencies with a role in reviewing the Application for the proposed Facility. To the extent applicable, these outreach efforts and municipal/agency consultations satisfy the criterion related to coordination between state and local governments.

8) Criterion 8: To participate in community-based planning and collaboration

The Applicant has conducted and will continue to conduct extensive public outreach to community-based organizations throughout the development and review of the Facility. This has included the public outreach conducted in accordance with the requirements of the PIP. See response to Criterion 7 for additional detail. These outreach efforts satisfy the criterion related to participation in community-based planning and collaboration.

9) Criterion 9: To ensure predictability in building and land use codes

The Applicant has no role in or authority over the development or enforcement of building or land use codes in the Towns of Windsor and Sanford. Therefore, this criterion does not apply to this Facility.

10) Criterion 10: To promote sustainability by strengthening existing and creating new communities which reduce greenhouse gas emissions and do not compromise the needs of future generations by among other means, encouraging broad-based public involvement in developing and implementing a community plan and ensuring the governance structure is adequate to sustain its implementation

The Facility is consistent with New York State policies designed to encourage initiatives that reduce greenhouse gas emissions and contribute to the transition of New York's energy markets by encouraging renewable alternatives. The production of renewable wind energy by the Facility promotes the reduction of greenhouse gas emissions by providing an alternative energy source to fossil fuels. Therefore, the Facility supports this smart growth criterion.

11) Smart Growth Attestation

The Smart Growth Act requires that the chief executive officer of a state infrastructure agency (or his or her designee) attest in writing that the project under review, to the extent practicable, meets the relevant smart growth criteria in ECL § 6-0107(2). As previously noted, the Facility will not result in the construction or operation of public infrastructure as that term is used in the Smart Growth Act. As a result, the requirement to obtain an attestation from the chief executive officer of a state infrastructure agency does not apply to the Facility.