

Socioeconomic Report

Cassadaga Wind Project

Towns of Arkwright, Charlotte, Cherry Creek and Stockton, Chautauqua County, New York

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EXECUTIVE SUMMARY

This socioeconomic report is prepared in connection to the proposed Cassadaga Wind Project (“the Project”), utility scale wind power project located in the Towns of Cherry Creek, Charlotte, Stockton, and Arkwright, Chautauqua County, New York (see Figure 1: Facility Site). As measured to the nearest proposed turbine, the Project is located approximately 0.3 mile northwest of the Village of Sinclairville, 0.9 mile northwest of the Village of Cherry Creek, 3.0 miles east of the Village of Cassadaga, 4.1 miles southwest of the Village of South Dayton, 6 miles southeast of the Village of Fredonia, and 10.9 miles north of the City of Jamestown (see Figure 2: Regional Facility Location). The Project will consist of up to 58 turbines, each with a nameplate capacity rating of 2.1 to 3.45 MW (depending on the final turbine model selected), and deliver up to 126 MW of electrical power to the New York state grid. Please note that the only components proposed to be located in the Town of Stockton are the Point of Interconnect (POI) substation and small portion of the overhead 115 kV generator lead line (i.e., no wind turbines). The Project is scheduled to be constructed and go into operation in 2018.

The focus of this report is to assess the potential socioeconomic effects of this Project on the host communities of the Towns of Arkwright, Charlotte, Cherry Creek and Stockton (the “Study Area”). 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 impacts from the Project are then assessed in light of the current socioeconomic conditions of the area.

Chautauqua County is the western-most county of Western NY, and shares many economic and demographic characteristics of the region. Like many other counties in the area, Chautauqua County has experienced a mix of population growth, stagnation and decline over the past 30 years, as have the Towns of Arkwright, Charlotte, Cherry Creek and Stockton. 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 73% and 86%). Housing values are relatively stable, and are well below the statewide median value. Poverty rates within the Study Area are mixed, with half of the Towns lower than that of the County as a whole, which, at 14.1% is slightly higher than the statewide rate of 12.0%.

In decreasing order of total employment, the five dominant employment sectors in Chautauqua County are 1) manufacturing, 2) health care and social assistance, 3) retail trade, 4) educational services, and 5) accommodation and food services. Once a significant contributor to the local employment base, on-farm employment now represents a much smaller share of countywide employment, 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 Project is fundamentally compatible with existing land use patterns and future land use goals within the Study Area. Aside from occasional maintenance and repair activities, Facility operation will not interfere with on-going land use (i.e., farming and forestry activities). In the short-term, there may be a temporary interruption of current land uses due to construction activities, however the Project operation is not expected to result in long-term or large scale changes to the prevailing rural character of the area. Furthermore, the development of this Project is compatible with the future land use plans in the Study Area and largely compatible with Zoning Regulations in the Study Area

The Project is anticipated to have a positive impact on municipal budgets, as it is not expected to generate any new significant municipal expenditures, but will generate additional revenue through payments in lieu of taxes (PILOT). Given the budget constraints that local taxing jurisdictions are currently facing, it is expected that the PILOT will be a positive revenue stream to municipalities. Additionally, pending the final PILOT agreement, the applicant will also enter into a Host Community Agreement (HCA) for an additional fee per MW.

Furthermore, it is anticipated that construction and operation of the Project will have positive impacts throughout the local and regional economy. Businesses involved in on-site Project construction and operations, as well as those associated throughout the industrial supply chain, are expected to see a measureable increase in the demand for their services. In addition, the wages earned by workers during construction and operation of the Project are expected to generate additional spending, creating a "ripple effect" throughout the local and regional economy.

Using standards developed by the National Renewable Energy Laboratory, it is estimated that Project construction could increase direct and indirect employment demand by 442 workers, with total earnings of approximately \$36.4 million. The total value of direct and indirect industrial production in the local or state economy associated with Project construction is estimated at \$79.6 million. The operation and maintenance of the installed Project is estimated to increase direct and indirect employment demand by an additional 19 workers, with total annual earnings of approximately \$1.7 million. The total value of direct and indirect industrial production in the local or state economy associated with operation and maintenance of the Project is estimated at \$4.3 million.

These estimates suggest that the construction and operation of the Cassadaga Wind Project will have a positive impact throughout the local and regional economy through the provision of employment, spending of wages, and increase in industrial output. In addition, 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 the Cassadaga Wind LLC (Applicant), Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. has prepared this socioeconomic report is prepared for the proposed Cassadaga Wind Project (“the Project”), utility scale wind power project located in the Towns of Cherry Creek, Charlotte, Stockton, and Arkwright, Chautauqua County, New York (see Figure 1: Facility Site). As measured to the nearest proposed turbine, the Project is located approximately 0.3 mile northwest of the Village of Sinclairville, 0.9 mile northwest of the Village of Cherry Creek, 3.0 miles east of the Village of Cassadaga, 4.1 miles southwest of the Village of South Dayton, 6 miles southeast of the Village of Fredonia, and 10.9 miles north of the City of Jamestown (see Figure 2: Regional Facility Location). The Project will consist of up to 58 turbines, each with a nameplate capacity rating of 2.1 to 3.45 MW (depending on the final turbine model selected), and deliver up to 126 MW of electrical power to the New York state grid. Please note that the only components proposed to be located in the Town of Stockton are the Point of Interconnect (POI) substation and small portion of the overhead 115 kV generator lead line (i.e., no wind turbines). The Project is scheduled to be constructed and go into operation in 2018.

A comprehensive review of the potential socioeconomic effects on local municipalities requires an examination of the related impacts generated from the construction and operation of a given project. Specific to the proposed Project, this report includes a review of the past and current demographic and economic characteristics and trends in the area, which includes the Towns of Arkwright, Charlotte Cherry Creek, and Stockton (hereafter, the Study Area) in Chautauqua County. When the comparison is informative, demographic and economic data for New York State and the United States is also included.

In Part I of this report the current conditions and trends are presented and discussed. A demographic profile is provided with specific data on population size, age and educational attainment, housing occupancy rate and median value. A snapshot of the health of the local economy follows with specific data on the local labor force and unemployment rates; and median household income including poverty levels. Finally, the towns and county 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 presents the analysis of the potential positive and negative socioeconomic impacts from the Project. 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 impact investigation. In Part III the mitigation measures for each identified potential adverse impact on the socioeconomic aspects of the communities are discussed. Potential measures intended to either eliminate or reduce the potential adverse impact are presented.

PART I: SOCIOECONOMIC PROFILE OF COMMUNITIES WITHIN STUDY AREA

1. Demographic and Housing Characteristics

In this section the local population, housing and labor force characteristics and trends are reviewed at three comparative levels: 1) the Study Area, including the Towns of Arkwright, Charlotte, Cherry Creek and Stockton; 2) the County of Chautauqua, and, where appropriate, 3) the State of New York. This includes past, current and estimated 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 2010 and 2014. For the purposes of this report, these estimates will be referred to as estimates for 2014

1.1 Population and Housing Trends

Census data reveals that these communities have experienced a varied history of small population growth and decline over the past three decades. The 2010 population for Chautauqua County, the Towns of Arkwright, Charlotte, Cherry Creek and Stockton is shown in Table 1 below. The county as a whole showed an overall 8.2% decline in population from 1980 to 2010, with the Towns of Cherry Creek and Stockton also experiencing comparable population declines between 1980 and 2010. Meanwhile, the Towns of Arkwright and Charlotte experienced population increases of 8.3% and 15.7%, respectively, between 1980 and 2010. The majority of residents across the County and the four towns are working adults (ages 16 to 64 years), with a substantial (approximate average of 20%) child population (ages 0 to 15 years) (see Table 2). The Town of Arkwright was a notable exception, with a child population of only 12.5%. The 65-years-or-older age group has grown slightly (+3.0%) since 1980, when it comprised 14.2% of the total population in Chautauqua County.

Table 1. Population

	2010 Population	Change 2000-2010	2000 Population	Change 1990-2000	1990 Population	Change 1980-1990	1980 Population
Chautauqua County	134,830	-4,920	139,750	-2,145	141,895	-5,030	146,925
Town of Arkwright	1,061	-65	1,126	86	1,040	60	980
Town of Charlotte	1,729	16	1,713	185	1,528	34	1,494
Town of Cherry Creek	1,118	-34	1,152	88	1,064	-163	1,227
Town of Stockton	2,248	-83	2,331	-184	2,515	184	2,331

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

Table 2. Age Groups

	<15 Years	% of Total Pop.	15-44 Years	% of Total Pop.	45-64 Years	% of Total Pop.	65+ Years	% of Total Pop.
Chautauqua County	23,105	17.30%	359	36.80%	279	28.60%	168	17.20%
Town of Arkwright	121	12.40%	311	31.90%	361	37.00%	182	18.70%
Town of Charlotte	423	23.10%	616	33.60%	526	28.70%	267	14.60%
Town of Cherry Creek	226	22.20%	320	31.40%	303	29.70%	170	16.70%
Town of Stockton	535	24.10%	777	35.00%	533	24.00%	377	17.00%

Source: American Community Survey 2010-2014 5-Year Estimates

This trend of relative population stability is expected to slowly decline over the next 30 years (Cornell University, 2015). With a stable or declining population, it can be anticipated that the distribution of population density for each municipality will remain relatively unchanged. The level of education attained by the local residents, particularly in terms of Bachelor's degree attainment, continues to improve. Educational attainment refers to the highest level of education that a person has attained, whether it is the highest grade completed or the highest degree received. An increase in the number of residents who receive a higher education reflects a better-educated workforce in each community. This is a positive attribute that is attractive to current and future employers. Wind farm projects such as this Project create jobs that require various levels of education from advanced degrees, to long-term on-the-job training, and trade certifications (Bezdek, 2007). Thus, the 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 below, the estimated level of overall education obtained by residents has generally increased in recent years.

Table 3. Educational Attainment, 2010

	% High School Degree or Other	2000-2010 Change	% Bachelor's Degree or Higher	2000-2010 Change
Chautauqua County	88.00%	+6.80%	21.10%	+4.20%
Town of Arkwright	85.50%	-1.40%	19.60%	-1.90%
Town of Charlotte	84.70%	+5.10%	13.70%	+4.30%
Town of Cherry Creek	81.00%	+2.50%	15.90%	+1.00%
Town of Stockton	82.50%	-2.30%	17.10%	+4.70%

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

With slightly more than a 19% percent vacancy rate, housing availability in Chautauqua County increased slightly from 2000 to 2010. With an occupancy rate of 73.3% in the Town of Arkwright, 86.4% in the Town of Charlotte, 77.6% in the Town of Cherry Creek, and 76.8% in the Town of Stockton coupled with a slowly-decreasing forecasted population, housing availability is projected to increase in the local communities.

Within the occupied housing, rates of home ownership are fairly strong for the Towns of Arkwright, Charlotte and Cherry Creek and Stockton at 93.5%, 83.6%, 79.8% and 70.5% respectively in 2010. The 2010 estimated median housing values in the Towns of Arkwright were slightly higher than those in Chautauqua County as a whole. Cherry Creek and Stockton were slightly lower, and Charlotte's median housing value was substantially lower. However, all of these values are significantly low compared to the median value for New York State. In 2010, the median housing value in the Town of Arkwright was \$86,100, the Town of Charlotte was \$67,100, the Town of Cherry Creek was \$77,000 and the Town of Stockton was \$71,300, whereas the County was \$79,600. This compares to an estimated statewide median housing value of \$303,900 in 2010.

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 local housing (to own or rent). As discussed in the previous section, the vacancy rate for these communities is relatively low, indicating some stability in the local housing. Household income and poverty levels 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 2014, the estimated median household income for each municipality ranged between approximately \$44,500 and \$58,000, all of which were lower than the \$58,687 median household income estimate for New York State. Stockton has the lowest median household income of \$41,656. Of significance to each community is the poverty rate, which is the percentage of individuals below the poverty level. The town with the highest poverty rates was also Stockton, with Charlotte closely behind. As indicated in Table 4, these two towns had higher poverty rates than the County, where 14.5% of the population is living below the poverty level. The Towns of Charlotte and Stockton, in addition to the County also feature higher rates than that of New York State as a whole, where 12.0% of the population is living below the poverty level.

Table 4. Household Income and Population below Poverty, 2014

	Median Household Income	% of Population Below Poverty
Chautauqua County	\$ 42,720.00	14.5
Town of Arkwright	\$ 58,073.00	9.9
Town of Charlotte	\$ 42,708.00	15.7
Town of Cherry Creek	\$ 51,058.00	6.9
Town of Stockton	\$ 41,656.00	19.7

Source: U.S. Census Bureau, 2010-2014 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 cash public assistance provided to households is 1.8%, 4.1%, 8.1%, and 7.0% for the Towns of Arkwright, Charlotte, Cherry Creek and Stockton, respectively. Cherry Creek and Stockton are the only towns with a percentage higher than Chautauqua County (4.4%). This is compared to 3.4% of the statewide household populations that use public assistance programs.

2.2 Labor Force Characteristics

The regional and local economy in the Study Area is affected by three major trends; 1) transition from a manufacturing base 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 County's total population over 16 years of age (108,722), 58.4% (63,452) were in the labor force in 2014. As illustrated in Table 5 this majority percentage of working population existed in all four local municipalities. In the last decade the County's labor force participation rate shrank by 3% (61.4% in 2000). This statistic, coupled with a slow economy, suggests that job openings have recently been difficult to find, and could possibly become more competitive.

Table 5. Labor Force Characteristics, 2014

	Working Age Population	Population in Labor Force	% of Working Age Population in Labor Force
Chautauqua County	108,722	63,452	58.4%
Town of Arkwright	836	501	59.9%
Town of Charlotte	1,398	848	60.7%
Town of Cherry Creek	781	506	64.8%
Town of Stockton	1,668	848	50.8%

Source: U.S. Census Bureau, 2010-2014 5 Year Estimates

The Chautauqua County unemployment rate in October 2015 was 5.4% (not seasonally adjusted), which is a notable 2.8% decrease from the 8.2% rate in October 2012. In comparison, the unemployment rate for New York State in October 2015 was 4.5% (US Bureau of Labor Statistics, 2015).

2.3 Local Industries

In decreasing order of total employment, the five dominant employment sectors in Chautauqua County are 1) Manufacturing, 2) Health Care and Social Assistance, 3) Retail trade, 4) Educational services, and 5) Accommodation and Food Services (US Census Quarterly Workforce Indicators, 2015). Non-governmental major employers in the County include The Resource Center, Cummins Engine Co. Inc., WCA Hospital, The Carriage House Company, SKF Aeroengine and Cott Corporation (Buffalo Niagara Enterprise 2013).

Although several changes have occurred throughout the local economy in recent years, most industries have remained relatively stable in their share of overall county employment. Notable shifts within large individual sectors have been sizeable, however. Both the Retail Trade and the Accommodation & Food Services sector have grown substantially, up 16% and 24% from 2010 to 2014, respectively. Smaller sectors have also risen significantly; employment in the Management of Companies and Enterprises has grown by 57%, and employment in the Information and Arts/Entertainment/Recreation sectors has each grown by more than 22% in between the same time period of 2010-2014 (US Census Quarterly Workforce Indicators, 2015).

The economy in Chautauqua County appears to have remained stable between the years of 2010 and 2014 in terms of overall jobs, yet a more detailed review shows economic transformations towards a more service-based economy. The following employment data for the fourth quarter (Q4) for 2014, although the most recent available, lags approximately 12 - 15 months behind real employment conditions. Overall, there has been a total job growth of 0.9% (391 jobs) between Q4 2010 and Q4 2014. Recognizing this fact, it is nevertheless informative to review what did occur with employment overall during recent years. From Q4 2010 to Q4 2012, there was a net increase of 1104 jobs (2.6 %) in the County, most of which were created within the Information and Educational Services sectors during 2010-2011 and Retail and Accommodations/Food Services during 2011-2012. Within that same timeframe (2010-2012), smaller, yet notable employment increases occurred within the Public Administration and Management of Companies and Enterprises sectors. The latter part of the four-year period (Q4 2012 to Q4 2014) was marked with job decline of a nearly equal magnitude (-1.7%). Sectors suffering the highest decline in jobs were the Manufacturing and Health Care and Social Assistance Table 6 shows the breakdown of total part-time and full-time employment in Chautauqua County from 2011 to 2014 (note: 2014 figures are preliminary estimates).

Fortunately, since 2010, some workers experienced a steady increase in average annual earnings in many industry sectors. Jobs within the Wholesale Trade sector had the highest increase in earnings, with 21% over the 4-year span. Closely behind were Real Estate/Rental/Leasing and Agriculture/Forestry/Fishing/Hunting sector earnings, each with a 19% increase. The Utilities and Public Administration sectors also had notable increase with 18% and 17% increases, respectively from Q4 2010 to Q4 2014 (US Census Quarterly Workforce Indicators, 2015) (note: wage estimates for Utilities and Management of Companies and Enterprises is significantly distorted and featured fuzzed values). In 2014 the highest average earnings were in the Utilities (\$86,283), falling much higher than the next highest paying sectors, which were Finance and Insurance (\$52,584), Wholesale Trade (\$52,560) and Manufacturing (\$49,911).

Table 6. Total Employment in Chautauqua County

	Total full-time and part-time employment by NAICS industry Chautauqua County, New York (average annual number of jobs)			
	2011	2012	2013	2014
Manufacturing	9333	9247	8962	8889
Health Care and Social Assistance	7163	7242	7034	7098
Educational Services	4839	4500	4539	4511
Retail Trade	4606	5019	5202	5218
Accommodation and Food Services	3260	3259	3680	3670
Public Administration	3196	3248	3260	3258
Other Services (except Public Administration)	1851	1508	1535	1540
Administrative and Support and Waste Management and Remediation Services	1472	1426	1425	1503
Construction	1314	1279	1285	1223
Wholesale Trade	968	999	958	858
Transportation and Warehousing	935	942	916	946
Professional, Scientific, and Technical Services	742	741	740	767
Finance and Insurance	678	677	620	676
Information	573	601	695	601
Arts, Entertainment, and Recreation	458	483	521	553
Real Estate and Rental and Leasing	449	487	375	379
Agriculture, Forestry, Fishing and Hunting	357	347	372	373
Management of Companies and Enterprises	196	311	302	290
Utilities	184	162	144	205
Mining, Quarrying, and Oil and Gas Extraction	149	146	138	120

Source: US Census Bureau Quarterly Workforce Indicators, 2015

Although once a significant contributor to the local employment base, on-farm employment now represents a much smaller share of countywide employment, although it remains a substantial economic generator throughout Chautauqua County by several other measures. Since 1997 the farming industry in this region has experienced a decline in the total acreage of farmland. By 2012 the county lost 3.4% of its farmland, from 244,921 acres in 1997 to only 236,546 acres. The number of farms decreased from 1,557 in 1997 to 1,515 in 2012, indicating economic decreases within the industry. The most recent Census of Agriculture counted 3,207 hired workers throughout Chautauqua County (USDA National Agricultural Statistics Service, 2012).

Employment in the Western New York region, which includes the Study Area, is projected to grow by 7.5% through the year 2022. This projected growth is expected to be concentrated in the educational and service-providing sectors of the economy, while employment in manufacturing and hospitals is expected to decline. (NYSDOL, 2015). Service providing sectors include specialty trade contractors, ambulatory health care, nursing and residential care, accommodation, amusements, gambling and recreation, and food services and drinking places.

3. Community Character and Land Use Trends

3.1 Community Character

As previously mentioned, the proposed Project is located in the Towns of Arkwright, Charlotte, Cherry Creek and Stockton in Chautauqua County. The county is located in Western New York State, along the border Pennsylvania to the west and the south and Lake Erie to the north. Much of Chautauqua County is wooded, and interrupted by lakes, streams, gorges, scenic farms and other components of the natural environment. According to the Chautauqua County website, "Farming continues to contribute to the county's economy, as well as the associated food processing industry. With 1557 commercial farms (1997), 15,500 acres of grapes, and eight wineries, Chautauqua County has more farms and produces more grapes than any other county in New York State." According to the *Chautauqua County Profile 2013* report, obtained from the Chautauqua County Department of Planning & Economic Development website, there are 1,658 farms with an average size of 142 acres, and 1,335 of these farms have been present 10 years or more. Similar to the County's setting, 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. Mill Creek flows southwest to the Cassadaga Creek through the Town of Charlotte and Cherry Creek flows southeast to the Conewango Creek through the Town of Cherry Creek. The Villages of Sinclairville and Cherry Creek are the two main population centers within both the towns and the Study Area.

The Study Area features a rural and low-density character, with forests and farms as the most dominant visual aspect of the landscape. Although residential use is the most dominant land use category by percentage of parcels (see Table 7), the low density of residential uses results in a pastoral aesthetic across the countryside. 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 five jurisdictions (four towns and one county) have a diversity of land uses, all of which factor into their respective tax base, the majority of the property tax revenue is based on residential properties. This places a significant tax burden on 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.

Table 7. Total Assessed Property Values and Percent of Parcels by Land Use Classification, 2015

Jurisdiction	Type of Land Use	% of Total Parcels	Total Assessed Value
Town of Arkwright	Residential	45%	\$26,849,633
	Vacant	30%	\$2,847,980
	Industrial	11%	\$1,045,613
	Agricultural	5%	\$2,170,650
	Public Services	4%	\$5,149,428
	Wild, Forested, Conservation Lands and Public Parks	3%	\$426,140
	Community Services	1%	\$1,703,400
	Recreation and Entertainment	1%	\$333,300
	Commercial	0.2%	\$201,540
Town of Charlotte	Residential	50%	\$51,514,460
	Vacant	30%	\$10,226,600
	Industrial	11%	\$1,332,094
	Agricultural	2%	\$3,121,000
	Public Services	2%	\$7,592,373
	Community Services	1%	\$2,191,200
	Wild, Forested, Conservation Lands and Public Parks	1%	\$2,648,520
	Commercial	1%	\$1,340,700
	Recreation & Entertainment	0.2%	\$50,400
Town of Cherry Creek	Residential	43%	\$35,953,900
	Vacant	35%	\$8,029,300
	Industrial	11%	\$1,020,454
	Public Services	4%	\$4,251,044
	Commercial	3%	\$3,191,000
	Agricultural	2%	\$4,333,200
	Community Services	1%	\$10,923,300
	Wild, Forested, Conservation Lands and Public Parks	1%	\$1,455,300
	Recreation and Entertainment	1%	\$638,400
Town of Stockton	Residential	46%	\$74,738,300
	Vacant	38%	\$14,523,900
	Industrial	6%	\$1,226,153
	Agricultural	5%	\$5,579,600
	Public Services	3%	\$8,153,796
	Commercial	1%	\$2,883,300
	Community Services	1%	\$4,422,200
	Wild, Forested, Conservation Lands and Public Parks	0.4%	\$1,820,600
	Recreation & Entertainment	0.3%	\$1,130,100

Source: NYSORPTS, 2015

A qualitative assessment of project 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 may not be available. Compatibility with these plans and ordinances is discussed in further detail in the paragraphs that follow.

The Town of Charlotte comprehensive plan, adopted in 2007, was generated to correlate the changing environment with the desires of the local residents. It specifically addresses the development of small scale windmills as a planning issue. While it promotes the use of small scale windmills to generate electricity for personal consumption, it states that “the use of land for industrial generation of electricity by wind power is not recommended, and any use of windmills should be subject to environmental review and a visual environment assessment form review” (Town of Charlotte, §B.25). The plan also favors development which respects the rural nature of the surrounding area, incorporates appropriate setbacks between different use types, and provides economic benefits to the Town (Town of Charlotte, 2007). Subsequent to the 2007 Comprehensive Plan, the Town of Charlotte adopted Wind Energy Facility Regulations in 2012, which allow wind energy conversion systems by special permit. Therefore, the development of the proposed Project is compatible with such goals. The Towns of Arkwright, Cherry Creek and Stockton do not have Comprehensive Plans, and instead use zoning ordinances to guide land use (see discussion of zoning ordinances in the following section ‘Land Use Trends’).

Chautauqua County’s 20/20 Comprehensive Plan, adopted in 2011, summarizes the vision for the County based upon the community’s values, from which a framework for goals and strategies were developed through 16 key focus areas, ranging from business and economic development to environment and energy resources. Among local conditions detailed within this plan are assessments of Chautauqua County’s demographic trends, natural environment, land use, infrastructure, and economy. Goals, strategies, and recommended actions relevant to the proposed Facility are listed below (emphasis added):

- Goal: The County’s economy is diversified with new businesses and good job opportunities created in advanced manufacturing, agricultural production, tourism, green technologies, **renewable energy**, and other current industries.
- Strategy: Make sustainable use of local and **green energy resources** to benefit the local environment and economy.
- Strategy: Capitalize on the County’s abundant water and **energy resources** for economic development.
- Recommended Action: Advocate for legislation that provides and **promotes local energy production** in order to generate local revenues, reduce economic costs, and lower environmental impacts.
- Recommended Action: Investigate the feasibility of establishing an industrial park for the **sole purpose of creating and promoting green and energy-related industries**.
- Recommended Action: Use a portion of revenues from local energy sources, **including potential fees from wind projects**, natural gas drilling, and timber harvesting, to fund parks and other outdoor recreational development and maintenance.

- Recommended Action: Identify and **reserve key corridors to connect potential renewable energy resource areas to the regional grid.**

These goals, strategies, and recommended actions express a clear desire to foster renewable energy development within Chautauqua County, specifically including wind energy. Construction and operation of the proposed Facility will help the County achieve the objectives articulated in the Chautauqua County Comprehensive Plan.

At a regional level, the 2014 Southern Tier West Region Comprehensive Economic Development Strategy is an annually-prepared regional economic development plan for Allegany, Cattaraugus and Chautauqua Counties per a contract with the U.S. Department of Commerce's Economic Development Administration (EDA). The plan identifies economic development goals, strategies, projects and plan of action and lists wind resources as a regional opportunity due to the region's proximity to Lake Erie and its wind currents. Additionally, the 2015 Regional Economic Development Goals list alternative energy as a regional and state priority based on the high incomes of this sector compared to the regional average.

Finally, the 2013 Western NY Regional Sustainability Plan, is a plan for the five county Western New York region, and is a product of the Cleaner Greener Communities program through NY Works. The Western NY Region includes the following 5 counties: Chautauqua, Niagara, Erie, Cattaraugus, and Allegany. It highlights the development of wind energy as a regional energy goal to work towards the NYS Renewable Portfolio Standard. The region's target is to increase renewable energy generation (including wind, solar and hydroelectric) to 75% of the County's production by 2025. The Project Facility also aims to maintain agricultural land use patterns within the vicinity, which is consistent with the Plan's goal to preserve, protect and enhance agriculture.

This Project is compatible with the County plan, by considering the placement of turbines as a way to promote the long term viability of rural land uses and the associated rural character of the area by maintaining agricultural land use patterns. Whether or not a wind facility negatively impacts views is subjective, to some extent. Some people may feel the Facility will impact scenic views, which would represent an inconsistency with the County Comprehensive Plan. At a regional level, the Project Facility has no known inconsistencies with the Southern Tier West Region Comprehensive Economic, and supports its goals and strategies of the Development Strategy by capitalizing on the local wind resources. The Project Facility has no known inconsistencies with the Western NY Regional Sustainability Plan, and is consistent with two goals of this plan: 1) utilize renewable resources (wind) to generate electric power and provide local and regional economic benefits and 2) preserve, protect and enhance agricultural lands.

3.2 Land Use Trends

The distribution of land uses¹ within the Study Area is similar to the land use distribution throughout Chautauqua County. In 2008, the highest percentage of land use for all four towns and the County was residential; the second highest percentage of land use was vacant land;² the third highest percentage of land use across all four Towns was industrial use (NYSORPTS, 2015).

The properties where proposed Facility Components will be located (hereafter, the Facility Site) feature a rural and low-density character, with forested rural residential 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 Project, including North Hill Road, Mill Creek Road, Boutwell Hill Road, Nelson Road and Erwin Road. Also located within or adjacent to the Facility Site is the Boutwell Hill State Forest near the intersection of Boutwell Hill Road and Mill Creek Roads. The proposed transmission route crosses a few agricultural fields adjacent to County Road 75 and Andrews Road but the route is largely forested.

According to the NYSORPS, the Facility Site consists of six distinct land use types. The majority of the Facility Site (approximately 44.4%) is categorized as Vacant Land, which is described as "property that is not in use, is in temporary use, or lacks permanent improvement." Residential, which constitutes approximately 39.6% of the Facility Site, is described as "property used for human habitation." Agriculture, which is defined as "property used for the production of crops or livestock" makes up approximately 9.4% of the Facility Site. Approximately 6.2% 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." The remaining land use types consist of Undefined (0.3%) and Commercial (0.1%).

Chautauqua County has eleven designated Agricultural Districts established pursuant to the New York State Agriculture and Markets Law. A portion of the western end of the overhead transmission line and the point of interconnect substation falls within Agricultural District 8; 14 turbines and associated infrastructure are located in Agricultural District 10; and a 22 turbines and associated infrastructure are located in Agricultural District 13.

¹ As measured by the number of parcels with land use defined by the New York State Office of Real Property Tax Services (NYSORPTS).

² 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.

Each of the four towns hosting the Project have zoning ordinances. This section presents a summary of the zoning regulations adopted by each host Town, with a focus on regulations specific to Facility components. These ordinances support the goals of Chautauqua County's Comprehensive plan, which lists the need for legislation to enable local energy production to generate local revenues, reduce economic costs and lower environmental impacts.

Town of Arkwright Zoning Law

The Zoning Law of the Town of Arkwright establishes three zoning districts: Agricultural-Residential (AR1), Transition (T), and Flood Plain (FP). In the Town of Arkwright, wind facilities are considered permitted uses that require a special use permit (Town of Arkwright Local Law 2 of 2007, §656). There is one proposed turbine site located in the Town of Arkwright. Local Law No. 2 of 2007 amended Sections 401(C) and 402(C) of the Town of Arkwright Zoning Law to indicate that wind energy facilities are allowable uses by special permit in Agricultural-Residential and Transition Districts, respectively, in accordance with Article VI-A. Local Law No. 2 of 2007 also added Article VI-A to the Town of Arkwright Zoning Law. The purpose of this Article is to promote the effective and efficient use of the Town's wind energy resource through wind energy conversion systems (WECS) and to regulate the placement of such systems so that public health, safety, and welfare will not be jeopardized. No WECS can be constructed or operated in the Town of Arkwright except in a Wind Overlay Zone, pursuant to an application for rezoning and special use permit.

Article VI-A outlines definitions, permit and rezoning requirements, applicability, district rules, application review process, WECS standards, required safety measures, traffic routes, setbacks, easements and variances, issuance of special use permits, abatement, approval limitations and Town easements, and permit revocation for Wind Energy Facilities. This section also outlines application requirements and standards for Wind Measurement ("Met") Towers and Small Wind Energy Conversion Systems.

Town of Charlotte Zoning Law

The 2012 Zoning Ordinance for the Town of Charlotte includes three zoning districts: Agricultural and Residential, Commercial-Industrial and Flood Plain. These districts regulate use by either uses by right or by special use permit. WECS are allowed in the Agricultural-Residential district and are considered uses that require a special use permit (Town of Charlotte Zoning Law updated November 2, 2012, §618). There are 25 proposed turbine site located in the Town of Charlotte. All turbines and infrastructure proposed as part of this Project within the Town of Charlotte are located in the Agricultural-Residential district.

These turbines are subject to the wind energy facilities regulations set forth in Section 618 of the Town of Charlotte Zoning Law. No WECS can be constructed or operated in the Town of Charlotte except in a Wind Overlay Zone, pursuant to an application for rezoning and special use permit. Section 618 contains definitions, permit and rezoning requirements, applicability, district rules, application review process, WECS standards, required safety measures, traffic routes, setbacks, easements and variances, issuance of special use permits, abatement, approval limitations and Town easements, and permit revocation for Wind Energy Facilities. This section also includes application requirements and standards for Wind Measurement (“Met”)

Town of Cherry Creek Zoning Law

In the Town of Cherry Creek, the 1972 Zoning Ordinance establishes the following four zoning districts: Agricultural and Commercial (District I), Recreational, Commercial and Residential (District II), Residential, Recreational and Agricultural (District III), with an additional district, the Residential, Recreational, Agricultural and Recreational Resorts District (District IV), amended in November 2012. There are 32 proposed turbine site located in the Town of Cherry Creek. All turbines and infrastructure proposed as part of this Project within the Town of Cherry Creek are located in District III.

WECS are expressly permitted as a permitted special use in the 2011 Local Law 2 Governing Wind Energy Facilities, the key local regulation governing the use and regulating the placement of WECS (Town of Cherry Creek Local Law 2 of 2011, §1). The purpose of this Law is to promote the effective and efficient use of the Town’s wind energy resource through wind energy conversion systems (WECS) and to regulate the placement of such systems so that public health, safety, and welfare will not be jeopardized. This law states that no WECS shall be located outside of a Wind Overlay District within Zoning District III. Requests for Wind Overlay Districts are submitted with applications for WECS Special Use Permits. Steps for preparing a joint application are listed in Section 8. Other sections include the Permits and Rezoning Required, Applicability, Wind Overlay District rules, Application Review Process, Standards, Required Safety Measures, Traffic Routes, Setbacks, Noise and Setback Easements and Variances, Wind Overlay District Creation and Issuance of Special Use Permits, Abatement, Limitations on Approvals and Easements on Town Property, and Permit Revocation. They also specific laws for Met Towers, including site assessment, applications, standards and specific laws for Small WECS.

Town of Stockton Zoning Ordinance

The Town of Stockton 2007 zoning ordinance includes six districts: Residential, Agricultural Residential, Agricultural, Business, Industrial, and Lakeside Districts. These districts regulate uses allowed by right, special use permits, no

permit required or use not allowed. The permitted special use requires a hearing. There are no turbines proposed in the Town of Stockton. All of the Project infrastructure, which is limited to the point of interconnect substation and the western portion of the 115 kilovolt (kV) generator lead line (i.e. no wind turbines or wind measurement towers), are located within the Agricultural (A) districts or Agricultural Residential (AR) Zoning Districts. §403, Article XVI of the Stockton zoning ordinance presents an appended article on the standards, maintenance, exemptions and violations/penalties for WECS (Town of Stockton, 2007). According to Section 407 Land Use Matrix of the Town of Stockton Zoning Regulations, uses related to utilities are allowed by right in the A and AR districts and uses related to wind energy are allowed in the A and AR districts upon the issuance of a special use permit. The Zoning Board of Appeals requires a special use permit including a site plan and full State Environmental Quality Review Act Form (SEQR EAF).

4. Local Municipal Tax Base and Budgets

Understanding the fiscal health of the local communities is essential to assessing the potential economic impacts or benefits of a 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. It is informative to review the local property tax levies and tax rates for each taxing jurisdiction affected by the Project, as these are the revenue sources over which municipalities can exert the most direct control.

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. Costs associated with providing these facilities and services are incurred, and to cover these costs or expenses, revenues are collected by levying taxes. The taxing jurisdictions affected by the project include Chautauqua County, the Towns of Arkwright, Charlotte, Cherry Creek and Stockton and the Cassadaga Valley and Pine Valley Central School Districts.

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 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 8 summarizes the most recent data available for municipal and county property tax levies and rates.

Table 8. Property Tax Levy and Municipal Tax Rate* (2014, 2013)

	Levy year 2014 (roll year 2013)				Levy year 2013 (roll year 2012)			
	Property Tax Levy	Municipal Tax Rate	County Tax Rate	Eq. Rate	Property Tax Levy	Municipal Tax Rate	County Tax Rate	Eq. Rate
Chautauqua County	\$ 61,526,404	-	-	-	\$ 61,112,120	-	-	-
Town of Stockton	\$ 656,935	6.33	9.03	100	\$ 645,685	6.47	9.01	100
Town of Charlotte	\$ 585,650	8.35	9.03	100	\$ 580,841	8.30	9.01	100
Town of Arkwright	\$ 464,442	6.76	9.03	55	\$452,518	6.61	9.01	55
Town of Cherry Creek	\$ 438,144	7.95	9.03	100	\$ 502,582	9.13	9.01	100

Source: NYSORPTS, 2015

*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 Arkwright, property tax liability = $(6.76 / 1000) * 100,000$, or \$676. 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.

Another source of revenue for local municipalities is the local sales tax revenue. The current sales tax rate for the County is 7.5% (3.5% local tax plus 4% state tax) (New York State Department of Taxation and Finance 2015). In 2014, the total sales tax revenue³ for the county was \$24,358,609, for the Town of Arkwright, \$201,529, Town of Charlotte, \$220,145, Town of Cherry Creek, \$ 146,846, and the Town of Stockton, \$ 256,315 (New York State Office of the State Comptroller, 2015). 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. As with most taxing jurisdictions in Western New York, the 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 without significantly raising real property taxes (New York State Association of Counties, 2015).

An overview of the balance of a municipality's revenues, expenditures and indebtedness reveals its general fiscal health. As illustrated in Table 9, local municipal budgets vary substantially between one another, and in some cases from one year to the next. Arkwright cut expenditures by 1% from 2013 to 2014, while the Town of Charlotte and Stockton increased expenditures by 5% and 6%, respectively. Other changes were more dramatic, such as the Town of Cherry Creek expenditures increase of 23%. The Towns of Arkwright and Cherry Creek have both experienced larger amounts of expenditures than revenues in recent years. 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. The Cassadaga Valley Central School District's revenues and expenditures are in near balance, whereas those of the Pine Valley Central School District varied substantially in 2014 (see Table 10).

³ Sales Tax revenue is distributed to towns, not directly collected by them. Not all towns receive distribution payments from Sales Tax Revenue.

Table 9. Municipal Budgets⁴

Chautauqua County		
	2014	2013
Total Revenues & other sources	\$ 318,864,755	\$ 295,380,678
Total Expenditures & other sources	\$ 310,837,479	\$ 301,968,574
Total Indebtedness	\$ 53,112,694	\$ 57,660,516
Town of Arkwright		
Total Revenues & other sources	\$ 949,011	\$805,201
Total Expenditures & other sources	\$ 870,542	\$881,459
Total Indebtedness	\$ 50,000	\$70,000
Town of Charlotte		
Total Revenues & other sources	\$ 1,013,687	\$1,018,814
Total Expenditures & other sources	\$ 927,369	\$885,165
Total Indebtedness	-	-
Town of Cherry Creek		
Total Revenues & other sources	\$ 711,087	\$758,499
Total Expenditures & other sources	\$ 862,132	\$701,394
Total Indebtedness	-	-
Town of Stockton		
Total Revenues & other sources	\$ 1,211,379	\$1,155,764
Total Expenditures & other sources	\$ 1,192,491	\$1,127,628
Total Indebtedness	-	-

Source: New York State Office of the State Comptroller, 2015.

Table 10. School District Budgets

	2014	2013
Cassadaga Valley Central School District		
Total Revenues & other sources	\$ 20,770,918	\$ 20,379,087
Total Expenditures & other sources	\$ 20,995,034	\$ 20,390,684
Total Indebtedness	\$ 8,693,897	\$ 9,436,859
Pine Valley Central School District		
Total Revenues & other sources	\$ 15,076,824	\$ 16,054,500
Total Expenditures & other sources	\$ 19,644,921	\$ 16,325,285
Total Indebtedness	\$ 22,849,538	\$ 12,761,406

Source: New York State Office of the State Comptroller, 2015

⁴ The NYS Office of State Comptroller reports no debt for 2013 and 2014 in the Towns of Charlotte, Cherry Creek and Stockton. Because indebtedness may accumulate over the years, revenue, expenditures and indebtedness may not cancel each other out.

PART II: SOCIOECONOMIC EFFECTS OF PROPOSED WIND PROJECT

The Project will have both direct and indirect positive economic effects on the Towns of Arkwright, Charlotte, Cherry Creek, and Stockton, Chautauqua County, and the Cassadaga Valley and Pine Valley Central School Districts, as well as the individual landowners participating in the Project. These effects have already begun to commence for participating landowners, and will continue during construction and throughout the operating life of the Project. In the short term, benefits will include additional employment and local purchases and expenditures associated with Project construction. In the long term, the Project will generate significant additional revenue through a payment in lieu of taxes (PILOT) agreement, purchases of goods and services, and lease payments to participating landowners. Additionally, pending the final PILOT agreement, the applicant will also enter into a Host Community Agreement (HCA) for an additional fee per MW, which will further generate local revenues. The Project will also provide full-time employment for a limited number of individuals. All of these results will have a beneficial effect on local businesses and residents. The overall socioeconomic impact of Project construction and operation is discussed in detail below.

1. Effects on Population and Housing

As mentioned previously, the towns hosting this Project experienced an overall moderate population decline between 2000 and 2010, with the extremes at a 5.6% decline in the Town of Arkwright to a 0.9% growth in the Town of Charlotte. The proposed Project is not expected to influence these trends for better or worse. 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 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, Project construction will have no significant impact on population and housing.

The project 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 Project 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. The current land uses on the participating properties can

continue throughout operation of the Project. In the short-term, during construction, there may be a temporary interruption of current land uses due to construction related activities. However, the long-term operation of this Project is compatible with the current land uses. Furthermore, the development of this Project is compatible with the future land use plans in the Study Area and largely compatible with Zoning Regulations in the Study Area.

2.2 Effects 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. A broad approach to assessing potential impacts on property values of residences near wind facility projects was undertaken for this study and consequently it was, in 2009, 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 existing wind power facilities spread across nine states. The study included the Fenner Wind Farm and Waymart Wind Farm (total turbine blade tip height 328 feet) in Wayne County, Pennsylvania, two facilities that are comparable in terms of land use and rural condition to the Cassadaga Summit Wind Farm. While the Fenner Wind Farm is a considerably smaller Project, 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 may occur regardless of whether the wind facility is within view of the home. The mere fact that a wind facility is generally nearby may adversely affect a home's value. Scenic vista stigma is based on the concern that a home may be devalued because a wind facility is within view and/or interrupts an existing scenic vista. A nuisance stigma can occur because of the potential for extenuating factors from a nearby wind facility, such as noise or shadow flicker (regardless of whether they actually occur). Exploration of the effects of all three stigmas resulted in finding no persuasive evidence that neither the view of the wind facilities nor the distance of the home to the facilities is found to have any significant effect on home sales prices. The study recognizes 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. In a site-specific study conducted in Ford and McLean County, Illinois, Hinman (Hinman, 2010) formalized a fourth stigma, wind farm anticipation stigma. 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 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 effecting 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: < ½ mile, ½-1 mile, 1-3 miles, and 3-10 miles. 1,198 homes were within one mile of a turbine. 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 Hoen et al. (Hoen et al., 2009) study estimated a sales volume model and concluded that sales volumes did not decrease with wind energy development.

Heintzelman and Tuttle (2012) examined 11,331 property transactions (including agricultural property) over nine years in Northern New York to explore the effects of new wind facilities on property values. These properties are within

Lewis, Franklin, and Clinton Counties. However, only 461 transactions occur within three miles of a wind turbine. The study examined 194 turbines (height to blade tip 395 feet) in Lewis County, which occur 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), which occur 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. 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. At a range of three miles the decline is between 2% and 8%. 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 Project will not have a significant adverse impact on local property values.

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

Quantifying the socioeconomic impacts of the proposed Cassadaga Wind Project is essential to understanding the potential benefits that the Project could have on the local and regional economy. Wind power development, like other commercial development projects, can expand the local economy through both direct and indirect means. Income generated from direct employment during the construction and operation phases of the wind farm is subsequently used to purchase local goods and services, creating a ripple effect throughout the local economy. This report analyzes three levels of impact that the proposed Project may have on the economy:

On-site labor impacts: These are the direct impacts experienced by the companies/individuals engaged in the construction and operation of the facility. This value estimates the dollars spent on labor and professional services by project developers, consultants, and construction contractors, as well as operation and maintenance (O&M) personnel. On-site labor impacts do not reflect material expenditures.

Local revenue and supply chain impacts: These impacts measure the estimated increase in demand for goods and services in industry sectors that supply or otherwise support the companies engaged in construction and operation (also known as “backward-linked” industries). These measures account for the

demand for goods and services such as turbine components, project analysis, legal services, financing, insurance, etc.

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 within the economy, on household goods, entertainment, food, clothing, transportation, etc.

Each of these three categories 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 below:

Jobs: Jobs refer to the increase in employment demand as a result 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 Project. 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 earned by the employees described above.

Output: Output refers to the value of industry production in the state or local 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.

To quantify the local economic impacts of constructing and operating the Project, the Job and Economic Development Impact (JEDI) model was used, which was created by the National Renewable Energy Laboratory (NREL), a national laboratory of the United States Department of Energy. The JEDI model requires project-specific data input (such as year of construction, size of project, turbine size and location), and then calculates the impacts described above through the use of state-specific multipliers. These multipliers account for the change in jobs, earnings, and output likely to occur throughout the local and regional economy as a result of Project-related expenditures. The resulting data are paired with industry standard values (e.g. wage rates) and data reflecting personal spending patterns (e.g. percent of household income dedicated to housing expenditures) to calculate on-site, supply chain, and induced impacts (USDOE NREL, 2015).

This model allows impacts to be estimated for both the construction and operation phases of the proposed Project. An economic impact analysis was performed for a commercial wind farm (the Project) to be constructed and go into operation in 2018 with a rated capacity of 126 MW with 58 turbines sized at 2,172 kW. The results of this analysis are illustrated in Table 11, below, and summarized in the narrative that follows. The results shown in Table 11 describe the potential impact of the Project on industries throughout the state, including the on-site labor impacts that occur specifically within the local economy.

Table 11. Economic Impact Analysis

	Jobs	Earnings (Millions)	Output (Millions)
Construction			
Project Development and Onsite Labor Total	75	\$6.1	\$6.6
Construction & Interconnection Labor	5	\$0.7	-
Construction Related Services	70	\$5.4	-
Turbine & Supply Chain Impacts	239	\$19.9	\$48.5
Induced Impacts	128	\$10.4	\$24.5
Total Impacts	442	\$36.4	\$79.6
Annual Operation			
Onsite Labor Impacts	7	\$0.6	\$0.6
Local Revenue and Supply Chain Impacts	6	\$0.6	\$2.5
Induced Impacts	6	\$0.5	\$1.2
Total Impacts	19	\$1.7	\$4.3

Source: Jobs and Economic Development Impact Model (USDOE NREL, 2015)

Note: Totals may not add up due to independent rounding. Project Development and Onsite Labor Total represents the Construction and Interconnection Labor plus the Construction Related Services. The JEDI model only provides the output for this total, and not for these individual components.

3.1 Economic Impact of Construction

Based upon JEDI model computations, it is anticipated that construction of the proposed Project will directly generate employment of an estimated 75 FTE on-site construction and project development positions, 70 of which will be for Construction and Interconnection labor, and 5 of which will be Construction Related Services. The JEDI model resulted in a total output of \$36.4 million for annual construction payroll of the 70 on-site construction jobs. These estimates of the annual construction payroll by trade are listed in Table 12.

Table 12. Annual Construction Payroll by Trade (in \$ Millions)

Trade	Direct Impacts	Indirect Impacts	Induced Impacts
Agriculture	\$0.00	\$0.00	\$0.000
Mining	\$0.00	\$0.00	\$0.000
Construction	\$5.40	\$15.42	\$4.513
Manufacturing	\$0.00	\$0.58	\$0.330
Fabricated Metals	\$0.00	\$0.00	\$0.000
Machinery	\$0.00	\$0.00	\$0.000
Electrical Equipment	\$0.00	\$0.00	\$0.000
Transport., Communication & Utilities	\$0.00	\$0.00	\$0.000
Wholesale Trade	\$0.00	\$0.00	\$0.000
Retail Trade	\$0.00	\$0.22	\$0.313
Fire	\$0.00	\$0.00	\$0.000
Misc. Services	\$0.00	\$0.28	\$0.339
Government	\$0.00	\$0.58	\$3.576
Engineering & Professional Services.	\$0.70	\$0.85	\$0.00
Other Sectors (Not Construction)	\$0.00	\$2.06	\$0.00
Total	\$6.1	\$19.9	\$10.4

Turbine manufacturing and supply chain industries could in turn generate an additional 239 jobs over the course of Project construction. In addition, Project construction could induce demand for 128 jobs through the spending of additional household income. The total impact of 442 new jobs could result in up to \$36,400,000 of earnings, assuming a 2018 construction schedule and wage rates consistent with statewide averages. Project construction labor wages for similar positions within New York State range from approximately \$23 to \$33 per hour for laborers, and \$45 per hour for project management. Local employment will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. Project 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 Project is expected to have a positive impact on 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 Project construction is estimated to be \$79,600,000. Between workers' additional household income and industries' increased production, the impacts associated with the Project are likely to be experienced throughout many different sectors of the statewide economy.

3.2 Economic Impact of Operations

Based upon JEDI model computations⁵, the operation and maintenance of the proposed Project is estimated to generate seven full full-time jobs with combined estimated annual earnings of approximately \$600,000. These seven jobs are anticipated to be comprised of a Project Manager, Wind Technicians, and administrative personnel. Projected wage rates are anticipated to consistent with statewide averages, and are estimated to range from \$19 to \$30 per hour for administrative and technical personnel, to around \$48 per hour for facility management. These seven full time local jobs generated by the wind energy facility comprise the Project’s direct long-term employment impact.

Operations and maintenance should also generate new jobs in other sectors of the economy through supply chain impacts and the expenditure of new and/or increased household earnings. In total, while in operation, this Project is estimated to generate demand for 12 jobs through secondary employment with annual earnings of approximately \$1,100,000. This secondary employment is estimated to have an economic output of \$3.7 million annually. Total economic output, or the economic activity or value of production in the state or local economy, is projected to increase by an estimated \$4,300,000 as a result of Project operations and maintenance.

In terms of expenditures, this project will cost a total of \$38,022,563 annually for direct operational and management costs and other annual costs including property taxes and land leases. Of this total, an estimate \$2.4 million local dollars will be spent annually. Table 13 highlights the sources of these expenditures.

Table 13. Total Annual Operational Expenses

	Local	Non-Local	Total Direct and Other Annual Costs
Direct O&M Costs	\$934,125	\$1,702,754	\$2,636,879
Other Annual Costs	\$1,449,329	\$33,936,355	\$35,385,684
Debt and Equity Payments	\$0		
Property Taxes	\$954,450		
Land Lease	\$378,000		
Total Spending	\$2,383,454	\$35,639,109	\$38,022,563

Source: Jobs and Economic Development Impact Model (USD OE NREL, 2015)

⁵ Note: Impact subtotals (as shown in Table 11) are independently rounded, therefore may not add up directly to the totals shown. For example, the JEDI model for this Project estimates 7.08, 6.01, and 5.97 FTE jobs during the operational phase of the Project (equal to 19.06 positions, which is the rounded figure as shown). Because the model estimates whole full-time positions only, these appear in the summary table as 7, 6, and 6 positions.

The Project operation will result in payment to local landowners in association with the lease agreements executed to host Project components, and these annual lease and easement payments will offer direct benefits to participating landowners, which will be in addition to any income generated from the existing land use (e.g. agricultural production). As indicated above the JEDI model has calculated these payments at \$378,000 annually. However, based on the specifics of the lease and easement agreements, the Applicant estimates that these payments will total approximately \$1.2 million during the first year (construction), and approximately \$950,000 on an annual basis each year the Facility is in operation. These lease payments will have a positive impact on the region, to the extent that landowners will spend their revenue locally.

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

The Cassadaga Wind Project may place limited (if any) demand on municipal and school district services. For example, 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' property tax payments and the respective district's state aid. If employees live in the municipalities, their required services will be paid for through property taxes and utility fees.

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 Project will not have a significant adverse impact on local property values. Therefore, the Project should have no effect on future real property tax obligations for participating or neighboring landowners.

In exchange for a partial real property tax exemption, the Applicant expects to execute a payment in lieu of taxes (PILOT) Agreement, which will require annual PILOT payments 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 annual payment of \$4,000 per megawatt installed during the term of the PILOT. At this rate, during

the term of the PILOT, the average annual PILOT payment would total \$504,000 per year, accumulating up to \$10.1 million (in 2014 dollars) over 20 years⁶.

This annual revenue stream will be distributed among the relevant taxing jurisdictions according to their share as determined by the local combined tax rates and pursuant to the terms of the PILOT Agreement. Table 14 summarizes the projected annual PILOT payments based on the average distribution of property taxes. Municipalities include the Towns of Cherry Creek, Charlotte, Arkwright and Stockton. Schools Districts include Pine Valley and Cassadaga Valley Central School Districts. Within the Study Area in 2014, municipal property taxes constituted an average of 22% of each property's total tax obligation. County taxes constituted an average of 27%, and school taxes claimed the remaining 51%.

Table 14. Potential Annual and Total PILOT Payments*

Annual PILOT payment	Average annual distribution			20-yr total PILOT payment	Average total distribution		
	Municipalities	County	School Districts		Municipalities	County	School Districts
\$ 504,000	\$110,550	\$ 135,864	\$257,586	\$10,080,000	\$2,210,995	\$2,717, 289	\$5,151,7 16

* Distribution of property taxes based on average distribution as determined published 2014 tax rates (NYSORPTS, 2014). Payment amounts based on 126 MW facility, with a base payment of \$4,000 per MW installed.

Over the 20-year PILOT Agreement, approximately \$10.1 million will be provided to the local taxing jurisdictions (in 2014 dollars). In light of this revenue stream, the Project will have a beneficial impact on municipal budgets and is expected to offset any indirect costs to the local municipalities. Upon expiration of the PILOT Agreement, tax payments will be dependent upon the depreciation of the project's generating assets and the appraised value of the project at that time.

4. Consistency with State Smart Growth Public Infrastructure Criteria

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

⁶ If the annual PILOT agreement remains at \$4,000/MW, the applicant plans to enter into a Host Community Agreement for \$3,800/MW.

Although the Project will not result in the construction or operation of public infrastructure and will not result in unnecessary sprawl, approvals from the NYSDOT may be required due to Project components crossing state highways (e.g., State Route 60). Therefore, this section provides a detailed statement regarding the Project's consistency with smart growth criteria. As discussed below, the Project is consistent with five of the ten criteria, while the remaining five criteria do not apply to the Project.

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

The purpose of the Project is to create an economically viable wind-powered electrical-generating facility that will provide a source renewable energy to the New York State grid, and in doing so, improve the existing energy infrastructure. The Project components include 58 wind turbines and their associated access roads, electrical gathering lines, overhead generator lead line, permanent meteorological towers, operations and management building, staging area, collection station and substation. While these project components are not public infrastructure and are generally not expected to result in the operation of public infrastructure, the project will contribute 126 MW of renewable energy to the New York State grid. As reported by the Preliminary Scoping Statement (September 2015), total net generation delivered to National Grid's existing 115 kV line is expected to be approximately 397 GWh⁷, or enough electricity to meet the average annual consumption of between approximately 36,791 and 55,187 households, based on average annual electric consumption of 10.9 MWh for the U.S. and 7.1 MWh for New York State, respectively.

Additionally, the project 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 NYS Power Grid and transportation routes identified above, it has been determined the Cassadaga Wind Project is consistent with this Smart Growth criterion. Consequently, the necessary changes to the public infrastructure (contribution of renewable energy to NYS Power Grid, utilization of existing transportation routes and construction of access road intersections to existing roads) are also consistent with the criterion.

b. Criterion 2: To advance projects located in municipal centers

"Municipal centers" are defined in the Smart Growth statute as "areas of concentrated and mixed land uses that serve as centers for various activities, including, but not limited to, central business districts, main streets, downtown areas, brownfield opportunity areas, downtown areas of local waterfront revitalization program areas, transit-oriented development, environmental justice areas, and hardship areas," as well as "areas adjacent to municipal centers, which

⁷ Assumes a 36% capacity factor

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.” The Facility Site is not within a municipal center nor is it near a municipal center. The Facility Site is also not planned as a municipal center. Therefore, this criterion does not apply to this Project.

- c. 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

The Cassadaga Wind Project is not located within an area designated for concentrated infill development plan, local waterfront revitalization plan, and/or brownfield opportunity area plan. The Project is on land encompassed by rural residential and agricultural areas, which are not suitable for concentrated infill development or brownfield redevelopment and is not within a designated Coastal Zone. Therefore, this criterion does not apply to the Project.

- d. 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 Project’s Article 10 Application provides a detailed analysis of the potential for 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. Based on these analyses, the Applicant believes that the Project has avoided and minimized impacts to these resources to the maximum extent practicable (based on the layout as currently proposed), and any remaining impacts are outweighed by the benefit provided by the Project’s generation of up to 126 MW of clean, renewable energy. Therefore, the Project is consistent with this criterion.

- e. 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.

The Project is proposed to be located in the rural hills of Chautauqua, well removed from any areas that would potentially experience compact development, downtown revitalization, diversity and affordability of housing, etc. (e.g., villages and cities). Therefore, this criterion is not applicable.

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

The Project is not a public infrastructure action, and therefore this criterion is not applicable.

- g. 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 Project. 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 Project, which includes frequent stakeholder consultation and other forms of engagement, public education, public meetings, ample notification periods, and public comment periods at key milestones. To the extent applicable, these outreach efforts and municipal/agency consultations satisfy the criterion related to participation in community based planning and collaboration.

- h. 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 Project. This has included the public outreach conducted in accordance with the requirements of the PIP, which includes frequent stakeholder consultation and other forms of engagement, public education, public meetings, ample notification periods, and public comment periods at key milestones. See Criterion 7 for additional detail. These outreach efforts satisfy the criterion related to participation in community based planning and collaboration.

- i. Criterion 9: To ensure predictability in building and land use codes

The Applicant has no role in or jurisdiction over the development or enforcement of building or land use codes in the Towns of Arkwright, Charlotte, Cherry Creek and Stockton. Therefore, this criterion does not apply to this project.

- j. 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 Project is consistent with State policies designed to encourage the development of renewable energy projects, fight climate change, and contribute to the transition of New York's energy markets. Electricity generated from zero-emission wind energy can displace the electricity generated from conventional power plants, thereby reducing the emissions of conventional air pollutants, such as methane and carbon dioxide (which are both linked to global climate change). Thus, this Project promotes the reduction of greenhouse gas emissions through the use of renewable energy. The Project does, therefore, support this Smart Growth criterion.

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. With regard to the socioeconomic impacts of this Project, 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 and Housing, Economy and Employment

The operating Project is not anticipated to adversely affect population or housing availability in the Towns of Arkwright, Charlotte, Cherry Creek, Stockton or the surrounding communities. Nor is it expected to depress local property values. As described previously, the operating Project'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. 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

Neither construction nor operation of the proposed Project 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 upon annual PILOT payments for other wind energy projects in New York) that the annual PILOT payment will be approximately \$4,000 per megawatt of installed generation capacity. At that rate, and assuming that 126 MW of generation is installed, the PILOT payments would average approximately \$504,000 per year. Further, over the life of the PILOT Agreement, the local jurisdictions would receive total payments of approximately \$10.1 million (in 2016 dollars) (see Table 14).

The PILOT payments will increase the revenues of the local taxing jurisdictions, and will represent a significant portion of their total tax levy. Further, the PILOT payments will more than offset any minor increases in community service costs that may be associated with long-term operation and maintenance of the Project (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 Project is the impact of construction on local roads, and the need to repair or upgrade these roads to accommodate construction vehicles and activity. However, to mitigate this impact, construction-related damage or improvements to public roads affected by the project will be the responsibility of the Applicant, and will be undertaken at no expense to the municipalities or the County as set forth in the Road Use Agreement.

1.2 Decommissioning

The Applicant has established a decommissioning and restoration plan. The projected salvage value of the towers and turbines (expected to be available from the dismantling of the Project), will be available to pay for the decommissioning of the Project at the end of its useful life. Specifically, the Applicant shall provide an estimate prepared on a per-turbine basis from an independent engineer for the DPS Staff and Town review and approval, in order to establish the cost of decommissioning the Project. The first decommissioning estimate shall be provided prior to Project construction, the second estimate after one year of Project operation and every fifth year thereafter. Prior to the start of construction, the Project 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 Project will generate a predictable source of additional revenue for all of the affected municipalities and school districts over the next 20-plus years, the Project 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 Project's operational lifespan.

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Figures