Hecate Energy
Cider Solar Farm

Exhibit 18: Socioeconomic Effects

Cider Solar Farm
Towns of Oakfield and Elba
Genesee County, New York

Matter No. 21-01108

EXHIBIT 18: SOCIOECONOMIC EFFECTS

Matter No. 21-01108

Table of Contents

LIST OF TABLES

LIST OF TABLES

EXHIBIT 18: SOCIOECONOMIC EFFECTS

Matter No. 21-01108

Abbreviations

CO^2	Carbon Dioxide
ECL	Environmental Conservation Law
EPC	Engineering, Procurement and Construction
FTE	Full-time Equivalent
NYSDOL	New York State Department of Labor
NYSERDA	New York State Energy Research and Development Authority
PILOT	Payment in lieu of taxes
SOC	Standard Occupational Classification

EXHIBIT 18: SOCIOECONOMIC EFFECTS

Matter No. 21-01108

Glossary of Terms

Applicant	Hecate Energy Cider Solar LLC
Project	Refers to the proposed Cider Solar Farm, an up to 500-megawatt utility scale solar project that will be comprised of photovoltaic panels, inverters, access driveways, electrical collection lines, point of interconnection/substation, construction staging areas, fencing and plantings, located on private land in the towns of Elba and Oakfield, Genesee County, New York.
Project Area	Refers to the Project Site and surrounding/adjacent land totaling approximately 7,518 acres.
Project Footprint	Refers to the limit of temporary and permanent disturbance within the Project Site caused by the construction and operation of all components of the Project totaling approximately 2,452 acres.
Project Site	Refers to those privately owned parcels under option to lease, purchase, easement or other real property interests with the Applicant in which all Project components will be sited totaling approximately 4,650 acres.

.

EXHIBIT 18: SOCIOECONOMIC EFFECTS

Matter No. 21-01108

The content of Exhibit 18 is provided in conformance with Chapter XVIII, Title 19 of the New York Codes, Rules, and Regulations (NYCRR) § 900-2.19, as follows.

a) Estimate of Construction Work Force

The Applicant has developed estimates of the work force that would be required for construction of the Cider Solar Farm (Project). The estimated average construction workforce is presented by discipline for each quarter during construction in Table 18-1: *Estimated Construction Workforce*. Table 18-1 also provides a summary of total full-time equivalent (FTE) employment and includes an estimate of the peak construction level, which is expected to occur in the third quarter of construction. These estimates were developed by the Applicant based on past experience with similar projects and consultations with contractors.

Table 18-1: Estimated Construction Workforce

Labor Discipline	Quarter						Annual Full-Time Equivalent (FTE) Employment	Total FTE Employment[1]
	1	2	3	4	5	6		
Construction Managers	10	10	10	10	10	10	10	15
Foremen	20	20	20	20	20	20	20	30
Technicians	100	100	100	100	100	100	100	150
Construction Equipment Operators	50	50	50	50	50	50	50	75
Laborers	150	150	150	150	150	150	150	225
Total	330	330	330	330	330	330	330	**495**

[1]One FTE job equates to one full-time job for 1 year or 2,080-hour units of labor, with part-time or temporary jobs constituting a fraction of a job. Numbers are rounded to the nearest FTE.

Project construction would provide on-site employment for an estimated total of 330 FTE jobs per year, with technicians and laborers accounting for 75% of this total (Table 18-1). Viewed by quarter, the level of estimated on-site labor is expected to remain equal (Table 18-1; Figure 18-1: *Estimated Construction Workforce*). In total, this project would support 495 FTE jobs. Workers directly employed on-site during construction include technicians, laborers, foremen, equipment operators, and construction managers. These estimates do not include workers directly employed elsewhere in County or New York State (the State) that would provide Project-related technical services such as engineering design and permitting.

The Applicant anticipates that the majority of the on-site construction workforce would be hired locally to the extent workers are available, with an estimated 70% of the workforce expected to already reside in Genesee County. In addition, the Applicant anticipate that the total construction workforce would be hired from within the State, with approximately 90% of the workforce to be hired from Western New York. The shares of the workforce expected to be hired in Genesee County and from within Western New York would be equivalent to approximately 349 and 449 total FTE jobs, respectively. The remaining 50 FTE jobs would be hired from other parts of the State.

EXHIBIT 18: SOCIOECONOMIC EFFECTS

Matter No. 21-01108

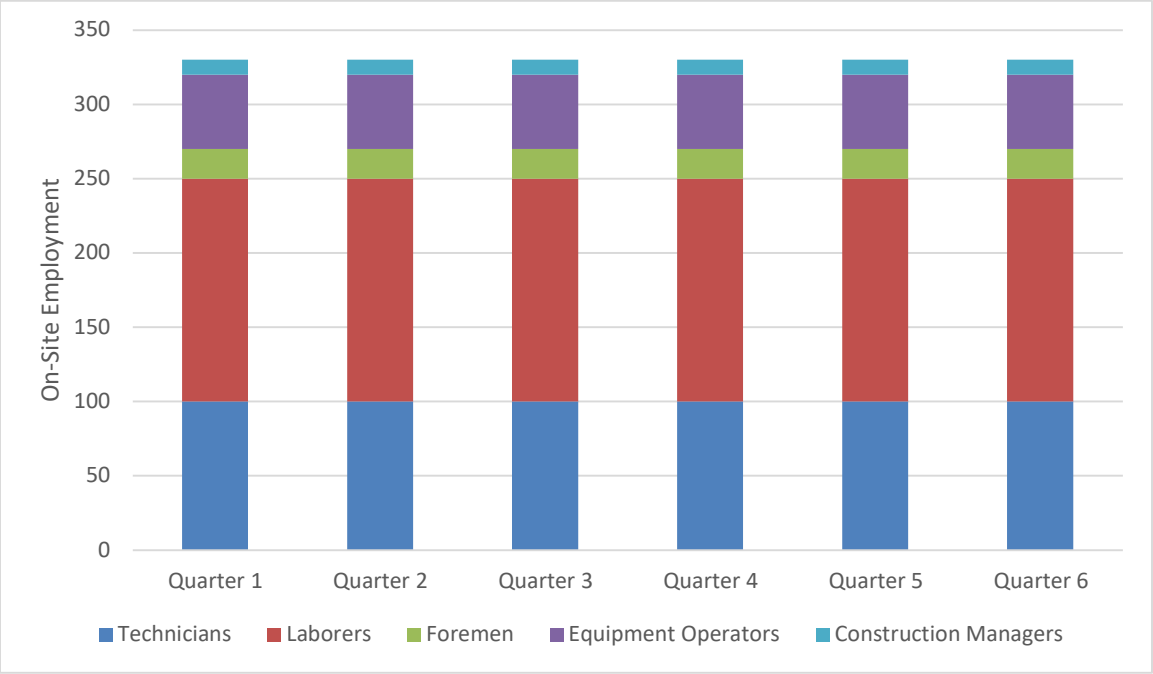

Figure 18- 1: Estimated Construction Workforce

An emphasis on local hiring has been noted elsewhere in the solar industry. The 2018 National Solar Jobs Census, for example, profiles a construction firm that provides Engineering, Procurement, and Construction (EPC) contracting services for large-scale photovoltaic solar projects, noting that the firm typically performs about 1 million labor hours for solar projects, with direct hires from local communities accounting for over 60% of the total work performed (The Solar Foundation 2018). Another large-scale EPC firm cited in the 2018 National Solar Jobs Census indicated that 90% of the construction workforce for an 80-megawatt project is typically hired from the local community (The Solar Foundation 2018). The 2019 National Solar Jobs Census further emphasized the local hiring context within the solar industry through another case study in which a firm uses a Training Within Industries (TWI) approach to employing workforce for solar projects. This approach has allowed the firm in various projects to engage with the local labor market, hiring workers in the local economy without prior solar experience (The Solar Foundation 2019).

Review of occupational data for the Finger Lakes labor market region indicates that the area has a considerable construction workforce pool. The Finger Lakes Region is 1 of 10 labor market regions defined by the State by the Department of Labor (NYSDOL) and consists of Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, and Yates Counties (NYSDOL 2019). Additional construction workforce resources also are available from elsewhere in the State. Occupational employment estimates for the disciplines required to construct the Project are presented for the Finger Lakes Region and the State as a whole in Table 18-2: *Existing Construction Workforce*.

EXHIBIT 18: SOCIOECONOMIC EFFECTS

Matter No. 21-01108

Table 18-2: Existing Construction Workforce

Labor Discipline	Standard Occupational Classification (SOC) Code	Finger Lakes Region[1]	New York State[2]
Construction Managers	11-9021	590	11,380
Foremen	47-4011	430	8,330
Technicians[3]	47-2111	2,440	43,890
Construction Equipment Operators	47-2073	1,190	13,960
Construction Laborers	47-2061	2,970	66,740

Source: NYSDOL 2019.
[1] The Finger Lakes Region labor market area consists of Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, and Yates Counties.
[2] Statewide totals include the Finger Lakes Region, along with the other nine labor market regions defined by the NYSDOL
[3] The SOC code for electricians is used to represent technicians.

b) Estimate of Annual Construction Payroll and Direct Non-Payroll Expenditures

The Applicant's annual construction payroll estimate is presented by discipline in Table 18-3: *Estimated Construction Payroll*. Construction would last for approximately 1.5-years. Total construction payroll is estimated to be approximately $40.1 million during the 1.5-year construction-phase of the Project. These estimates are based on fully burdened hourly rates. An estimated 70% of the total payroll is expected to be paid to workers normally residing in Genesee County, with an additional 20% (90% total) paid to workers from elsewhere in the Western New York, and the remaining 10% (100% total) paid to workers elsewhere in the State.

Table 18-1: Estimated Construction Payroll

Labor Discipline	Annual FTE Employment	Annual Payroll ($000)[2, 5]	Total Project Payroll ($000)[2, 5]
Construction Managers	10	[redacted]	[redacted]
Foremen	20	[redacted]	[redacted]
Technicians	100	[redacted]	[redacted]
Construction Equipment Operators	50	[redacted]	[redacted]
Laborers	150	[redacted]	[redacted]
Total	**330**	[redacted]	[redacted]
Estimated Share in Genesee County	231	[redacted]	[redacted]
Estimated Share in Western New York	297	[redacted]	[redacted]
Estimated In-State Share	330	[redacted]	[redacted]

[1] Person-hours were estimated by multiplying total FTE employment by 2,080.
[2] Numbers may not sum due to rounding.
[3] Total project reflects the full 1.5-years construction period and is estimated by multiplying total FTE employment by 3,120

[4] Hourly rates are fully burdened.
[5] Payroll is presented in thousands of dollars.

Estimated direct non-payroll expenditures expected to occur locally and in-state includes the structural and electrical balance of system materials, construction materials and supplies, equipment rentals, and construction services. Expenditures related to engineering and surveying, development and licensing, interconnection, and financing costs also are expected to occur within the State. The expenditures during the construction of the Project including [redacted] are estimated to be $55.3 million dollars within Genesee County and $79.0 million in New York State.

c) Estimate of Annual Operation Jobs, Payroll, and Non-Payroll Expenditures

The Applicant estimate of the number of jobs and on-site payroll for a typical year once the Project is in operation is presented by discipline in Table 18-4: *Estimated Annual Operation Employment and Payroll by Discipline*. Project operation would provide direct employment for the equivalent of 16 FTE jobs, with a corresponding annual payroll of approximately [redacted]. Estimated payroll is based on fully burdened hourly rates, with 8 of the FTEs residing in Genesee County and the total amount expected to be paid to workers in the State.

Table 18-1: Estimated Annual Operation Employment and Payroll by Discipline

Labor Discipline	Total FTE Employment	Annual Payroll ($000)[2]
Field Technicians	12	[redacted]
Site Management	1	[redacted]
Ops monitor/control	1	[redacted]
Administrative	2	[redacted]
Total	**16**	[redacted]

[1] Man-hours were estimated by multiplying total FTE employment by 2,080.
[2] Numbers may not sum due to rounding.
[3] Hourly rates are fully burdened.

Ongoing operations and maintenance will require annual non-payroll expenditures equal to [redacted] annually over the 30-year operating life of the site for materials and operation supplies and landscaping services. In addition, the Project will also make annual lease payments of [redacted] per year to local landowners for use of their land.

d) Estimate of Incremental School District Operating and Infrastructure Costs

The Project is located in the Oakfield-Alabama Central School District and the Elba Central School District. The School Districts will likely benefit from the Project with the Applicants making annual payments (see Sections (f) and (g) of this Exhibit). Construction and operation of the Project is unlikely to cause an increase in enrollment.

Project construction would take place over a 1.5-year period, with annual estimated on-site employment equivalent to 330 FTE jobs and total project on-site employment equivalent to 495 FTE jobs (Table 18-1). On-site employment is expected to be steady throughout the entire construction period with the same number of FTE jobs projected for each quarter of construction. The Applicants estimate that 100% of this workforce would be hired from within the State, with approximately 90% of the total expected to reside within daily commuting distance. The remaining 10% of the workforce would be expected to temporarily relocate for the duration of their employment. None of these workers are expected to permanently relocate to the area and very few, if any, are expected to be accompanied by family members. As a result, construction of the Project is not expected to add any new students to the local school district.

Similarly, little to no effect on enrollment is expected during Project operation, in which the equivalent of approximately 16 FTE jobs will be filled by State residents (Table 18-4). Therefore, Project operation is not expected to noticeably affect local school enrollment.

The Applicant consulted with the Oakfield-Alabama Central School District and the Elba Central School District Superintendents via a letter sent on July 25, 2019 (Appendix 18-A: *Economic Impacts of Hecate Energy LLCs Proposed Solar Development in Genesee County, New York*). Representatives from Elba Central School District have attended the public engagement events for the Project, including the weekly zoom office hours and the public informational open house.

e) Estimate of Incremental Municipal, Public Authority, or Utility Operating and Infrastructure Costs

The Applicant consulted with the following entities to appropriately estimate the incremental operating and infrastructure costs that could result from the Project:

- Oakfield-Alabama Central School District
- Elba Central School District
- Town of Oakfield Supervisor
- Town of Elba Supervisor
- Genesee County Police Department
- Town of Oakfield Highway Superintendent
- Town of Elba Highway Superintendent
- Elba Fire Department
- Oakfield Fire Department

A copy of the letter, sent on July 25, 2019, to each of these entities is provided in Appendix 18-A. To date, no responses have been received. As the Project is not proposed to interconnect to any existing utility (i.e., water, sewer), these entities were not consulted.

Incremental costs associated with the permitting process may be incurred by the towns, and the Project has discussed with the towns the availability of intervenor funding to cover costs associated with the Project's permitting review. No incremental costs are expected during operation of the facility from the perspective of emergency services, water, sewer, or solid waste disposal, highway maintenance or other municipal, public authority, or utility services.

f) Identification of Jurisdictions that Levy Real Property Taxes or Benefit Assessments or User Fees

The Project falls within the following jurisdictions that are anticipated to receive a payment in lieu of taxes (PILOT) payments from the Applicant:

- Genesee County
- Town of Elba
- Town of Oakfield
- Oakfield-Alabama Central School District
- Elba Central School District

The towns have elected to negotiate the PILOT agreements with the assistance of the Genesee County Economic Development Center (GCEDC). PILOT discussions have begun between the Project and the GCEDC.

g) Fiscal Tax Benefit Increase for Jurisdiction

The Applicant anticipates executing a PILOT agreement and/or Host Community Agreement with the entities identified in Section (e) of this Exhibit. The specific terms of the PILOT agreement have not yet been finalized, but these agreements are anticipated to increase the revenues of the affected jurisdictions. For the purposes of this Exhibit, total payments estimated and modeled to be approximately $30 Million for the lifespan of the Project.

h) Fiscal Cost to Jurisdiction

The Applicants do not anticipate any measurable increase in municipal costs to be incurred as a result of the Project. Consultation with the affected municipalities, public authorities, and utilities did not identify additional costs that will be incurred as a result of construction and operation of the Project. The estimated PILOT payments discussed in Section (g) of this Exhibit above would represent a net increase in local revenues.

i) Contingency Plans for Fire or Hazardous Waste Substance Incident

A description of all contingency plans to be implemented in response to the occurrence of a fire emergency or a hazardous substance incident is provided in Exhibit 6: *Public Health, Safety and Security* of this Application. Consultations with the affected local emergency response organizations indicated that these plans can be fulfilled by existing emergency response capacity. The Project will provide additional training to the local fire response organizations prior to construction.

j) Smart Growth Public Infrastructure Criteria

The Project is a privately funded energy project and, as such, is not subject to the State's Environmental Conservation Law (ECL) Article 6, Section 107 requiring the construction of new or expanded "public infrastructure" to meet certain Smart Growth Criteria. The State's Smart Growth Public Infrastructure Policy Act outlines 11 criteria for evaluating public infrastructure. While not required, the Project's consistency with Smart Growth Criteria is addressed below for illustrative purposes

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

The development of this Project will improve the existing energy infrastructure by creating an economically viable, solar-powered electric generating Project that provides renewable energy to the State's power grid. The Project will generate approximately 500 megawatts alternating current photovoltaic renewable solar energy. The Project will use the existing New York Power Authority transmission line to deliver power to the existing New York State grid for the distribution of electricity to end users. Transportation infrastructure will be used for the conveyance of equipment and construction materials. No long-term impacts to the transportation infrastructure are anticipated. Based on the contribution to the State power grid and the limited use of transportation infrastructure, the Project is consistent with Smart Growth Criterion 1.

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

New York State's Smart Growth Public Infrastructure Policy Act defines "municipal centers" 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. Municipal centers shall also include: areas adjacent to municipal centers, as defined in this subdivision, which have clearly defined borders, are designated for concentrated development in the future in a municipal or regional comprehensive plan, and exhibit strong land use, transportation, infrastructure and economic connections to a municipal center; and areas designated in a municipal or comprehensive plan, and appropriately zoned in a municipal zoning ordinance, as a future municipal center." (ECL Section 6-0103, Definitions)*

EXHIBIT 18: SOCIOECONOMIC EFFECTS

Matter No. 21-01108

The development of solar power projects requires a large area of land. As such, larger solar projects, like the proposed Project, are not typically located in municipal centers. The Project is located on predominantly rural land in the Towns of Oakfield and Elba, Genesee County, New York. The nearest city, the City of Batavia, is located approximately 5 miles south of the Project Site.

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.*

Large-scale solar projects are generally incompatible with infill development, given the land area required. The Project is not located in a designated brownfield area and does not involve local waterfront revitalization.

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 archeological resources.*

Exhibits 9: Cultural Resources, Exhibit 11: Terrestrial Ecology, Exhibit 13: Water Resources and Aquatic Ecology, Exhibit 14: Wetlands, Exhibit 15: Agricultural Resources, and related studies, analyze the potential effects on agricultural land, forests, surface and groundwater, air quality, recreation and open space, scenic areas, and significant historic and archaeological resources. These analyses illustrate that the Project will avoid and/or minimize impacts to the relevant resources to the maximum extent practicable. Although the Project Site will be taken out of agricultural production for the operational life of the Project, upon decommissioning the land may be returned to agricultural use. The Project, therefore, is protecting the land from other development that would render it no longer useful for agricultural production. Tree clearing will be minimized to the maximum extent practicable, as the majority of panels will be placed in open agricultural fields; additional vegetation will be planted to provide screening from surrounding properties. No significant effects on recreational and open spaces, scenic areas or cultural resources are anticipated from the Project. Potential impacts resulting from Project construction are outweighed by the benefit provided by operation of the Project, including the generation of emission-free electricity and the reduction of carbon and emissions associated with energy generation, thereby minimizing the public health and environmental impacts related to climate change (see Exhibit 6).

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 in the Towns of Oakfield and Elba. The area is not conducive to mixed land uses, compact development, or the development of diverse and affordable housing in the proximity to places of employment, recreation, and commercial development. Further, as mentioned previously, a large-scale solar farm requires significant open space and, thus, is incompatible with downtown revitalization. The proposed location is not in a brownfield. Therefore, compliance with Criterion 5 is impracticable.

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

The Project will not impact transportation choices in the area and, therefore, Criterion 6 is not applicable.

Criterion 7: *To coordinate between state and local government and intermunicipal and regional planning.*

The Applicant has been involved in public outreach to local government and planning agencies throughout the development and review of the Project, in accordance with the requirements of the Section 94-c process and the Public Involvement Program Plan prepared specifically for the Project. The Master List of Stakeholders, provided as Appendix 2-A: *Community Engagement Plan* in Exhibit 2: *Overview and Public Involvement* of this Application, provides a list of identified host community, adjacent community, county, and agency stakeholders. Appendix 2-B: *Applicant Meeting Log* in Exhibit 2 of this Application provides information on the public outreach efforts, including meetings with local community and governmental representatives. These coordination efforts are consistent with Criterion 7.

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

As described above, the Applicant has conducted and will continue to conduct stakeholder outreach throughout the development and review of the Project. These efforts have been conducted in accordance with the requirements of the Public Involvement Program Plan, which includes stakeholder consultation and other forms of engagement, public education, public meetings, ample notification periods, and public comment periods at key milestones (see Exhibit 2 and the Meeting Log, provided as Appendix 2-B, for more information). Information also is available to the community via the Project's website, http://cidersolarfarm.com/. These outreach efforts satisfy Criterion 8.

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

The Project does not set building and land use codes in Genesee County or in the Town of Oakfield and the Town of Elba but plans to materially comply with codes. Criterion 9 is not applicable.

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.*

Solar power, a renewable energy source, generates electricity without the by-product of greenhouse emissions and can reduce the dependence on conventional power plants, thereby reducing the emissions of conventional air pollutants. In fact, the Project is expected to reduce nitrogen oxides, sulfur dioxide, and CO2 emissions from the power sector in the State. The Project will help the state achieve the 2015 State Energy Plan, amended on April 8, 2020, that the state's power be 100% carbon-free by 2040, with 70% provided by renewable electricity by 2030 (New York State Energy Research and Development Authority [NYSERDA] 2019; see Exhibit 17: *Consistency with Energy Planning Objectives* of this Application). As this Project will expand the state's clean, renewable energy infrastructure and reduce greenhouse gas emissions, the Project is consistent with and will help the state achieve its goals in Criterion 10.

Criterion 11: *To mitigate future physical climate risk due to sea level rise, and/or storm surges and/or flooding, based on available data predicting the likelihood of future extreme weather events, including hazard risk analysis data if applicable.*

The Project is consistent with the State's efforts to expand reliance on renewable energy sources and reduce greenhouse gas emission. As described in Climate Smart Communities Guide to Local Action: Taking Steps to Combat Climate Change, reducing greenhouse gas emissions "will help stabilize atmospheric [greenhouse gases] at manageable levels and avoid severe climatic changes." The State recognizes that this action will "minimize the risks of climate change and reduce its long-term costs" (New York State Department of Environmental Conservation 2017). Solar power, as a zero-emission, renewable energy source, not only expands available power generation capabilities without increasing greenhouse gas emissions, the addition of a solar power project also will result in a decrease in existing greenhouse gas emission levels as solar power displaces generation from fossil fuel facilities. Therefore, the Project is expected to have a positive impact on the mitigation of future physical climate risk, thereby supporting Smart Growth Criterion 11.

k) Host Community Benefits

The Applicant anticipates the Project will stimulate economic activity to the Host Community and directly provide a stimulus effect to Genesee County during the Project construction, as well as structural economic benefits once the Project Site is operational. In addition to the direct economic activity resulting from the Project, there are observable interdependencies between different economic sectors and industries, i.e., a multiplier effect. This multiplier effect reflects the dynamic of indirect and induced economic activity resulting from additions to economic output.

The indirect effects refer to the reliance on goods and services from supporting economic sectors resulting from construction, operation and maintenance of the Project. And the induced effects are created as a result of expenditures made by the direct and indirect activities and are seen as stimulating economic activity in areas not directly related to the Project, with typical consumer expenditures being the most common examples. These indirect and induced effects create the secondary effects of the Project, and combined with the direct effects, reflect the total economic impacts from the Project.

The Project construction is estimated to generate direct impacts to Genesee County of a total 346 FTE jobs and a total project payroll of $28.1 million (Table 18-3) during the 1.5-year construction-period. The total direct economic output would increase in Genesee County by approximately $60.9 million, where economic output represents the gross value industry production. For industries that do not hold inventory, output equals revenues (sales). For industries that do hold inventory, output equals revenues plus any net change in inventory (BBC Report 4). These direct local impacts result from the Project's ability and willingness to source labor, good, and services locally for construction.

BBC Research & Consulting conducted an analysis of the total economic impacts of the Project and summarized the results in the report dated April 5, 2021 (BBC Report). This report describes County-level secondary impacts of 172 FTE jobs, $5.1 million of labor income and $17.0 million of economic output. When combining the direct and secondary impacts, the 1.5-year construction-period estimates a total of 518 FTE jobs, $33.2 million of labor income and $77.9 million of economic output in the Host Community.

EXHIBIT 18: SOCIOECONOMIC EFFECTS

Matter No. 21-01108

Upon completion of the Project construction, the Applicant anticipates an additional 8 FTE jobs per year for the operations and maintenance of the Project Site with an annual payroll of [redacted] within Genesee County. While it has been noted that the indirect output resulting from the facility is proprietary, the Project site is anticipated to generate an additional 58 FTE jobs, $1.2 million in labor income, and $3.9 million in economic output through secondary impacts. The combined effect results in direct and secondary annual impacts from operating and maintaining the Facility Site of 66 FTE jobs and $1.7 million in labor income.

EXHIBIT 18: SOCIOECONOMIC EFFECTS

Matter No. 21-01108

References

New York State Department of Labor (NYSDOL). 2019. Occupational Employment Statistics. Available at: https://www.labor.ny.gov/stats/lswage2.asp. Accessed May 20, 2021.

New York Public Service Commission. 2018. PSC Approves Third Community Choice Aggregation Plan for Upstate New York, Providing New Options for Clean and Affordable Energy. 18006/14-M-0224. January 18. Available at: http://www.dps.ny.gov/. Accessed My 20, 2021.

New York State Department of Environmental Conservation. 2017. Climate Smart Communities Guide to Local Action: Taking Steps to Combat Climate Change. Available at: https://www.dec.ny.gov/docs/administration_pdf/cscguide.pdf. Accessed May 20, 2021.

New York State Energy Research and Development Authority. 2016. Fact Sheet - Frequently Asked Questions Community Choice Aggregation. October. Available at: https://www.nyserda.ny.gov/. Accessed May 20, 2021.

New York State Energy Research and Development Authority. 2019. Governor Cuomo Announces Green New Deal Included in 2019 Executive Budget. Nation-Leading Clean Energy and Jobs Agenda Puts New York on a Path to Carbon Neutrality. January 17. Available at: https://www.nyserda.ny.gov/About/Newsroom/2019-Announcements/2019-01-17-Governor-Cuomo- Announces-Green-New-Deal-Included-in-2019-Executive-Budget. Accessed May 20, 2021.

The Solar Foundation. 2018. National Solar Jobs Census 2018. Available at: https://www.thesolarfoundation.org/national/. Accessed May 20, 2021.

United States Department of Agriculture. 2014. Technical Note: 200-ECN-2. ECN – Guidelines for Economic Impact Analysis with IMPLAN. Natural Resources Conservation Service. December 5. Available at: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/econ/tools/?cid=nrcs143_009732. Accessed May 20, 2021.

United States EPA. 2019. Energy and the Environment. Greenhouse Gas Equivalencies Calculator. Available at: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator. Accessed May 20, 2021.