Socioeconomic Report

Baron Winds Project

Towns of Cohocton, Dansville, Fremont, and Wayland Steuben County, NY

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EXECUTIVE SUMMARY

This socioeconomic report is prepared in connection to the proposed Baron Winds Project ("the Facility"), a utility scale wind power project located in the Towns of Cohocton, Dansville, Fremont, and Wayland, Steuben County, New York (see Figure 1: Facility Site). As measured to the nearest proposed turbine, the Facility is located approximately 0.3 mile west of the Village of Cohocton, 5.1 miles northwest of the Village of Avoca, 3.6 miles northeast of the Village of North Hornell and the City of Hornell, 4.1 miles east of the Village of Arkport, 8.3 miles east of the Village of Canaseraga in Allegany County, and 7.8 miles southeast of the Village of Dansville in Livingston County (see Figure 2: Regional Facility Location). The Facility will consist of up to 76 turbines, and deliver up to 300 megawatts (MW) of electrical power to the New York State grid. The Facility is scheduled to be constructed and go into operation in 2020.

The focus of this report is to assess the potential socioeconomic effects of this Facility on the host communities of the Towns of Cohocton, Dansville, Fremont, and Wayland (the "Study Area") and New York State. This involves a review of relevant conditions throughout the area, and an interpretation of trends and patterns of change as represented by several demographic and economic indicators. Potential statewide impacts from the Facility are then assessed in light of the current socioeconomic conditions of the area.

Steuben County is in the Southern Tier of New York, along the border of Pennsylvania, and shares many economic and demographic characteristics of the region. Like many other counties in the area, Steuben County has experienced a mix of population growth, stagnation and decline over the past 30 years, as have the Towns of Cohocton, Dansville, Fremont, and Wayland. Age distribution patterns and educational attainment levels throughout the Study Area are relatively consistent with those in the surrounding areas. Housing availability throughout the Study Area is stable, and homeownership rates are high (between approximately 72.5% and 82.9%). Housing values are relatively stable, and are well below the statewide median value. Poverty rates within the Study Area are mixed with half the Towns above the County rate of 16.3%.

In decreasing order of total employment, the five dominant employment sectors in Steuben County are 1) Manufacturing, 2) Health Care and Social Assistance, 3) Educational Services, 4) Professional, Scientific and Technical Services, and 5) Retail Trade. On-farm employment now represents a much smaller share of countywide employment than previously, although it remains a substantial economic generator throughout the region by several other measures. Although unemployment across all industries within the county is higher than the statewide average, recent (slow) growth has begun to bring the unemployment rate down.

The proposed Facility is fundamentally compatible with existing land use patterns and future land use goals within the Study Area. In the short-term, there may be a temporary interruption of current land uses due to construction activities. However, Facility operation will not result in long-term or large-scale changes to the prevailing rural character of the area and will not interfere with ongoing land use (i.e., farming and forestry activities). Furthermore, the development of this Facility is compatible with the future land use plans in the Study Area and largely compatible with zoning regulations in the Study Area.

The construction and operation of the Facility will have positive impacts throughout the local and statewide economy. Businesses involved in on-site Facility construction and operations, as well as those associated throughout the industrial supply chain, are expected to see a measurable increase in the demand for their services. In addition, the earnings earned by workers during construction and operation of the Facility are expected to generate additional spending, creating a "ripple effect" throughout the statewide economy.

Using standards developed by the National Renewable Energy Laboratory, it is estimated that Facility construction could increase onsite and off-site employment by 898 workers statewide, with total earnings of approximately \$65.1 million. The total value of onsite and off-site industrial production in the statewide economy associated with Facility construction is estimated at \$161.9 million. The operation and maintenance of the installed Facility is estimated to increase onsite and off-site employment demand by an additional 43 workers statewide, with total annual earnings of approximately \$3.6 million. The total value of industrial production in the statewide economy associated with operation and maintenance of the Facility is estimated at \$10.2 million.

Furthermore, the Facility is anticipated to have a positive impact on local taxing jurisdictions, because it will generate additional revenue through payments in lieu of taxes (PILOT) and payments to local municipalities under Host Community Agreements (HCA). Given the budget constraints that local taxing jurisdictions are currently facing, it is expected that the PILOT/HCA payments will be a positive revenue stream to municipalities. Annual PILOT amounts are estimated to total \$1,590,000, and annual HCA amounts are estimated to total \$750,000. On the expenditure side, the Facility will not impose significant additional burdens on municipal and school district services and thus will not increase the costs to the participating Towns.

These estimates suggest that the construction and operation of the Baron Wind Facility will have a positive impact throughout the statewide economy through the provision of employment, spending of wages, and increase in industrial output. At a local level, direct payments will occur in the form of land leases and other agreements (i.e., easements, good neighbor agreements), PILOTs and HCAs, as well as a small number of local jobs and purchases of local goods. In addition, as demonstrated by available research, the presence of turbines is not expected to have a negative impact on other portions of the economy, such as tourism and land values.

INTRODUCTION

On behalf of Baron Winds LLC (Applicant), Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. has prepared this socioeconomic report for the proposed Baron Winds Project ("the Facility"), a utility scale wind power project located in the Towns of Cohocton, Dansville, Fremont, and Wayland, Steuben County, New York (see Figure 1: Facility Site). As measured to the nearest proposed turbine, the Facility is located approximately 0.3 mile west of the Village of Cohocton, 5.1 miles northwest of the Village of Avoca, 3.6 miles northeast of the Village of North Hornell and the City of Hornell, 4.1 miles east of the Village of Arkport, 8.3 miles east of the Village of Canaseraga in Allegany County, and 7.8 miles southeast of the Village of Dansville in Livingston County (see Figure 2: Regional Facility Location). The Facility will consist of up to 76 turbines, and will deliver up to 300 megawatts (MW) of electrical power to the New York State grid. The Facility is scheduled to be constructed and go into operation in 2020.

A comprehensive review of the potential socioeconomic effects on local municipalities and New York State requires an examination of the related impacts generated from the construction and operation of a given project. Specific to the proposed Facility, this report includes a review of the past and current demographic and economic characteristics and trends across New York State and in the Study Area, which includes the Towns of Cohocton, Dansville, Fremont, and Wayland in Steuben County.

Part I of this report presents a socioeconomic profile of the Study Area and New York State, including a demographic profile with specific data on population size, age and educational attainment, housing occupancy rate and median value. A snapshot of the health of the statewide and local economy follows with specific data on the local labor force and unemployment rates and median household income including poverty levels. Finally, local, county and state fiscal health is reviewed with attention focused on the existing tax base, recent budgets (including revenues, expenditures and indebtedness) along with land use trends and current assessed property values. Part II of this report analyzes the potential positive and negative socioeconomic impacts of the Facility. The economic impacts are presented through use of the economic input-output Jobs and Economic Development Impact (JEDI) model. This model was created by MRG & Associates, under contract with the National Renewable Energy Laboratory and is an industry standard for investigation of the economic impacts of wind energy facilities. Part III discusses the mitigation measures for each identified potential adverse impact of the Facility on the socioeconomic aspects of the communities. Potential measures intended to either eliminate or reduce the potential adverse impact are presented.

PART I: SOCIOECONOMIC PROFILE OF NEW YORK STATE AND STUDY AREA

1. Demographic and Housing Characteristics

This section reviews population, housing, and labor force characteristics and trends at three comparative levels: 1) the State of New York. 2) Steuben County and 3) the Study Area, which includes the Towns of Cohocton, Dansville, Fremont, and Wayland. This includes past, current and projected statistics. The most recent Decennial Census conducted by the U.S. Census Bureau was in 2010. For data not collected during the 2010 Decennial Census, the figures used are estimates based on the Census Bureau's American Community Survey, which apply to all years between 2011 and 2015. For the purposes of this report, these estimates will be referred to as estimates for 2015.

1.1 Population and Housing Trends

Census data reveals that these geographic scales have experienced a varied history of population growth and decline over the past three decades. The 2010 populations for the State of New York, Steuben County, as well as the Towns of Cohocton, Dansville, Fremont, and Wayland is shown in Table 1. While New York State showed a notable increase in population from 1980 to 2010 (10.37%), Steuben County's population was stable during the same period (-0.1%). At the local level, each of the towns within the Study Area experienced population increases between 1980 and 2010, most noticeably the Town of Dansville (26.6%) and the Town of Fremont (16.5%). The Towns of Cohocton and Wayland experienced smaller population increases of 3.9% and 5.7%, respectively, between 1980 and 2010. Most residents across the State, County and the four towns are working adults (ages 16 to 64 years), with a substantial child population (local populations were relatively close to the statewide average of 17% of the population ages 0 to 15 years) (see Table 2). There is a slightly lower proportion of people 65-years-or-older across New York State (14.3% of the total population) than there is within the Study Area (an average of 16.4% across all four towns).

	2010 Population	Change 2000-2010	2000 Population	Change 1990-2000	1990 Population	Change 1980-1990	1980 Population
New York State	19,378,102	2.1%	18,976,821	5.5%	17,990,778	2.5%	17,558,165
Steuben County	98,990	0.3%	98,726	-0.5%	99,217	0.1%	99,088
Town of Cohocton	2,561	-2.5%	2,626	4.2%	2 520	2.2%	2,466
Town of Dansville	1,842	-6.8%	1,977	9.2%	1 811	24.5%	1,455
Town of Fremont	1,008	4.6%	964	5.7%	912	5.4%	865
Town of Wayland	4,102	-4.9%	4,314	0.1%	4 311	11.1%	3,881

Source: U.S. Census Bureau, 2010, 2000, 1990 and 1980 Decennial Census

	<15 Years	% of Total Pop.	15-44 Years	% of Total Pop.	45-64 Years	% of Total Pop.	65+ Years	% of Total Pop.
New York State	3,501,825	17.8%	8,085,675	41.1%	5,272,411	26.8%	2,813,264	14.3%
Steuben County	18,154	18.4%	34,631	35.1%	28,909	29.3%	16,970	17.2%
Town of Cohocton	524	20.5%	845	33.1%	764	29.9%	416	16.3%
Town of Dansville	273	16.1%	514	30.3%	661	39.0%	244	14.4%
Town of Fremont	143	14.9%	371	38.8%	259	27.1%	185	19.3%
Town of Wayland	669	16.5%	1,297	32.0%	1,459	36.0%	628	15.5%

Table 2. Age Groups

Source: American Community Survey 2011-2015 5-Year Estimates

While the statewide population is expected to remain relatively stable over the next 30 years, the population of Steuben County is expected to decrease gradually (Cornell University, 2011). With a stable or declining population, it can be anticipated that the distribution of population density for each municipality will remain relatively unchanged or even decrease.

The level of education attained, particularly in terms of high school degree attainment, has improved in the Study Area. Educational attainment is a measure of the highest level of education that a person has attained. An increase in the number of residents who receive a higher education reflects a better-educated workforce in each community, which is a positive attribute that is attractive to current and future employers. Wind farm projects such as this Facility create jobs that require various levels of education from advanced degrees, to long-term on-the-job training, and trade certifications (Bezdek, 2007). Thus, communities with an educated labor force are better suited to fill the employment positions created by a wind farm project. As illustrated in Table 3, the estimated level of overall education obtained by state and local residents has generally increased in recent years.

Table 3. Educational Attainment

	% High School Degree or Higher	2000-2015 Change	% Bachelor's Degree or Higher	2000-2010 Change
New York State	85.6%	6.5%	34.2%	6.8%
Steuben County	89.3%	6.5%	21.3%	3.4%
Town of Cohocton	85.3%	5.5%	10.7%	-0.5%
Town of Dansville	89.6%	6.1%	16.5%	7.4%
Town of Fremont	94.4%	9.1%	16.5%	5.6%
Town of Wayland	87.0%	4.4%	10.7%	0.9%

Source: U.S. Census Bureau, 2000 Decennial Census and American Community Survey 2011-2015 5-Year Estimates

With an 11.1% percent vacancy rate, housing availability in New York State has remained relatively consistent between 2011 to 2015. By comparison, the vacancy rate is 15.9% in Steuben County, 20.5% in the Town of Cohocton, 19.7% in the Town of Dansville, 15.4% in the Town of Fremont, and 12.1% in the Town of Wayland. With a slowly-decreasing forecasted population, vacancy rates are projected to increase in these communities.

Within the occupied housing, rates of home ownership are strong for the Towns Cohocton, Dansville, Fremont and Wayland at 81.3%, 82.1%, 82.9% and 72.5%, respectively, in 2015. By comparison, the rate of home ownership for New York State in 2015 is only 53.6%. Median housing values statewide are significantly higher than those in the Study Area. In 2015, the estimated statewide median housing value was \$283,400. By comparison, the 2015 estimated median housing value was \$99,300 in the Town of Dansville, \$89,400 in the Town of Wayland, \$86,000 in the Town of Fremont and \$78,500 in the Town of Cohocton, while the median value in Steuben County was \$91,000.

2. Economic Characteristics and Local Employment

The economic health of a region and its local municipalities can be discerned from certain indicators such as median household income, poverty level, vacancy rate, unemployment rate and diversity in industry sectors and strength in local employment sources. The vacancy rate (as discussed above) is an indicator of the availability of housing (to own or rent). As discussed in the previous section, the vacancy rate for the local communities is relatively low, indicating some stability in the local housing. Household income and poverty levels also are indicators of the condition of the local economy. Household income is defined by the U.S. Census Bureau as the sum of income received in a calendar year by all household members 15 years old or older, including nonfamily household members. Included as income are wages or salary; interest, dividends, or net rental or royalty income or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental Security Income (SSI); public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income. Poverty level is determined by the level of income for a family of specific size and composition (number of adults and children) compared to established income thresholds. If the family falls below a certain threshold then they are considered below poverty level (U.S. Census Bureau, 2012). An overview of the economic health of these communities is depicted when these indicators are reviewed in light of the local unemployment rate and conditions of the local employment sources.

2.1 Household Income

As illustrated in Table 4 below, in 2015, the estimated median household income for each municipality ranged between approximately \$42,672 (Town of Wayland) and \$55,714 (Town of Fremont), all of which were lower than the \$59,269 median household income estimate for New York State. With respect to poverty, the Town of Wayland had the highest poverty rate, with Cohocton closely behind. As indicated in Table 4, these two towns had higher poverty rates than the **Baron Winds Project** Socioeconomic Report 4

County, where 16.3% of the population is living below the poverty level. Except for the Town of Fremont, all of the Towns in the Study Area as well as Steuben County had poverty rates that exceeded New York State rate of 15.7%.

	Median Household Income	% of Population Below Poverty
New York State	\$59,269	15.7%
Steuben County	\$47,280	16.3%
Town of Cohocton	\$44,202	17.1%
Town of Dansville	\$44,417	15.8%
Town of Fremont	\$55,714	9.5%
Town of Wayland	\$42,672	17.2%

Source: U.S. Census Bureau, 2011-2015 5 Year Estimates

In New York State public assistance is available for many individuals who live below the poverty level. Examples of public assistance programs in New York State include help with buying food, special tax credits, home energy assistance and WIC (Women, Infant, and Children) programs. The percentage of households receiving cash public assistance is 3.9%, 1.6%, 1.6%, and 2.5% for the Towns of Cohocton, Dansville, Fremont and Wayland, respectively. Cohocton is the only town with a percentage higher than Steuben County (2.9%). By comparison, 3.4% of households statewide receive cash public assistance.

2.2 Labor Force Characteristics

The regional and local economy in the Study Area is affected by three major trends; 1) transition from a manufacturingbased to a service-based economy, 2) relative population stability, and 3) a growing workforce. The characteristics of the local labor force, dominant industries and employment sources reveal the economic trends of the area.

Of the State's total population over 16 years of age, 63.5% were in the labor force in 2015. As illustrated in Table 5, the statewide percentage of working population was only slightly higher than that of the County and all four towns. In the last decade, the State's labor force participation rate decreased by 2.4%.

	Working Age Population	Population in Labor Force	% of Working Age Population in Labor Force
New York State	15,921,937	10,107,278	63.5%
Steuben County	79,166	47,140	59.5%
Town of Cohocton	2,012	1,139	56.6%
Town of Dansville	1,387	854	61.6%
Town of Fremont	785	491	62.5%
Town of Wayland	3,317	2,005	60.4%

Table 5. Labor Force Characteristics

Source: U.S. Census Bureau, 2011-2015 5 Year Estimates

The New York State unemployment rate in March 2017 was 4.3% (not seasonally adjusted), as compared to 5.6% in March 2015 and 7.8% in March 2013. The Steuben County unemployment rate, which is higher than the statewide average, was 5.9% in March 2017, 7.0% in March 2015 and 9.6% in March 2013 (US Bureau of Labor Statistics, 2017). These statistics, including decreasing labor force participation and an improving, yet high unemployment rate, are both indicators of a slowly recovering economy.

2.3 Local Industries

In decreasing order of total employment, the five dominant employment sectors in New York State are 1) Health Care and Social Assistance, 2) Retail Trade, 3) Educational Services, 4) Accommodation and Food Services, and 5) Professional, Scientific, and Technical Services (US Census Quarterly Workforce Indicators, 2015). This compares with the five dominant employment sectors in Steuben County, which are 1) Manufacturing, 2) Health Care and Social Assistance, 3) Educational Services, 4) Professional, Scientific and Technical Services, and 5) Retail Trade (US Census Quarterly Workforce Indicators, 2016). Non-governmental major employers in the County include Corning Incorporated, Gunlocke Corporation, St. James Mercy Hospital, Dresser-Rand Company, and Pathways, Inc. (Three Rivers Development Corporation, 2016).

Although several changes have occurred throughout the economy in recent years, most industries have remained relatively stable in their share of overall State employment. Notable shifts within large individual sectors have been sizeable, however. Cuts in employment have occurred within Public Administration (-4%) and Manufacturing (-1%) sectors from 2012-2015. Meanwhile, there has been notable growth within some statewide sectors during the same period, including Accommodation and Services (+13%), Professional, Scientific and Technical Services (+9%), Health Care and Social Assistance (+7%), Construction (+17%), Administrative and Support and Waste Management and Remediation Services (9%) along with increases in some of the smaller sectors such as Utilities (+15%), Agriculture, Forestry, Fishing and Hunting (+13%), Arts, Entertainment and Recreation (+9%) and Management of Companies and

Enterprises (+6%) over the same duration (US Census Quarterly Workforce Indicators, 2015). These increases have contributed to a total growth of 5% in the number of jobs throughout the State.

From 2012-2015 Steuben County endured sizeable cuts within Public Administration (-10%), Other Services Except Public Administration (-9%), Manufacturing (-5%), Retail Trade (-4%), Health Care and Social Assistance (-3%), and Professional, Scientific, and Technical Services (-3%). Like New York State, Steuben County experienced job group in some sectors, although not as robust as the growth statewide. These sectors include: Administrative and Support and Waste Management and Remediation Services (+8.5%), Finance and Insurance (+7%), Agriculture, Forestry, Fishing and Hunting (+8%), and Information (+8%) (US Census Quarterly Workforce Indicators, 2015). Table 6 shows the breakdown of annual average part-time and full-time employment in New York State and Steuben County from 2012 to 2015.

A more detailed review of State job statistics shows more complex economic transformations towards a more servicebased economy with a firm health care and social assistance sector. The employment data for the second quarter (Q2) of 2016 (the most recent available), lag approximately 12 to 15 months behind real employment conditions. The data indicate that the number of total jobs in New York State grew 7.2% between Q2 2012 and Q2 2016, following the trend of the yearly average indicators. During the first 1.5 years of the four-year period (Q2 2012 to Q4 2013), there was a net increase of 327,334 jobs (+3.9%) in the State, most of which were created in the Health Care and Social Assistance and Educational Services sectors, with smaller employment increases in the Utilities, Agriculture, Forestry, Fishing and Hunting and Mining, Quarrying and Oil and Gas Extraction sectors. The latter part of the four-year period (Q4 2013 to Q2 2016) was marked by a job growth of +3.2%, with 281,118 jobs added.

At the local level, the economy in Steuben County has endured more job decline than job growth between the years of 2012 and 2016 despite the fact that the unemployment rate in the County has dropped. Between Q2 2012 and Q2 2016, the total number of jobs in the County declined -4.2%, following the trend of the yearly average indicators. However, during the first 1.5 years (Q2 2012 to Q4 2013) of this four-year period, there was a net increase of 488 jobs (+1.3 %) in the County, most of which were created in the Manufacturing and Health Care and Social Assistance sectors. In that same 1.5-year timeframe (Q2 2012 to Q4 2013), smaller employment increases also occurred within the Retail Trade, Public Administration, Accommodation and Food Services, Wholesale Trade and Real Estate and Rental and Leasing sectors. By comparison, in the latter part of the four-year period (Q4 2013 to Q2 2016) a sharp decline occurred (-5.5%), with 2,052 jobs cut. Sectors that suffered the highest decline in jobs during this period include Manufacturing, Accommodation and Food Services (except Public Administration). However, while enduring a sharp decline in early 2014, jobs within the Health Care and Social Assistance sector have rebounded and have continued an upward trend.

Across New York State, since 2012, some workers experienced a steady increase in average annual earnings in many industry sectors. Jobs within the Information sector had the highest increase in earnings, with 13% over the four-year span (2012-2015). Closely behind were Real Estate and Rental and Leasing (12%), Arts, Entertainment and Recreation (12%), Administrative and Support and Waste Management and Remediation Services (11%) and Professional, Scientific, and Technical Services (10%). The Educational Services and Agriculture, Forestry, Fishing and Hunting sectors also had notable increase of 9% each from 2012 to Q4 2015 (US Census Quarterly Workforce Indicators, 2015). In 2015, the highest average earnings were in the Finance and Insurance sector (\$208,104) and Management of Companies and Enterprises sector (\$121,164), Utilities (\$111,060), Professional, Scientific and Technical Services (\$108,168), Information (\$104,520) and Wholesale Trade (\$82,200). At the county level, workers also experienced a steady increase in average annual earnings in many industry sectors, particularly within the Other Services (Except Public Administration) sector with 17% increase over the four-year span. In 2016, the highest average earnings in Steuben County were in the Professional, Scientific and Technical Services sector (\$126,908) and Management of Companies and Enterprises (\$129,936).

	Total full-time and part-time employment by NAICS industry New York State (average annual number of jobs)			Total employ Steu (averaç	l full-time yment by Iben Cour je annual	and part- NAICS ind ty, New Y number c	time dustry York of jobs)	
	2012	2013	2014	2015	2012	2013	2014	2015
Health Care and Social Assistance	1,409,745	1,425,487	1,478,576	1,514,577	5,289	5,273	4,911	5,107
Retail Trade	895,667	908,348	922,511	925,618	3,521	3,572	3,488	3,386
Educational Services	891,342	890,220	902,378	898,640	4,428	4,431	4,492	4,433
Accommodation and Food Services	646,410	677,642	704,314	727,885	2,369	2,417	2,400	2,325
Professional, Scientific, and Technical Services	599,731	612,908	624,452	650,872	3,901*	3,783*	3,818*	3,775*
Finance and Insurance	511,595	502,484	513,253	517,423	950*	1,006	1,000	1,013*
Public Administration	478,296*	476,437*	463,637*	461,513*	2,587	2,509	2,441	2,330
Manufacturing	460,063	456,703	455,732	454,848	5,589	5,566	5,354	5,301
Administrative and Support and Waste Management and Remediation Services	441,065	456,634	463,211	479,304	2,133*	2,291*	2,450*	2,316*
Wholesale Trade	338,248	338,103	338,418	341,895	436	449	394	381
Other Services (except Public Administration)	335,325	339,786	345,276	355,656	1,195	1,201	1,191	1,080
Construction	306,684	321,000	339,107	357,794	521	496	529	533
Transportation and Warehousing	288,671	292,703	303,460	311,826	846	828	866	839
Information	278,250	282,579	287,321	287,850	306	300	308	330
Real Estate and Rental and Leasing	192,976	195,035	198,126	203,299	243	229	211	179
Arts, Entertainment, and Recreation	167,443	173,624	178,868	181,757	451	455	452	457
Management of Companies and Enterprises	141,793	146,016	149,256	149,771	1,235*	1,222*	1,237*	1,248*
Utilities	37,094	40,244	42,049	42,806	181	177	169	160
Agriculture, Forestry, Fishing and Hunting	22,942	24,204	25,266	25,884	375	355	404	406
Mining, Quarrying, and Oil and Gas Extraction	4,562	4,384	4,700	4,647	115*	93*	84*	69*

Table 6. Total Employment in New York State and Steuben County

Source: US Census Bureau Quarterly Workforce Indicators, 2016

*=Values represent an aggregation of sectors, some of which have significantly high margins of error

Although on-farm employment now represents a much smaller share of countywide employment than previously, agriculture remains a substantial economic generator throughout Steuben County by several other measures. Of particular note, the number of farms and area of farmland has been on an upward trend since 1997. From 1997 to 2012, the amount of farmland in the County increased 9.2%, from 371,305 acres in 1997 to 405,727 acres in 2012. The number of farms increased 9.7% over the same period, from 1,519 in 1997 to 1,667 in 2012. The most recent

Census of Agriculture counted 1,759 hired workers throughout Steuben County (USDA National Agricultural Statistics Service, 2012).

Employment in the Western New York region, which includes the Study Area, is projected to grow by 5.5% through the year 2022. This projected growth is expected to be concentrated in the service-providing sectors of the economy, while employment in manufacturing, engineering and administrative support is expected to remain relatively stagnant, under a 1% growth rate. (NYSDOL, 2012). Service providing sectors expected to experience concentrated growth (10% or more) in Steuben County include community and service occupations, healthcare social practitioners/technicians/support, food preparation and serving, and personal care and service occupations.

- 3. Community Character and Land Use Trends
 - 3.1 Community Character

As previously mentioned, the proposed Facility is located in the Towns of Cohocton, Dansville, Fremont, and Wayland in Steuben County. The county is one of the largest counties in New York State and is located in Southern Tier, along the border Pennsylvania to the south and the western Finger Lakes to the north, directly bordered by Keuka Lake in its northeastern corner. Much of Steuben County is wooded, and interrupted by lakes, streams, gorges, scenic farms and other components of the natural environment. According to the Steuben County website, the county celebrates its natural waterways and topography, which provide the natural resources necessary for agriculture, manufacturing, and tourism. According to the *2015 Steuben County Agricultural and Farmland Protection Plan*, the Finger Lakes Region, a collection of 14 counties including Steuben County, is renowned for its 100+ vineyards and breweries that generate over \$14 million a year in sales, which along with the internationally-renowned Corning Museum of Glass, play a vital role in the \$2.8 billion tourist industry that attracts over 20 million tourists annually and supports 58,000+ jobs.

A qualitative assessment of Facility compatibility with community character and future land use plans can be conducted through an examination of adopted or proposed land use plans or zoning ordinances where such plans are not available. Compatibility with these plans and ordinances is discussed in further detail in the paragraphs that follow. Although Steuben County has not adopted a Comprehensive Plan, each of the Towns in which the Facility is located has adopted a Comprehensive Plan, which are reviewed below. In addition, there are several regional plans that apply to the area, including the Steuben County Agricultural and Farmland Protection Plan, the Cleaner Greener Southern Tier Regional Sustainability Plan, and the Southern Tier Central Comprehensive Economic Development Strategy. The Facility's consistency with these regional plans is summarized in Table 7.

Town of Cohocton Comprehensive Plan

Prepared by the Planning Board of the Town of Cohocton in 1970, the document titled "A Comprehensive Master Plan," includes only language addressing the Town's Zoning Ordinance, which was since updated in 2002. The Town confirmed this to be the only and most recent version of the Comprehensive Plan. As indicated in Section 3.2, the Facility is consistent with this zoning ordinance.

Town of Dansville Development Plan

The Steuben County Planning Board prepared this Plan in 1976 for the Town of Dansville in cooperation with the New York State Department of State. The Plan describes the Town's physical features and natural resources, along with existing land use, community facilities, transportation, population, housing, and economic characteristics. Chapter 10 provides land use recommendations. The overall objectives for future land use are to prevent land use conflicts, protect the agricultural sector from excessive encroachment from non-farm uses, and to guide development in a manner compatible with the physical and aesthetic character of the area. Non-farm encroachment into agricultural areas is detrimental to agriculture and increases municipal costs. Four land use categories are recommended in the Plan: Agricultural-Residential, Low Density Residential, Recreational, and Flood Plain.

According to the Plan, the primary goal in planning for future development

"is to encourage the preservation of the agriculture in the area and to encourage its growth. Good agricultural land is a non-renewable resource that must be protected for the benefit of all. Also, the agricultural industry is a major economic factor in a rural Town. By maintaining an open space low density character, farmers may avoid the possibility of non-farm residents objecting to normal farming operations."

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 objectives related to preserving agricultural land and preventing encroachment by non-farm uses. The Facility will not physically impact any agriculturally related structures, and aside from temporary disturbance during construction activities (subject to restoration), is largely compatible with farming practices. The Facility will not result in a change in land use, and will promote the long-term economic viability of the affected farms by supplementing the income of participating farmers. Furthermore, the presence of wind turbines will help preserve agricultural land and avoid conversion of that land to other developmental land uses.

Town of Fremont Comprehensive Plan

Prepared by the Fremont Planning Board in 2013, the Town of Fremont Comprehensive Plan is designed to provide municipal officials and residents with direction and guidance for the future. The Plan is designed to retain the Town's rural atmosphere; ensure that development happens in a planned and orderly manner without sprawl; encourage landowners to maintain open space and farmland; maintain the scenic values and natural beauty of the Town; preserve historically agricultural lands; provide for the general health, safety, and welfare of the population; and avoid despoiling the air, water, and land. The Plan describes the Town's physical features and natural resources, along with existing land use, transportation, and housing, and identifies the following goals and objectives:

- To encourage the most appropriate use of land in order to conserve and enhance the value of property;
- To encourage the preservation of agricultural lands;
- To encourage the preservation of the open space and special terrain features;
- To discourage development in areas physically unsuited.

To accomplish these goals and objectives, the Plan sets forth three major land use categories: Agricultural-Residential, Low Density Residential, and Land Conservation. These categories correspond to the Town's zoning districts, as described in the previous section. The Plan places much emphasis on the need to preserve agricultural land. In addition to Land Use Regulations for the Town, the Plan also acknowledges the establishment of agricultural districts pursuant to the New York State Agricultural Districting Law, passed in 1972, concluding that a "combination of land use regulations and agricultural districting will go far to preserve and encourage the continuation of a strong agricultural climate in the community." The Comprehensive 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 primary goal of preserving agricultural lands. The Facility will not result in a change in land use, and by supplementing the income of participating farmers, will promote the long-term economic viability of the affected farms.

Town of Wayland Comprehensive Plan

Prepared by the Town of Wayland Planning Board in 2011, the Town of Wayland Comprehensive Plan is the result of interviews, public meetings, and review of town, county, and state plans and programs as they relate to the Wayland area. The primary purpose of the Comprehensive Plan is to give future development that will occur within the Town and to assure the Town's natural resources will support such growth. The Plan sets forth desirable and attainable objectives and standards to accommodate the needs of the community, and is intended to become both a tool to serve as the basis for making decisions on current issues, and a guide to give direction and scale for future use.

As a result of focus groups, a survey, and input from citizens, the Plan contains a list of goals compiled under seven broad topics: 1) protect natural resources, 2) provide for well-planned residential growth, 3) support and preserve agricultural resources, 4) provide areas for commercial use, 5) encourage/allow small business/cottage industry, 6) maintain/improve public services, and 7) recreation uses. An Action Plan is proposed to accomplish these goals, organized by the same seven topics. The Comprehensive 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 goal of supporting and preserving agricultural lands. By supplementing the income of participating farmers, will promote the long-term economic viability of the affected farms.

In addition to assessing the consistency of the Facility with town comprehensive plans, this report also assesses Facility consistency with various regional planning documents as set forth in Table 7.

Plan	Relevant Goals and Objectives	Facility Consistencies	Facility Inconsistencies
	- Support local farmers and existing agricultural-related businesses in their efforts to create high quality, value- added products, increase consumer access, and develop essential infrastructure to ensure the long-term viability of the County's agricultural economy.	- Utilizing a renewable resource on agricultural land to generate electric power and provide local and regional economic benefits.	
Agricultural and Farmland Protection Plan	- Ensure that the county's farmland remains viable and productive for future farmers.	- Maintaining agricultural land use patterns within the	NA
(2015)	- Encourage the use of renewable resources on agricultural lands.	vicinity of the Facility	
	- Develop local wind and solar power ordinances to encourage farmers to implement projects on portions of their agricultural land.	income of farmers, ensures county's farmland remains viable for future farmers.	
	- Develop, produce, and deploy local renewable energy sources and advanced technologies across the Southern Tier.	- Utilizing a renewable resource to generate electric power and provide local and	
	- Identify and plan for the economic, environmental, and social impacts of climate change.	benefits.	
Cleaner Greener Southern Tier Regional Sustainability	- Support farming and related businesses to reinvigorate the rural economy, enhance residents' incomes and standards of living, and promote local food and agriculture.	- Maintaining and supporting agricultural land use patterns within the vicinity of the Facility.	NA
Plan (2013)	- 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.	-Enhancing residents' incomes and retaining agricultural jobs through lease payments to farmers.	
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. 	 Utilizing a renewable resource (wind) to generate sustainable electric power and support local agriculture Preserving agricultural resources in region by supplementing farmer income. 	- Whether or not a wind facility negatively impacts natural beauty is subjective, to some extent. Some people may feel the Facility will impact natural beauty, which would represent an inconsistency.

Table 7. Fac	ility Consisten	cy with Regiona	l Planning	Documents

3.2 Land Use Trends

The distribution of land uses within the Study Area is similar to the land use distribution throughout Steuben County as measured by the number of parcels with land use classified via the scheme developed by the New York State Office of Real Property Tax Services (NYSORPTS). As is true of the County generally, the Towns included in the Study Area are rural and characterized by wooded uplands and valleys occupied by roads, fields, pastures, and rural residential development, with forests and farms as the most dominant visual aspect of the landscape. Neils Creek flows northwest to Loon Lake through the towns of Fremont and Wayland; Turtle Creek flows south into Big Creek in the Town of Fremont; and Reynolds Creek flows east to the Cohocton River in the Town of Cohocton. The Village of Cohocton is the population center closest to the Study Area. Although residential use is the most dominant land use category by percentage of parcels (see Table 8), the low density of residential uses results in a pastoral aesthetic across the countryside. Based on the NYSORPTS land use classification scheme, the highest percentage of land use for all four towns and the County in 2015 was residential; the second highest percentage of land use was vacant land¹; the third highest percentage of land use across all four Towns was agricultural use (NYSORPTS, 2016). The land use scheme in the area has not changed significantly in recent years. To date, the Study Area has not received significant pressure to be developed for either residential, additional commercial or industrial land use.

Land use type and classification contributes to the assessed value of property, which directly influences the real property tax rates for each municipality. Thus, local land uses have a direct correlation to the tax base that influences the fiscal health of a community. Although all jurisdictions have a diversity of land uses, all of which factor into their respective tax bases, most of the property tax revenue is from residential properties. This creates a significant tax burden for private residential landowners. The percent of land use distribution for the Towns as well as the total assessed property value per classification for these communities is shown in the table that follows.

¹ According to the NYSORPTS, vacant land includes: residential vacant land; residential land including a small improvement (not used for living accommodations); rural vacant lots of 10 acres or less; underwater vacant lands not owned by a governmental jurisdiction; abandoned nonproductive agricultural lands not on an operating farm; rural residential vacant lands over 10 acres; other rural vacant lands; commercial vacant lands; industrial vacant lands; urban renewal or slum clearance; and public utility company vacant lands. **Baron Winds Project** Socioeconomic Report 15

Jurisdiction	Type of Land Use	% of Total Parcels	Total Assessed Value
	Residential	55.2%	\$73,203,540
	Vacant	18.4%	\$4,506,310
	Agricultural	13.9%	\$22,905,100
	Public Services	5.8%	\$139,011,973
	Commercial	3.4%	\$4,447,000
	Community Services	2.5%	\$5,386,200
	Industrial	0.5%	\$740,300
	Recreation & Entertainment	0.2%	\$219,800
Town of	Wild, Forested, Conservation Lands and Public		
Cohocton	Parks	0.2%	\$339,400
	Residential	58.8%	\$68,436,000
	Vacant	22.9%	\$6,844,310
	Agricultural	10.9%	\$14,489,100
	Public Services	3.4%	\$5,210,385
	Community Services	1.5%	\$800,800
	Commercial	1.1%	\$1,945,300
	Wild, Forested, Conservation Lands and Public		
	Parks	1.0%	\$1,073,500
Town of	Recreation & Entertainment	0.3%	\$1,296,400
Dansville	Industrial	0.2%	\$208,100
	Residential	52.5%	\$42,147,700
	Vacant	21.5%	\$4,627,900
	Agricultural	17.2%	\$15,137,800
	Public Services	5.5%	\$5,429,742
	Community Services	2.2%	\$802,200
	Commercial	0.9%	\$982,800
Town of	Wild, Forested, Conservation Lands and Public		
Fremont	Parks	0.4%	\$139,300
	Residential	66.4%	\$158,584,900
	Vacant	16.5%	\$7,747,800
	Agricultural	8.1%	\$17,689,200
	Commercial	4.8%	\$18,488,839
	Public Services	1.7%	\$11,274,933
	Community Services	1.6%	\$25,487,700
	Industrial	0.6%	\$16,791,896
	Recreation & Entertainment	0.2%	\$549,200
Town of	Wild, Forested, Conservation Lands and Public	0.1%	\$22,100
Wayland	Parks		

Table 8. Total Assessed Property Values and Percent of Parcels by NYSORPTS Land Use Classification

Source: NYSORPTS, 2016

The properties where proposed Facility components will be located (hereafter, the Facility Site) feature a rural and lowdensity character, with forested rural residential, agricultural and vacant properties as the dominant land uses. The Facility Site is a mix of open space and forested land, with a few agricultural fields located along the valley roads and on the gently rolling hills. Residential land use are primarily single-family homes located along public roadways adjacent to the Facility, including State Route 21. Also, located within or adjacent to the Facility Site is the 440-acre Lake Hollow Conservation Club at the terminus of Lake Hollow Road. According to the NYSORPTS, the Facility Site consists of seven distinct land use types. The majority of the parcels within the Facility Site (approximately 46.3%) is categorized as Residential, which is described as ""property used for human habitation." Agricultural, which constitutes approximately 25.25% of the Facility Site, is defined as "property used for the production of crops or livestock". Vacant land, or property that is not in use, is in temporary use, or lacks permanent improvement," makes up approximately 24.07% of the Facility Site. Approximately 1.4% of the Facility Site is characterized as Wild, Forested, Conservation Lands and Public Parks, which is described by the NYSORPS as "reforested lands, preserves, and private hunting and fishing clubs." Approximately 1.7% is unclassified, and includes road right of ways. The remaining land use types consist of Community Services (1.0%), Commercial (0.2%), and Recreation and Entertainment (0.2%). Steuben County has ten designated Agricultural Districts established pursuant to the New York State Agriculture and Markets Law. 29 turbines and associated infrastructure are located in Agricultural District 7; and the point of interconnect substation along with 27 turbines and associated infrastructure are located in Agricultural District 5.

Three of the four towns hosting the Facility have zoning ordinances. In addition, all four towns have adopted local laws regulating wind energy facilities. For a full summary of the zoning and related regulations adopted by each host town, with a focus on regulations specific to Facility components, see Exhibit 4 (Land Use) and Exhibit 31 (Local Laws and Ordinances) of the accompanying Application.

4. Local Municipal Tax Base and Budgets

Understanding the fiscal health of communities in which a project will be located is essential to assessing the potential economic impacts or benefits of that project. The general fiscal profile for any municipality includes its revenues, expenditures, and long-term debt obligations. The majority of revenue collected is through real property taxes, sales taxes, and state aid. In assessing the economic impact of the Facility, it is informative to review local property tax levies and tax rates for each affected taxing jurisdiction, as municipalities have the most direct control over these revenue sources.

Municipalities (towns, villages, and counties) and school districts, as independent taxing jurisdictions, are responsible for providing specific services and facilities to those who live and work within their boundaries and for levying the taxes needed to pay for those services/facilities. The taxing jurisdictions affected by the Facility include Steuben County, the Towns of Cohocton, Dansville, Fremont, and Wayland, and the Arkport, Avoca and Wayland-Cohocton Central School Districts and the Hornell City School District.

Annual municipal expenditures are recovered in large part through each municipality's tax levy, which is borne by taxable properties according to their respective assessed value. An increase in revenues raised through real property **Baron Winds Project** Socioeconomic Report 17

taxes has a positive effect on local municipal budgets. However, local business owners, farmers, or residents are directly impacted when their real property tax or sales tax obligations increase. Many factors influence the assessed value of land, including the type of land use on that property. Real property taxes are determined by each property's assessed value, multiplied by the tax rate established by each taxing jurisdiction. Table 9 summarizes the most recent data available for municipal and county property tax levies and rates in the County and affected Towns.

	Levy year 2015 (roll year 2014)			Levy year 2014 (roll year 2013)				
	Property Tax Levy	Municipal Tax Rate	County Tax Rate	Eq. Rate	Property Tax Levy	Municipal Tax Rate	County Tax Rate	Eq. Rate
Steuben County	\$42,112,767	-	-	-	\$41,220,480	-	-	-
Town of Cohocton	\$1,653,591	5.21	7.61	88	\$1,626,258	5.65	7.77	93.0
Town of Dansville	\$1,246,093	8.44	7.61	100	\$1,228,511	8.88	7.77	100
Town of Fremont	\$843,164	9.73	7.61	94.4	\$813,780	10.04	7.77	100
Town of Wayland	\$2,307,933	3.72	7.61	100	\$2,333,630	3.59	7.77	100

Table 9	Property	Tax Lev	v and	Municipal	Tax Rate ²
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Source: NYSORPTS, 2017

Another source of revenue for local municipalities is local sales tax revenue. The current sales tax rate for Steuben County is 8% (4% local tax plus 4% state tax) (New York State Department of Taxation and Finance 2015). In 2015, the total sales tax revenue³ for the County was \$52,045,982, \$261,960 for the Town of Cohocton, \$13,677 for the Town of Dansville, and \$275,000 for the Town of Wayland (New York State Office of the State Comptroller, 2017). While Steuben County's 2015 sales taxes increased compared to 2014, it appears that this increase primarily reflects a revised sales tax agreement with the cities of Corning and Hornell to consolidate tax collection services with the County and distribute them directly back to the cities and not an increase in economic activity (Jordan, 2016). Thus, the actual revenues that are reported do not reflect the struggling economic health of the County, which experienced only a 0.2% increase in revenues when considering this revised tax collection structure. Moreover, although sales taxes contribute to the total revenues, property taxes are the largest single source of revenue that offset the cost of providing local services. Across the Southern Tier, stagnation, loss of (or lack of) commercial and industrial tax base, in combination with rising service and material costs, make it increasingly difficult for municipalities to meet their budgets (New York State Association of Counties, 2015).

² Property tax levy reflects the amount of revenue required by the municipality through the property tax base, and is equal to total municipal spending minus aid and other revenues. Tax base is equal to the sum of taxable parcel values. Municipal tax rate is determined by dividing the levy by the tax base, such that each taxable parcel produces that amount of property tax per \$1,000 assessed value. For a \$100,000 property in the Town of Cohocton, property tax liability = (5.21 / 1000) * 100,000, or \$521. An equalization rate is the state's measurement of a municipality's level of assessment (LOA). An equalization rate of 100 means that the municipality is assessing property at 100 percent of market value. An equalization rate lower than 100 means that the municipality's total market value is greater than its assessed value.

³ Sales tax revenue is distributed to towns, not directly collected by them. Not all towns receive distribution payments from Sales Tax Revenue. **Baron Winds Project** Socioeconomic Report

An overview of the balance of a municipality's revenues, expenditures and indebtedness reveals its general fiscal health. As illustrated in Table 10, the budgets for the county and towns in which the Facility is located vary substantially between one another, and in some cases, from one year to the next. From 2014 to 2015, revenues in the Towns of Cohocton, Dansville, and Wayland increased by 0.1%, 4% and 2%, respectively, while decreasing in the Town of Fremont by 14%. With respect to expenditures, each Town made cuts to varying degrees from 2014 to 2015: Fremont (-28%), Cohocton (-18%), Dansville (-18%), and Wayland (-10%). While the Towns have generally decreased their debt levels in recent years, indebtedness remains a lingering challenge across these municipalities.

Steuben County 2015 2014 Total Revenues & other sources \$196,203,867 \$183,131,942 Total Expenditures & other uses \$179,942,337 \$183,847,745 **Total Indebtedness** \$3,535,000 \$17,180,000 Town of Cohocton Total Revenues & other sources \$1,847,254 \$1,845,699 Total Expenditures & other uses \$1,671,554 \$2,028,916 **Total Indebtedness** \$362,800 \$478,200 Town of Dansville Total Revenues & other sources \$1,094,394 \$1,050,712 Total Expenditures & other uses \$984,531 \$1,199,077 Total Indebtedness \$0 \$0 **Town of Fremont** Total Revenues & other sources \$688,714 \$787,297 Total Expenditures & other uses \$613,381 \$846,614 Total Indebtedness \$0 \$0 Town of Wayland Total Revenues & other sources \$1,540,813 \$1,512,060 Total Expenditures & other uses \$1,509,420 \$1,676,114 **Total Indebtedness** \$90,000 \$123,152

Table 10. Municipal Budgets⁴

Source: New York State Office of the State Comptroller, 2017.

Each school district within the Study Area has faced years of budget shortfalls. The budgets of Arkport and Avoca Central School Districts had more balanced amounts of revenues and expenditures and less indebtedness, whereas the Hornell City School District and Wayland-Cohocton Central School District faced greater budget shortfalls and indebtedness over the same period (see Table 11). Given budget shortfalls and the advent of the statewide property tax cap, municipalities in such a position may find it advantageous to maximize other, less traditional forms of revenue.

⁴ The NYS Office of State Comptroller reports no debt for 2014 and 2015 in the Towns of Dansville and Fremont. Because indebtedness may accumulate over the years, revenue, expenditures and indebtedness may not cancel each other out. Baron Winds Project Socioeconomic Report

Table 11. School District Budgets

	2015	2014			
Arkport Central School District					
Total Revenues & other sources	\$10,104,234	\$10,015,859			
Total Expenditures & other uses	\$10,331,644	\$9,987,773			
Total Indebtedness	\$6,470,000	\$7,195,000			
	Avoca Central School District				
Total Revenues & other sources	\$12,930,728	\$12,657,994			
Total Expenditures & other uses	\$12,914,412	\$12,469,521			
Total Indebtedness	\$15,460,000	\$17,125,000			
	Hornell City School District				
Total Revenues & other sources	\$43,493,494	\$38,649,664			
Total Expenditures & other uses	\$39,834,119	\$40,636,398			
Total Indebtedness	\$46,285,000	\$51,505,000			
Wayland-Cohocton Central School District					
Total Revenues & other sources	\$37,509,910	\$33,980,557			
Total Expenditures & other uses	\$38,258,672	\$34,022,329			
Total Indebtedness	\$13,120,042	\$12,485,000			

Source: New York State Office of the State Comptroller, 2017

PART II: SOCIOECONOMIC EFFECTS OF PROPOSED WIND FACILITY

The Facility will have positive onsite, supply chain, local revenue and induced economic effects on Steuben County, the Towns of Cohocton, Dansville, Fremont, and Wayland, along with the Arkport, Avoca and Wayland-Cohocton Central School Districts and the Hornell City School District. The Facility will provide direct financial benefits to the individual landowners leasing their land to the Applicant for the Facility. Some of these effects have already begun for participating landowners, and will continue during construction and throughout the operating life of the Facility. The participating towns and school districts will receive direct financial benefits from the Facility in the form of PILOT and HCA payments. In addition, the local and statewide economy will experience a number of employment opportunities and related economic benefits through onsite (e.g., construction laborers), supply chain (e.g., component manufacturers) and induced jobs (e.g., retail associates) and associated economic impacts. The overall socioeconomic impact of Facility construction and operation is discussed in detail below.

1. Effects on Population and Housing

As mentioned previously, the towns hosting this Facility experienced an overall moderate population increase between 2000 and 2010, ranging from a 26.6% increase in the Town of Dansville to a 3.9% increase in the Town of Cohocton. The proposed Facility is not expected to influence these trends. For the duration of construction (approximately nine months) there could be a temporary increase in local population and demand for temporary housing by out-of-town **Baron Winds Project** Socioeconomic Report 20

workers. However, this demand will be relatively modest, and can easily be accommodated by the available rental or temporary housing in the local municipalities and surrounding communities. Beyond this relatively minor (and positive) short-term impact, Facility construction will have no significant impact on population and housing.

The Facility will also result in a small number of permanent positions when it becomes operational (see Part II Section 3.2). These employees are expected to reside locally, which could translate into a small but steady improvement to the local economy. Although this represents a positive economic impact, long-term employment associated with the Facility is not large enough to have a significant impact on the local population or housing market.

2. Effects on Land Use and Property Values

2.1 Effects on Land Use

One of the benefits of the installation of a commercial wind farm is that the land can continue to be used in the same or similar manner as it was prior to the new development. Although construction may temporarily disrupt land uses in the short term, the long-term operation of this Facility is compatible with the current land uses. Furthermore, as discussed above, the development of this Facility is compatible with local and regional land use plans (see Section 3.1) and largely compatible with local zoning regulations (see Section 3.2).

2.2 Effects on Property Values

Numerous studies have been prepared on the impact of wind power projects on property values. 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). 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 of Madison County, NY and Waymart Wind Farm of Wayne County, PA (maximum hub height of 218 feet and 213 feet, respectively), two facilities that are comparable in terms of land use and rural condition to the Facility. While the Fenner Wind Farm is a considerably smaller 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 energy facility. 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. **Baron Winds Project** 21 Socioeconomic Report

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).

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 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.

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 9 states, and divided property transaction impacts into four distance-from-turbine categories: < $\frac{1}{2}$ mile, $\frac{1}{2}$ -1 mile, 1-3 miles, and 3-10 miles. 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, turbine height to blade tip 297 feet), GSG 1 Wind Farm (40 wind turbines, approximately 399 feet to blade tip), and Lee-Dekalb Wind Center (145 wind turbines, turbine height to blade tip 388 feet) within Lee County, Illinois, also examined the 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 (height to blade tip 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 (turbine height to blade tip 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 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.

3. Jobs and Economic Development Impact (JEDI) Model of the Wind Farm

The proposed Baron Wind Facility is anticipated to have local 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 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 using the Job and Economic Impact (JEDI) wind model. The JEDI model allows users to estimate exactly 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 onsite jobs and earnings, economic output from these onsite earnings, local revenue/supply chain jobs and earnings, economic output from these 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 then calculates the aforementioned 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 PLANing), a widely-used and widely-accepted general input-output modeling software and data system that tracks every 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 onsite construction and operation of the Facility. These values represent expenditure of dollars on labor (wages, salaries and associated expenses) by Facility onsite 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 onsite, the concrete used onsite, etc. However, the immediate economic impacts of the physical items used onsite, 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 Onsite Labor during Operational Years) is counted at this level.

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 **Baron Winds Project** Socioeconomic Report

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 onsite or the concrete used onsite. 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.

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 (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:

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 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 and economic output from a proposed facility using the JEDI model is a two-step process. The first step requires facility-specific data inputs (such as year of construction, size of facility, turbine size and location). Using this facility-specific data, the JEDI model then creates a list of default values, which include project 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 10 years of research by NREL, and stem from various

sources, including interviews and surveys from 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 project cost values and financial parameter values to more reasonable estimates. The Applicant reviewed the default project cost values subtotaled by each of the following categories in the JEDI model: 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 and determines whether they are appropriate for the project under review. In this case, the Applicant reviewed the default values for the various categories in the JEDI model to determine whether they were on par with the real costs as experienced by the Applicant. As a result of that review, adjustments were made to specific default values, including replacing the local tax default value (\$0) with the estimated annual total value of PILOT payments and HCA payments (\$2,340,000), adjusting the annual lease default value for onsite O&M workers from \$1,150,753 to a more reasonable value of \$989,648. The remaining actual cost values were unknown at the time of analysis (October 2017); therefore, the remaining JEDI default values were reviewed and determined to be reasonable estimates based on the Applicant's previous experience in wind energy development.

The economic impact analysis using the JEDI model was performed for the Facility assuming it goes into operation in 2020 with a rated capacity of 300 megawatt (MW) with 76 turbines sized at 3.95 MW. The analysis presented here used the most currently available (2016) multiplier data specific to New York to estimate potential impacts on a statewide basis. The results of this analysis, estimated for both the construction and operation phases of the proposed Facility, are illustrated in Table 12 and summarized in the narrative that follows.

	Jobs	Earnings (Millions)	Output (Millions)
Construction			
Project Development and Onsite Labor Total	148	\$10.8	\$12.4
Construction & Interconnection Labor	130	\$9.6	-
Construction-Related Services	17	\$1.2	-
Turbine & Supply Chain Impacts	542	\$38.7	\$110.5
Induced Impacts	208	\$15.6	\$38.9
Total Impacts	898	\$65.1	\$161.9
Annual Operation			
Onsite Labor Impacts	12	\$0.9	\$0.9
Local Revenue and Supply Chain Impacts	17	\$1.6	\$6.6
Induced Impacts	14	\$1.1	\$2.7
Total Impacts	43	\$3.6	\$10.2

Table 12. Summar	y Results of Jobs	and Economic Im	pact Analysis

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2017)

Note: Impact totals and subtotals are independently rounded, and therefore may not add up directly to the integers shown in this table. For example, the JEDI model for this Facility estimated that during the Construction Period, 130.3 Construction & Interconnection Labor FTE jobs and 17.3 Construction-Related Services FTE jobs (equal to 137.6 FTE jobs, which is the rounded figure as shown) will be produced. Because the model estimates whole full-time positions only, these appear in the summary table as 148 positions.

3.1 Economic Impact of Construction

Based upon JEDI model computations, it is anticipated that construction of the proposed Facility will generate employment of an estimated 148 FTE onsite Construction and Construction-Related positions for New York State residents, 130 of which will be for Construction and Interconnection labor, and 17 of which will be Construction-Related Services (engineers and other professional services). The JEDI model estimates a total output of \$10.8 million for annual earnings of the 148 on-site construction jobs. These estimates of the annual construction earnings by discipline are listed in Table 13. Estimated earnings represent total wages and salary compensation paid to 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 residents who are engaged in the construction of the Facility, including the Construction, Engineering and Professional Services trades. Turbine and Supply Chain earnings are estimated for New York State 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 State.

Trade	Project Development and Onsite Labor	Turbine & Supply	
	Earnings	Chain Earnings	Induced Earnings
Agriculture	\$0.0	\$0.0	\$0.0
Mining	\$0.0	\$0.0	\$0.0
Construction	\$9.6	\$28.6	\$8.8
Manufacturing	\$0.0	\$2.8	\$0.8
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	\$2.8	\$0.8
Finance, Insurance, and Real Estate	\$0.0	\$0.0	\$0.0
Misc. Services	\$0.0	\$3.4	\$0.9
Engineering & Professional Services.	\$1.2	\$0.4	\$0.4
Government	\$0.0	\$0.7	\$3.9
Total	\$10.8	\$38.7	\$15.6

Table 13. Annual Earnings by Trade During Construction Period (in \$ Millions)

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2017)

The estimated 148 FTE jobs have been further evaluated by the Applicant's construction management team 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 the following table.

Table 14. Quarterly L	Labor Averages
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Quarterly Period	Construction Labor Quarterly Average FTE Jobs	Construction-Related Services (Engineers and Other Professional Services) Quarterly Average FTE Jobs
Q1 (Jan-Mar)	12	3
Q2 (Apr-Jun)	102	13
Q3 (Jul-Sep)	128	16
Q4 (Oct-Dec)	61	10

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2017), Evaluation by Applicant's Construction Management Team

As estimated by the JEDI model, turbine manufacturing and supply chain industries could in turn generate an additional 542 jobs (with a total \$38.7 million in earnings) in New York State over the course of Facility construction. In addition, Facility construction could induce demand for 208 jobs (with a total \$15.6 million in earnings) statewide through the spending of additional household income. The total estimated impact of 898 new jobs statewide could result in up to \$65,100,000 of earnings, assuming a 2020 construction schedule and wage rates consistent with statewide averages.

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 \$161,900,000 statewide. 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.

3.2 Economic Impact of Operations

Based upon JEDI model computations, the operation and maintenance of the proposed Facility is estimated to generate 12 full-time jobs for NYS residents with combined estimated annual earnings of approximately \$900,000. These 12 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 15 provides an overview of annual wages of each full-time job position. These 12 full-time local jobs generated by the wind energy facility comprise the Facility's onsite long-term employment impact.

Positions	Number of Positions	Hourly Wage per Job	Annual Wages per Job ⁵
Technicians	9	\$29.25	\$60,846
Administrative/Secretarial	1	\$18.72	\$38,941
Site Management	1	\$46.80	\$97,353

Table 15. Hourly and Annual Wages of Onsite Labor during Operational Years

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2017)

Note: Consistent with the discussion of Table 12, the impact subtotals in Table 15 are independently rounded, and therefore may not add up directly to the totals shown. For example, the JEDI model for this Facility estimates 9.3, 1.4, and 1.0 FTE jobs during the operational phase of the Facility (equal to 11.7 positions, which is the rounded figure as shown). Because the model estimates whole full-time positions only, these appear in the summary table as 12 positions.

Operation and maintenance should also generate new jobs in other sectors of the statewide economy through supply chain impacts and the expenditure of new and/or increased household earnings. In total, while in operation, this Facility is estimated to generate demand for 31 jobs statewide through secondary employment with annual earnings of approximately \$2,700,000. This secondary employment is estimated to have an economic output of \$9.3 million annually statewide. Total economic output is projected to increase by an estimated \$10,100,000 statewide as a result of Facility operation and maintenance.

In terms of expenditures, this project will cost an estimated total of \$87,116,622 annually for operational and maintenance costs, including labor, materials, services, sales tax, debt and equity payments, PILOTs, HCA payments, and land payments (land easements, land leases and Good Neighbor Agreement payments). Of this total, an estimated \$5.7 million statewide dollars will be spent annually. Table 16 highlights the sources of these expenditures.

Table 16. Total Annual Operational Expenses	5
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	Statewide	Out-of-State	Total Direct and Other Annual Costs
Labor, Materials, and Services Costs with Sales Tax	\$2,145,114	\$5,071,777	\$7,216,890
Other Annual Costs	\$3,604,376	\$76,295,356	
Debt and Equity Payments	\$0	\$76,295,356	
PILOT and HCAs	\$2,340,000	\$0	
Land Payments	\$	\$0	\$
Total Spending	\$	\$81,367,132	\$

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2017)

⁵ 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 Table 12). Baron Winds Project

In addition to the economic benefits of Facility-related jobs, operation of the Facility also will result in payment to local landowners in association with the lease and easement agreements executed to host Facility components, as well as Good Neighbor Agreements executed with certain adjacent properties receiving compensation for the landowner's consent and waiver and certain requirements applicable to the landowner's property. These annual lease, easement, and Good Neighbor payments will offer direct benefits to participating landowners, in addition to any income generated from the existing underlying land use (e.g., agricultural production). As indicated above, the Applicant has estimated these payments to be \$1,264,376 annually. These lease, easement and Good Neighbor Agreement payments will have a positive impact on the region, to the extent that landowners spend their revenue locally.

Available research indicates that the economic benefits of the Facility to the State and to local communities outlined above will not be offset by negative impacts to local tourism. A 2002 study conducted in the ArgyII Region of Scotland, involving interviews with over 300 tourists, found that 91% said the presence of wind farms in the area would not influence their decision about whether to return to the area (MORI Scotland, 2002). Almost half (48%) of the tourists interviewed were visiting the area because of the "beautiful scenery and views." Of those who had seen wind farms, 55% indicated that their effect was "generally or completely positive," 32% were ambivalent, and 8% felt that the wind farms had a negative effect. Similar positive or negligible effects have been reported from various wind farm locations in the United Kingdom (e.g., Aitchison, 2004) and Germany (e.g., Albrecht et al., 2013). According to the German Offshore Wind Energy Foundation (Albrecht et al., 2013), initial concerns that wind turbines would negatively impact tourism in that country have proven unfounded (Albrecht et al., 2013). Similarly, a survey of visitors to Vermont's Northeast Kingdom found that 95% would not be deterred from further visits by the existence of a proposed wind farm (Institute for Integrated Rural Tourism, 2003). In addition, some tourism industry providers have begun marketing wind farms as a tourist attraction, even in rural portions of New York State (Puit, 2011; Albrecht et al., 2013).

Thus, the local economy will experience a positive increase in jobs, earnings, and local economic activity that will last during the operational years of the Facility.

3.3 Economic Impacts on Property Taxes and Local Taxing Jurisdictions

Local Public Expenditures

The Baron Winds Facility will place little, if any, demand on municipal and school district services and so will have virtually no impact on municipal expenses. As a preliminary matter, wind turbines do not require municipal water, sewer, or solid waste disposal services.

With respect to police services, as part of its Application, the Applicant has committed to developing and implementing security measures, including security lighting, fencing, locked gates, signage and other measures designed to restrict site access and deter trespassers during construction and operation of the Facility. The Applicant also will implement an emergency action plan that includes measures for responding to various emergencies, including those that could potentially involve the police. These measures, taken together, will limit the need for the Facility to utilize municipal police services.

With respect to fire, local fire departments may be called upon to respond to fire-related emergencies common to construction projects generally. However, once the Facility is operational, municipal fire departments are not expected to access a turbine location to fight a fire since the current best practice is to let the fire burn out at a turbine. Moreover, emergency responders generally will not have access to turbines or substations through access roads. As a result, Facility operations are not expected to impact municipal fire services.

With respect to emergency medical response, local emergency medical services may be called upon to respond to medical emergencies common to construction projects generally. Once the Facility is operational, the nacelle of each turbine will be equipped with an emergency descent for use in lowering sick or injured employees to the ground. In the event an employee takes ill or is injured during maintenance/repair of a turbine or related equipment, local emergency services may be called to assist the employee once he/she has been lowered to the ground. However, given the number of employees and the broad geographic area covered by the Facility, the potential financial burden on a particular town of providing such services is expected to be comparatively small.

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 either separately or as part of the HCA, which require the Applicant to restore any roadways impacted by the transportation of Facility components during construction and operation of the Facility. By virtue of 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.

More generally, some wind farm employees may elect to live in the towns in which the Facility is located. However, the impact of these employees and their facilities on town services are expected to be miniscule. Moreover, any marginal increase in services is expected to be recovered through the employees' property tax payments.

With respect to the local school districts, some of the wind farm employees may have school-aged children. This may cause a marginal increase in school district services and expenditures; however, it is assumed that such expenditures can be recovered through those employees' school tax payments and the respective district's state aid. Moreover, as presented in Table 17 below, the affected school districts will receive a considerable share of the PILOT that will more than offset any possible increase in expenses incurred by the districts as a result of Facility employee children entering the districts.

Property Tax Values

Although the presence of wind turbines will increase the value of the properties on which they are located, due to the allowed tax exemption pursuant to New York State Real Property Tax Law § 487, the landowners of these properties will not be assessed a higher value to reflect these improvements. In addition, numerous property value studies based on statistical analysis of real estate transactions have found that wind facilities have no significant impact on property values (Sterzinger et al. 2003; Hoen 2006; Hoen et al. 2009; Hoen et al. 2014; 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. Therefore, the Facility should have no effect on future real property tax obligations for participating or neighboring landowners.

PILOT Amounts

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 listed in Section (h) above for the next 20 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 \$5,300 per megawatt installed during the term of the PILOT. Over the expected 20-year term of the PILOT, the estimated annual PILOT amount would total \$1,590,000 per year, accumulating up to \$31.8 million (in 2017 dollars) over 20 years. The total amount will be distributed across nine taxing jurisdictions. The Applicant also plans to enter into HCAs with each town for a maximum payment rate of \$2,500/MW per year. This is estimated to total \$750,000 per year, to be distributed across all four amounting to \$22.5 million (in 2017 dollars) over 30 years.

Although the terms of the PILOTs have not been finalized, similar to other wind projects in New York State, the Applicant plans to distribute PILOTs to each taxing jurisdiction within the Study Area. The Applicant estimates the value of PILOT payments to each jurisdiction by considering the nameplate capacity of turbines located within each jurisdiction and the proportional tax obligations for each type of taxing jurisdiction (e.g., school district) relative to other types of taxing jurisdictions (e.g., county and town). Types of taxing jurisdictions include towns, school districts and counties. Towns receiving PILOTs will include the Towns of Cohocton, Dansville, Fremont, and Wayland. Schools districts receiving

PILOTs will include Arkport, Avoca, and Wayland-Cohocton Central School Districts and Hornell City School District. Steuben County also will receive PILOTs.

Table 17 summarizes the estimated PILOT payments projected to be made to each taxing jurisdiction within the Study Area. The estimated annual PILOTs for each taxing jurisdiction are determined by multiplying the proportional share of school/town/county property taxes by the prevailing PILOT rate (\$5,300/MW), then multiplying this product by the total nameplate capacity within each jurisdiction. The proportional share of local tax rates is presented for each jurisdiction type (i.e., county, town or school district) within the Study Area. Town property taxes constitute 21% of each property's total tax obligation. County taxes constitute 24%, and school taxes claim the remaining 55%. Table 17 also reflects the varied turbine distributions across towns and school districts by the number of turbines located within each taxing jurisdiction and their estimated nameplate capacity. Among the towns, the most turbines (38 out of 76 turbines) are in the Town of Fremont. Among the school districts, the most turbines (44 out of 76 turbines) are in the Wayland-Cohocton Central School District.

Types of Taxing Jurisdiction 7	Proportional Share of Local Tax Rates ⁸	Taxing Jurisdictions Receiving PILOTs	Estimated PILOT rate (\$/MW)	Number of Turbines within Jurisdiction	Estimated Annual Nameplate Capacity (MW) within Jurisdiction 9	Annual PILOT Estimate	20-Year PILOT Estimate
Town	21%	Town of Fremont	\$1,122	38	150	\$168,238	\$3,364,767
		Town of Cohocton	\$1,122	25	99	\$110,683	\$2,213,662
		Town of Wayland	\$1,122	10	39	\$44,273	\$885,465
		Town of Dansville	\$1,122	3	12	\$13,282	\$265,639
	Total for All Towns				300	\$336,477	\$6,729,534
School District	55%	Wayland- Cohocton Central School District	\$2,903	44	174	\$504,216	\$10,084,311
		Arkport Central School District	\$2,903	19	75	\$217,729	\$4,354,589
		Hornell City School District	\$2,903	7	28	\$80,216	\$1,604,322
		Avoca Central School District	\$2,903	6	24	\$68,757	\$1,375,133
Total for All School District			School Districts	76	300	\$870,918	\$17,418,356
County	24%	Steuben County	\$1,275	76	300	\$382,606	\$7,652,111
Facility Total	100%		\$5,300	76	300	\$1,590,000	\$31,800,000

Table 17. Estimated Annual and Total PILOT Amounts⁶

As reflected in Table 17, over the span of the 20-year PILOT Agreement, an estimated total of \$31.8 million (in 2017 dollars) will be paid to the local taxing jurisdictions. The structure of this agreement will be guaranteed for the 20-year period of the PILOT agreement, providing a continuous revenue stream to each affected jurisdiction. 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.

⁶ 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.

⁷ All 76 turbines are located within each type of overlapping tax jurisdictions (county, town, and school district). All 76 turbines are distributed across towns and across school districts within the Study Area. All turbines are located within Steuben County.

⁸ Proportional tax rates represent the proportion of 2016 tax obligations (NYSORPTS, 2016) to each type of taxing jurisdiction (e.g., school district) relative to other types of taxing jurisdictions (e.g., county and town) 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.

⁹ Annual nameplate capacity within jurisdictions is calculated by multiplying the number of turbines located within each jurisdiction by the turbine nameplate capacity (3.95 MW/turbine).

HCA Amounts

Although the terms of the HCAs have not been finalized, similar to other wind projects in New York State, the Applicant plans to enter into a HCA with an annual host community fee ("Host fee") to each town within the Study Area. Host fee rates will be estimated for each town within the Study Area based on the amount of \$2,500 per MW of nameplate rated capacity for each turbine installed by the Applicant in the town as part of this project. At this rate, the annual HCA payments across all towns would total \$750,000 per year, accumulating up to \$22.5 million (in 2017 dollars) over 30 years.¹⁰ These payments will be guaranteed for the 30-year period of the HCA agreement, providing a continuous revenue stream to each affected town.

Study Area Taxing Jurisdictions Entering HCAs	Estimated Host Fee	Number of Turbines	Estimated Annual Nameplate Capacity (MW) within Jurisdiction ¹²	Estimated Minimum Annual HCA Amount (\$2500/MW)	Estimated Minimum 30-Year HCA Amount
Town of Cohocton	\$2,500/MW	25	99	\$246,711	\$7,401,316
Town of Dansville	\$2,500/MW	3	12	\$29,605	\$888,158
Town of Fremont	\$2,500/MW	38	150	\$375,000	\$11,250,000
Town of Wayland	\$2,500/MW	10	39	\$98,684	\$2,960,526
Total (All Towns)	\$2,500/MW	76	300	\$750,000	\$22,500,000

Table 18. Estimated Annual and Total HCA Amounts¹¹

4. Consistency with State Smart Growth Public Infrastructure Criteria

The New York State Smart Growth Public Infrastructure Policy Act (hereinafter "Smart Growth Act") is meant to maximize the social, economic, and environmental benefits from public infrastructure development by minimizing the impacts associated with unnecessary sprawl. Under the Smart Growth Act, State infrastructure agencies, such as the New York State Department of Transportation (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 New York Environmental Conservation Law (ECL) § 6-0107.

¹⁰ This analysis is based on the 300-MW Facility nameplate capacity for 76 turbines sized at an approximate nameplate capacity 3.95 MW each.

¹¹ 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.

¹² Annual nameplate capacity within jurisdictions is calculated by multiplying the number of turbines located within each jurisdiction by the turbine nameplate capacity (3.95 MW/turbine).

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 to allow Facility components to cross state highways (e.g., State Route 21). Therefore, this section provides a detailed statement regarding the Facility's consistency with the smart growth criteria in ECL § 6-0107(2). As discussed below, the Facility is consistent with five applicable 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 76 wind turbines and their associated access roads, collection lines, permanent meteorological towers, operations and maintenance building, laydown area, collection substation and point of interconnect (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 300 MW of renewable energy to the New York State grid. As reported by the Preliminary Scoping Statement (August 2016), total net generation delivered to the existing NYSEG's Hillside-Meyer 230 kV transmission line is expected to generate enough electricity to meet the average annual consumption of thousands of households in New York State. Additionally, the Facility will use portions of existing State highway infrastructure through equipment transportation. However, none of these activities are anticipated to have any long-term impact on existing infrastructure.

After careful consideration of its contribution to and utilization of both the New York State power grid and transportation routes identified above, it has been determined the Baron Wind Facility is consistent with this smart growth criterion. Consequently, 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, transitoriented 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 projects to comparatively isolated rural areas. 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 Baron 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 300 MW of much-needed clean energy while largely preserving the agricultural and forested land that comprises the Facility Site. The Facility's Article 10 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 assessed potential visual impacts within a 10-mile radius of the Facility Site. As documented in the VIA and the Project's Cultural Resources Work Plan (EDR, 2017), the Applicant will continue to work with the local stakeholders to identify potential opportunities for mitigation. For instance, the Applicant may fund one more visual/cultural mitigation projects previously 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 (based on the layout as currently proposed), and that any remaining impacts are outweighed by the benefit provided by the Facility's generation of up to 300 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 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 Towns of Cohocton, Dansville, Fremont, and Wayland. 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. Electricity generated from zero-emission wind energy can displace the electricity generated from conventional power plants, thereby reducing emissions of conventional air pollutants, such as carbon dioxide (which is linked to global climate change). Thus, the Facility promotes the reduction of greenhouse gas emissions through the use of 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.

PART III: MITIGATION MEASURES

Once potential adverse impacts are identified, it is incumbent upon a given applicant to investigate possible mitigation measures, which would either eliminate or reduce the potential impacts. Regarding the socioeconomic impacts of this Facility, the positive impacts outweigh any potential adverse effects, and therefore mitigation measures are unnecessary. The following is an explanation of this conclusion for each identified socioeconomic impact.

1. Population, Housing, Economy, and Employment

The operating Facility is not anticipated to adversely affect population or housing availability in the Towns of Cohocton, Dansville, Fremont and Wayland, or the surrounding communities, nor is it expected to depress local property values. As described previously, the operating Facility's potential impact on the local economy and employment will be positive, in that additional jobs will be created, and additional local expenditures made (lease payments to participating landowners, as well as local purchase of goods and services). However, the number of permanent jobs created is not large enough to create a financial burden on local taxing jurisdictions by requiring provision of additional services and/or facilities to accommodate any additional employees. Thus, mitigation measures to address either loss of jobs or increased demand for municipal services are not necessary. Consequently, mitigation measures to address population and housing impacts are not necessary.

1.1 Municipal Revenues

As previously noted, the Facility is located in the following jurisdictions that levy real property taxes, benefit assessments or user fees on the Facility Site and that will receive PILOT payments: Steuben County, Town of Cohocton, Town of Dansville, Town of Fremont, Town of Wayland, Arkport Central School District, Avoca Central School District, Wayland-Cohocton Central School District, and Hornell City School District.

Neither construction nor operation of the proposed Facility will create a significant demand for additional municipal or school district services and facilities. Because it will not directly increase local municipal or school district expenses, it will have no adverse impact on municipal or school budgets. The Applicant plans to enter into a 20-year term PILOT Agreement with local tax jurisdictions. Although the specific terms of the PILOT Agreement have not been negotiated, the Applicant anticipates (based on annual PILOT payments for other wind energy projects in New York) that the annual PILOT payment will be approximately \$5,300 per megawatt of installed generation capacity. At that rate, and assuming that 300 MW of generation is installed, the PILOT payments would average approximately \$1,590,000 per year. Over the 20-year span of the PILOT Agreement, the local jurisdictions would receive total payments of approximately \$31.8

million (in 2017 dollars) (see Table 17). HCA payments to local municipalities would total \$750,000 per year. Over the 30-year span of the HCA, local municipalities would receive a total of \$22.5 million.

The PILOT and HCA payments will increase the revenues of the local taxing jurisdictions, and will represent a significant portion of their total tax levy. These revenue streams will be guaranteed for the life of the agreements, providing a dependable revenue stream for the participating municipalities. The amount of the PILOT and HCAs will more than offset any minor increases in community service costs that may be associated with long-term operation and maintenance of the Facility (e.g., small number of additional school children, slightly increased road maintenance).

The only potential adverse impact to municipal budgets anticipated as a result of the Facility is the impact of construction on local roads, and the need to repair or upgrade these roads to accommodate construction vehicles and activity. However, as previously noted, to mitigate this impact, construction-related damage or improvements to public roads affected by the Facility will be the responsibility of the Applicant, and will be undertaken at no expense to the municipalities or the County in accordance with Road Use Agreements. Once the Facility is operational, the only additional traffic expected will be associated with occasional non-oversize/overweight vehicles visiting each turbine site to perform routine maintenance and repair activities. In the event a large component of the Facility (i.e., tower, blade, nacelle) requires replacement, any impacts to the roads associated with transportation of the component will be covered by the Road Use Agreement.

1.2 Decommissioning

The Applicant has established a decommissioning and restoration plan. The projected salvage value of the turbines will be available to pay for the decommissioning of the Facility at the end of its useful life. Specifically, the Applicant will provide New York State Department of Public Service staff and the Towns with an estimate prepared on a perturbine basis from an independent engineer for review and approval, in order to establish the cost of decommissioning the Facility. The first decommissioning estimate will be provided prior to Facility construction, the second estimate after one year of Facility operation and every fifth year thereafter. Prior to the start of construction, the Facility developer will submit evidence of the mechanisms that are in place to ensure the removal of each wind turbine in the event it is not in active service for an extended period of time (such that there is no expectation of their returning to operation).

Because the Facility will generate a predictable source of additional revenue for all of the affected municipalities and school districts over the next 20-plus years, the Facility will positively impact municipal and school district revenues. This should enhance the type and level of services these jurisdictions provide to local residents for the duration of the Facility's operational lifespan.

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Baron Winds Project

Towns of Cohocton, Dansville, Fremont, and Wayland - Steuben County Socioeconomic Report

Figure 1 - Facility Site

Notes: 1. Basemap: ESRI ArcGIS Online "World Shaded Relief" Map Service and ESRI StreetMap North America, 2008. **2.** This map was generated in ArcMap on November 6, 2017. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

Wind Turbine
 Permanent Met Tower
 Buried Collection Line
 Overhead Collection Line
 Access Road
 Facility Site
 Town Boundary
 POI Substation



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Baron Winds Project Towns of Cohocton, Dansville, Fremont, and Wayland - Steuben County Socioeconomic Report Figure 2 - Regional Facility Location

Notes: 1. Basemap: ESRI ArcGIS Online "World Shaded Relief" Map Service and ESRI StreetMap North America, 2008. 2. This map was generated in ArcMap on November 6, 2017. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.



