High Bridge Wind Project

Case No. 16-F-0262

1001.27 Exhibit 27 - REDACTED

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 27-A). The Facility is located within the Town of Guilford in Chenango County. Information regarding population, educational attainment and race in the Town is summarized in Table 27-1.

Table 27-1. Demographic Information for the Town of Guilford.

Population	
2010 Total Population[1]	2,922
2017 Total Population Estimate	2,847
Median Age	44.8 yrs
Educational attainment	
% high school graduate or higher	88.6%
Total housing units	1,644
Median household income	$50,736
Individuals below poverty level	13.9%

[1] Demographic profile of 2010 US Census. All other data from the 2013-2017 American Community Survey 5-Year Estimates

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

The job and economic impacts of the Facility were assessed, in part, using the Job and Economic Impact (JEDI) wind model. The JEDI model allows users to estimate the jobs and economic development impacts from wind power generation projects for both the construction and operation phases of a proposed project (USDOE NREL, 2017). These economic development impacts, categorized by the levels of impact and indicators described below, include on-site jobs and earnings, economic output from these on-site earnings, turbine/local revenue/supply chain jobs and earnings, economic output from these turbine/local revenue/supply chain earnings, induced jobs and earnings, and economic output from these induced jobs and earnings. The JEDI model was created by the National Renewable Energy Laboratory (NREL), a national laboratory of the United States Department of Energy. It calculates the indicators for each level of impact using project-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:

1) **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 Facility, 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.
2) **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, 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 local revenue and supply chain impact.
3) **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, County, 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 (as expressed through the increase in employment demand), the amount of money earned through those jobs, and the overall economic output associated with each level of economic impact. These indicators are described in further detail:

1) **Jobs:** Jobs refer to the increase in employment demand because of facility 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 an FTE position (e.g., a half-time, year-round position is 0.5 FTE).
2) **Earnings:** This measures the wages and salary compensation paid to the employees described above.
3) **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: Chenango County and New York State
- Year of Construction: 2021
- Total Project Nameplate Capacity: 100.8 MW[1]
- Number of Projects: 1
- Number of Turbines:18

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.

[1] Note that although the Applicant presents a turbine layout of up to 25 turbines for Article 10 permitting purposes, the economic analysis for the Socioeconomic Report assumes an 18-turbine layout assuming the GE5.6 MW turbine, which amounts to total project nameplate of 100.8 MW. This is to both to be consistent with the economic benefit information presented in the Applicant's NYSERDA Application, which was based on a slightly smaller 99 MW nameplate capacity, and to avoid overestimating the Facility's economic benefits in the Article 10 Application.

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 O&M, Materials and Services during O&M, 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 (June 2019); therefore, the remaining JEDI default values were reviewed by the Applicant and determined to be reasonable based on project specific costs known to date and the Applicant's experience relating to wind and other energy development projects. These costs are further elaborated in Tables 27-3 and 27-4.

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

JEDI Cost Items (Annual Estimates)	Default Value	Adjusted Value	Change
Construction Equipment Costs	$121,469,954	$[redacted]	[redacted]
Construction Materials Costs	$25,453,865	$[redacted]	[redacted]
Construction Labor Total Costs	$10,825,012	$[redacted]	[redacted]
Development/Other Costs	$4,530,501	$[redacted]	[redacted]
Sales Tax for Construction Materials and Equipment	$5,357,061	$[redacted]	[redacted]
Operating/Maintenance Labor Costs	$354,028	$[redacted]	[redacted]
Operating/Maintenance Materials and Services	$2,468,372	$[redacted]	[redacted]
Sales Tax for Operating/Maintenance Materials and Equipment	$72,630	$[redacted]	[redacted]
Revenues for Local Tax Jurisdictions ($/MW)	N/A	$[redacted]	[redacted]
Land Payments (during Operation)	$124,200	$[redacted]	[redacted]

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

Estimated non-payroll expenditures to be made both within New York State and Chenango 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					
Construction (concrete, rebar, equip, roads and site prep)	$[redacted]	65%	$[redacted]	6%	$[redacted]
Transformer	$[redacted]	0%	$[redacted]	0%	$[redacted]
Electrical (drop cable, wire)	$[redacted]	100%	$[redacted]	0%	$[redacted]
HV line extension	$[redacted]	10%	$[redacted]	0%	$[redacted]
Development/Other Costs					
HV Sub/Interconnection Materials	$[redacted]	10%	$[redacted]	0%	$[redacted]
Engineering	$[redacted]	0%	$[redacted]	0%	$[redacted]
Legal Services	$[redacted]	100%	$[redacted]	0%	$[redacted]
Land Easements	$[redacted]	100%	$[redacted]	0%	$[redacted]
Site Certificate/Permitting	$[redacted]	100%	$[redacted]	100%	$[redacted]
Sales Tax (Material and Equipment Purchases)	$[redacted]	50%	$[redacted]	50%	$[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 Cost Item	Project Cost	State Share	Statewide Expenditures	County Share	Countywide Expenditures
Materials and Services					
Vehicles	$[redacted]	100%	$[redacted]	0%	$[redacted]
Site Maintenance/Misc. Services	$[redacted]	80%	$[redacted]	2%	$[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]	4%	$[redacted]
Replacement Parts, Equipment, Spare Parts Inventory	$[redacted]	2%	$[redacted]	0%	$[redacted]
Sales Tax (Materials & Equipment Purchases)	$[redacted]	50%	$[redacted]	50%	$[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 Chenango County (2016) to estimate potential impacts on a statewide and countywide basis. A summary of this analysis, estimated for both the construction and O&M phases of the proposed Facility, are presented in Tables 27-5 and 27-6 and described in the narrative that follows.

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

Economic Impacts	Jobs	Earnings (Millions)	Output (Millions)
Construction			
Project Development and On-site Labor Total	67	$5.3	$6.2
Construction & Interconnection Labor	*58*	*$4.2*	--
Construction-Related Services	*9*	*$1.1*	--
Turbine & Supply Chain Impacts	166	$11.7	$31.1
Induced Impacts	63	$4.7	$12.4
Total Construction Impacts	**297**	**$21.6**	**$49.7**
Annual Operation			
On-site Labor Impacts	7	$0.6	$0.6
Local Revenue & Supply Chain Impacts	9	$0.7	$2.7
Induced Impacts	6	$0.4	$1.1
Total Annual Operation Impacts	**22**	**$1.8**	**$4.5**

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

Economic Impacts	Jobs	Earnings (Millions)	Output (Millions)
Construction			
Project Development and On-site Labor Total	2	$0.2	$0.2
Construction & Interconnection Labor	*2*	*$0.2*	--
Construction-Related Services	*0*	*$0.0*	--
Turbine & Supply Chain Impacts	13	$0.7	$3.1
Induced Impacts	11	$0.5	$1.9
Total Construction Impacts	**26**	**$1.3**	**$5.1**
Annual Operation			
On-site Labor Impacts	7	$0.4	$0.4
Local Revenue & Supply Chain Impacts	4	$0.1	$1.4
Induced Impacts	2	$0.1	$0.4
Total Annual Operation Impacts	**14**	**$0.7**	**$2.3**

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 67 FTE on-site Construction and Construction-Related positions for New York State residents, 58 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 two (2) FTE on-site Construction and Construction-Related positions for County residents, all of which will be for Construction and Interconnection labor. Although there are a small number of jobs provided for Chenango County residents, the Facility is likely to draw additional workers from neighboring, more-populated counties (e.g., Broome County). 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.

The Applicant's construction management team has further evaluated the estimated peaks of 124 FTE statewide construction jobs and 4 FTE countywide construction jobs to provide the following estimated distribution of average work force, by discipline, for each quarter during the construction year 2021. 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)	10	6
Q2 (Apr-Jun)	72	10
Q3 (Jul-Sep)	124	11
Q4 (Oct-Dec)	41	8

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)	0	0
Q2 (Apr-Jun)	2	0
Q3 (Jul-Sep)	4	0
Q4 (Oct-Dec)	1	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 $5.3 million for annual earnings for the 67 on-site construction jobs for New York State residents, $0.2 million of which is the estimated for annual earnings of the 2 on-site construction jobs for Chenango 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 Chenango County employees (i.e., wages plus 37.6% average annual overhead costs including SSI, Medicare, workers' compensation, and disability). Project Development and On-site Labor earnings are realized by New York State and Chenango 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 Chenango 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 on-site 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. The construction of the Facility is not anticipated to result in any earnings within following industry categories at either a statewide or countywide level: Agriculture; Mining; Fabricated Metals;

Machinery; Electrical Equipment; Transport. Communications, and Utilities; and Wholesale Trade. At a countywide level, the construction of the Facility is not anticipated to result in any Manufacturing earnings.

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

Trade	Project Development and On-site Labor Earnings	Turbine & Supply Chain Earnings	Induced Earnings
Construction	$4.2	$4.8	$1.7
Manufacturing	$0.0	$1.0	$0.3
Retail Trade	$0.0	$2.3	$0.6
Finance, Insurance, and Real Estate	$0.0	$0.7	$0.2
Misc. Services	$0.0	$2.4	$0.6
Engineering & Professional Services.	$1.1	$0.3	$0.4
Government	$0.0	$0.1	$0.9
Total	**$5.3**	**$11.7**	**$4.7**

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.

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 (U.S. Department of Labor Bureau of Labor Statistics, 2019). 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.

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

Trade	Project Development and On-site Labor Earnings	Turbine & Supply Chain Earnings	Induced Earnings
Construction	$0.2	$0.3	$0.0
Retail Trade	$0.0	$0.0	$0.0
Finance, Insurance, and Real Estate	$0.0	$0.3	$0.0
Misc. Services	$0.0	$0.0	$0.0
Engineering & Professional Services.	$0.0	$0.0	$0.0
Government	$0.0	$0.0	$0.4
Total	**$0.2**	**$0.7**	**$0.5**

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 166 jobs (with a total $11.7 million in earnings) in New York State and 13 jobs (with a total $0.7 million in earnings) in Chenango County over the course of Facility construction. In addition, Facility construction could induce demand for 63 jobs (with a total $4.7 million in earnings) statewide and 11 jobs (with a total $0.5 million in earnings) countywide through the spending of additional household income. The total estimated impact of 229 new secondary jobs statewide during construction could result in up to $16.4 million in earnings, assuming a 2021 construction schedule and wage rates consistent with statewide averages. County residents are estimated to obtain 23 of these secondary jobs during construction, resulting in up to $1.2 million of earnings countywide.

In addition to secondary 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 secondary industries[2]. 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 $49.7 million statewide and $5.1 million 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 7 full-time jobs for New York State residents with combined estimated annual earnings of approximately $0.6 million. Chenango County residents are anticipated to hold all 7 of these on-site operational jobs. These 7 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. Table 27-11 provides an overview of annual wages of each full-time job position. These 7 full-time local jobs comprise the Facility's on-site long-term employment impact.

[2] As defined above, economic 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.

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	$29.06	$60,445
Administrative/Secretarial	1	$18.60	$38,688
Site Management	1	$46.50	$96,720

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 during the O&M period are shown in detail in Table 27-4. These expenditures would total approximately $[redacted] statewide annually, with approximately $[redacted] of that anticipated to be spent at the county level annually. 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).

Payments to local landowners will be made in association with lease and easement agreements executed to host Facility components and good neighbor agreements (GNAs) executed with certain adjacent properties. These annual lease, easement, and GNA payments offer direct benefits totaling $[redacted] annually to participating landowners. This income would be in addition to any income generated from the current use of the land (e.g., agricultural or timber production).

(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 supply chain and local revenue 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 15 jobs statewide with annual earnings of approximately $1.1 million and 6 jobs countywide with annual earnings of approximately $0.2 million. This secondary employment is estimated to have an economic output of $3.8 million annually statewide and $1.8 million annually countywide. Total economic output is projected to increase by an estimated $4.5 million statewide and $2.3 million countywide as a result of Facility operation and maintenance (see Tables 27-5 and 27-6).

[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).

(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. Although it is 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 Section (i) below, the affected school districts should also benefit from PILOT Agreement payments, once a PILOT is executed. These payments will more than offset any possible increase in expenses incurred by the districts because of Facility employee children entering the school districts. The Applicant has had consultation with the school district. For more details, see Public Involvement Plan Tracking Log in Appendix 02-B.

(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 the local municipalities, authorities, or utilities. The Facility will 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 Town of Guilford, their required services will be paid for through property taxes and utility fees.

Although transportation of major Facility components during construction will impact certain roadways, the Applicant will work with the Town and County to address/mitigate these impacts through Road Use Agreements (RUAs), which would require the Applicant to restore roadways impacted by the transportation of Facility components during construction and operation of the Facility. By virtue of these agreements, the Town 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 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

- Chenango County
- Town of Guilford
- Bainbridge-Guilford Central School District
- Gilbertsville-Mt. Upton Central School District
- Guilford Fire District
- Mt. Upton Fire District

(i) Incremental Amount of Annual Taxes or Payments

In exchange for a 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 30 years. Over the expected 30-year term of the PILOT, the estimated annual PILOT amount would total $[redacted] per year, accumulating up to $[redacted] (in 2019 dollars) over 30 years. The total amount will be distributed across the taxing jurisdictions. The Applicant expects a portion of the PILOT to be allocated to HCAs with host municipalities. At the time of this report, the exact amount of these HCAs is unknown. The Applicant also estimates that roughly $[redacted] will be paid annually to the Guilford Fire District and the Mt. Upton Fire District to cover the Fire District Tax. These payments will total $[redacted] (in 2019 dollars) over the 30-year duration of the agreement.

The Applicant plans to execute PILOTs with each taxing jurisdiction within the Study Area. Table 27-12 summarizes the estimated PILOT payments projected to be made to each taxing jurisdiction within the Study Area. The 2018 local tax rates are presented for each jurisdiction within the Facility Area. Payment amounts shown are based on the Project's planned improvements and projected capacity of 100.8 MW. Payment amounts would increase or decrease in direct proportion to changes in the Project's final installed capacity.

Table 27-12. Estimated Annual and Total PILOT Amounts[4]

Taxing Jurisdiction	Full Value Tax Rate	Year 1 Payment	30-Year Payment
Bainbridge-Guilford CSD	2.11%	$[redacted]	$[redacted]
Town of Guilford[5]	0.57%	$[redacted]	$[redacted]
Chenango County[6]	1.05%	$[redacted]	$[redacted]
Subtotal	**3.73%**	$[redacted]	$[redacted]
Gilbertsville-Mt. Upton CSD	1.27%	$[redacted]	$[redacted]
Town of Guilford[7]	0.57%	$[redacted]	$[redacted]
Chenango County[8]	1.05%	$[redacted]	$[redacted]
Subtotal	**2.89%**	$[redacted]	$[redacted]

[4] 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.
[5] Those portions of the Town of Guilford within the Bainbridge-Guilford CSD.
[6] Those portions of the Chenango County within the Bainbridge-Guilford CSD.
[7] Those portions of the Town of Guilford within the Gilbertsville-Mt. Upton CSD.
[8] Those portions of Chenango County within the Gilbertsville-Mt. Upton CSD.

(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 or training 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 (HASP), the Emergency Action Plan (EAP), and Site Security Plan, provides specific details on the equipment that the Applicant will keep on site to respond to a fire or medical emergency as well as the training that will be provided to on-site personnel. Because local emergency responders are not expected to provide any emergency services beyond those ordinarily provided, no equipment or training deficiencies are anticipated.

Local first responders (i.e., Town fire departments, Chenango County Department of Fire and Emergency Services) were provided with a copy of the preliminary EAP on June 03, 2019, 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. Consistent with the discussion above, 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.

(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. 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. The Facility components include up to 25 wind turbines and associated access roads, collection lines, permanent meteorological towers, O&M facility, the collection substation, which may include a battery storage facility, and a POI substation. While these Facility components are not public infrastructure and are generally not expected to result in the operation of public infrastructure, the Facility will contribute up to 100.8 MW of renewable energy to the New York State grid[9]. As reported by the Preliminary Scoping Statement (January 2019), total net generation delivered to NYSEG's existing Jennison to East Norwich 115 kV transmission line will meet the average annual consumption needs of thousands of households in New York State. Additionally, the Facility will use portions of existing State highway infrastructure to transport equipment. However, none of these activities are anticipated to have any long-term impact on existing infrastructure.

The High Bridge Wind Facility is consistent with this smart growth criterion, when its contribution to and utilization of both the New York State power grid and transportation routes identified above are considered. The necessary changes to the public infrastructure (contribution of renewable energy to power grid, utilization of existing transportation routes and construction of access road intersections to existing roads) are also consistent with the 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

[9] Note although the Applicant presents a turbine layout of up to 25-turbines for Article 10 permitting purposes, the economic analysis for the socioeconomic report assumes an 18-turbine layout. This is to both to be consistent with the economic benefit information presented in the Applicant's NYSERDA Application, which was based on a slightly smaller 99 MW nameplate capacity, and to avoid overestimating the Facility's economic benefits in the Article 10 Application.

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 projects to areas with lower population density. 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 High Bridge Wind 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. 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 100.8 MW of renewable energy while largely preserving the vacant, agricultural and forested land that comprises the Facility Site. The Facility's Article 10 Application provides a detailed analysis of 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 in the VIA and the Facility's Cultural Resources Work Plans, the Applicant will continue to work with the local stakeholders to identity potential opportunities for mitigation. For instance, the Applicant may fund one more visual/cultural mitigation projects identified by State and local agencies. Based on these analyses, the Applicant believes that the Facility has avoided and minimized impacts to these resources to the maximum extent practicable, and that any remaining impacts are outweighed by the benefit provided by the Facility's generation of up to 100.8 MW of clean, 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 Facility must necessarily be located in a rural area well removed from any areas that would potentially experience compact development, downtown revitalization, or significant quantities of 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 public 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 team 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 Town of Guilford. 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 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 Facility promotes the reduction of greenhouse gas emissions using renewable energy. The Facility, therefore, 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.