

Exhibit G

Economic Impact Report

Stantec

February 10, 2021



**Birch Solar Project – Economic
Impact Report**

Allen and Auglaize Counties, Ohio

February 10, 2021

Prepared for:

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BIRCH SOLAR PROJECT – ECONOMIC IMPACT REPORT

Introduction

1.0 INTRODUCTION

Birch Solar 1, LLC (Birch Solar) is developing the 300-megawatt alternating current (MW_{AC}) Birch Solar 1 Project in Shawnee Township in Allen County and Logan Township in Auglaize County, Ohio (Project). Construction and operation of a solar energy facility has the potential to create both short- and long-term jobs and economic benefits through the purchase of materials and equipment, as well as employment of construction workers, will create demand for local business during the construction and operational phases of the Project, generating revenue within the regional economy. The objective of this assessment is to quantify the economic impacts from construction and operation of the Project as well as evaluate the socioeconomic impact of the Project on the local community.

1.1 PROJECT DESCRIPTION

Birch Solar is a wholly owned subsidiary of Lightsource US. The ultimate parent of Lightsource US is Lightsource bp Renewable Energy Investments Limited, a company registered under the laws of the Countries of England and Wales (Lightsource bp). Birch Solar proposes to develop, construct, and operate the Project over a 35-year period. The Project Area will encompass approximately 2,345 acres of land, with the area needed for Project infrastructure including solar modules, trackers, inverters, internal access roads, and a Project substation totaling approximately 1,410 acres (see Figure 1). The land for the Project is leased from local landowners. Approximately 91% of the Project Area is currently used for row-crop agriculture. Following decommissioning of the Project, all the land will be restored and can resume its pre-construction land use.

1.2 SOCIOECONOMICS

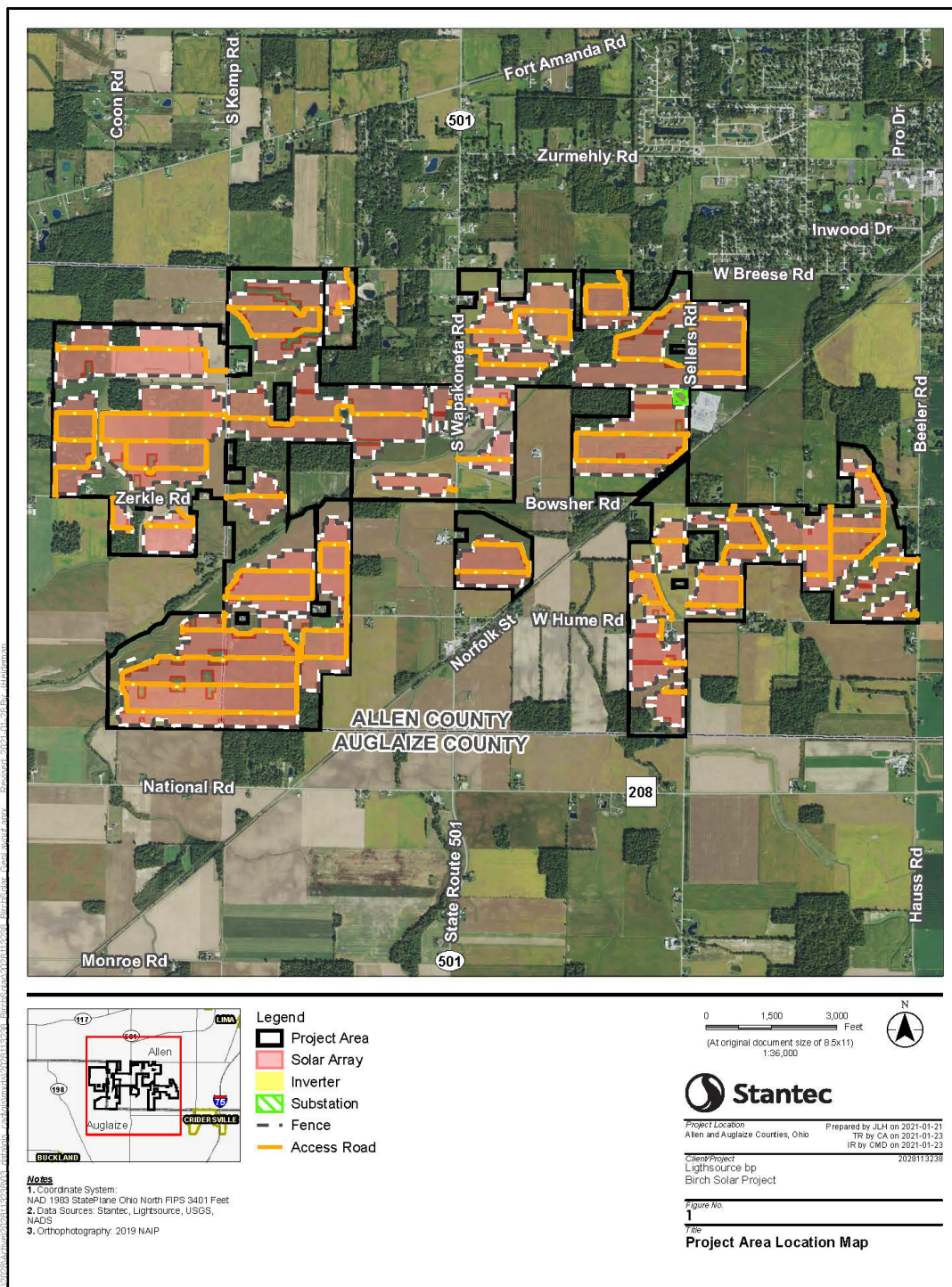
The population in Allen County from the 2010 U.S. Census was 106,331. The most recent estimated population for Allen County in 2019 was 102,351, an annual percentage change of -0.4% (Ohio Office of Research 2020a). The population of Shawnee Township from the 2010 Census was 12,449 and was estimated to be 12,083 in 2019, an annual decrease of -0.3% (Ohio Office of Research 2020b). The population density for Allen County, based on the 2019 population is approximately 253 persons per square mile. The median household income in Allen County is estimated to be \$50,552. The largest employment sectors in Allen County as of 2018 were education and health services, trade, transportation and utilities, and manufacturing (Ohio Office of Research 2020a).

The population of Auglaize County from the 2010 U.S. Census was 45,949. The most recent estimated population for Auglaize County was 45,656, an annual percentage change of -0.1% (Ohio Office of Research 2020c). The population of Logan Township from the 2010 Census was 1,113, and was estimated to be 1,097 in 2019, an annual decrease of -0.2% (Ohio Office of Research 2020b).



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Methodology

The population density for Allen County, based on the 2019 population is approximately 114 persons per square mile. The median household income in Auglaize County is estimated to be \$61,758. The largest employment sectors in Auglaize County in 2018 were manufacturing, trade, transportation and utilities, and education and health services (Ohio Office of Research 2020c).

1.3 SOLAR INDUSTRY IN OHIO

The solar industry in Ohio is growing and that could be leveraged during construction and operation of the Project to enhance benefits of the Project and for the state of Ohio. In 2019, Ohio ranked 7th in the country for the number of solar industry jobs in a state, providing 7,282 jobs (SEIA 2020). There are approximately 288 solar companies operating in Ohio, including installers, manufacturers, and other industry-related firms (**Figure 1-1**). The companies are concentrated around major cities in Ohio, including Columbus, Toledo, and Cincinnati. The Project Area is located between these three cities.



Figure 1-1 Solar Companies in Ohio

Key = green = installer, yellow = manufacturer, blue = other solar industry company
Source: reproduced from SEIA 2020

2.0 METHODOLOGY

The Jobs and Economic Development Impact Model (JEDI) photovoltaics (PV) model (PV12.23.16), developed by U.S. Department of Energy, National Renewable Energy Laboratory (NREL), was utilized to quantify the number of jobs and overall economic impact from construction and operation of the Project.

JEDI-PV is an input-output model that uses state-specific data to predict employment, income, and economic output of solar facilities based on the anticipated wattage of a project. The model is based on the assumption that expenditures in an industry usually result in demands for goods and services in other



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industries. The direct expenditures from purchases like aggregate, fencing, etc. can create indirect impacts to the entire supply chain, such as employment created in supplemental industries such as those producing and transporting the solar modules from the manufacturers. Induced impacts result from the increase in construction workers and indirect employees' income and household spending in the region. An example of this induced impact is at local restaurants which need to hire additional staff to accommodate construction laborers spending their wages on meals.

The model parameters were updated to reflect Birch Solar's range of calculated installed system cost and annual O&M costs, as well as with recent publicly available labor costs from the U.S. Bureau of Labor Statistics, and industry-wide information on PV solar equipment, construction, and operational costs U.S. Energy Information Administration (2020).

Based on Lightsource bp's experience constructing solar energy facilities in the U.S. it is estimated that the capital costs for the Project will total between approximately \$314 million and \$360 million and employ between 400 and 500 people during the construction effort. Based on the expected range of construction costs, the Project's current estimated cost is between \$1,050 and \$1,200/kilowatt AC (kWAC).

The annual O&M costs for the Project are estimated to be approximately \$3.5 million to \$5 million per year. Using the estimated annual O&M costs for the Project, the Project's cost per kilowatt per year (kWAC/year) to incorporate into the model is between approximately \$11.67 and \$16.67 kWAC/year. Birch Solar estimates that between 5 and 10 full time jobs will be required for O&M of the Project.

The JEDI model was run using both ends of the estimated capital costs and the O&M costs provided by Birch Solar in order to provide a range for the potential economic output. A summary of all the inputs used for the model are provided in Appendix A.

3.0 ECONOMIC IMPACT

3.1 JOB CREATION AND ECONOMIC OUTPUT

Using Birch Solar's estimated 400 to 500 construction jobs and related services and construction costs of between \$316 and \$360 million, the JEDI model predicts that construction of the Project will result in a payroll for onsite labor and related expenses that totals between approximately \$32 million and \$39 million during the 12-18 month construction window. The purchase of materials and equipment, as well as employment of construction workers, will create demand for local business through the duration of construction, generating revenue within the regional economy. Module and supply chain jobs, plus induced jobs are predicted to create an additional approximately 225 to 300 jobs from construction of the Project. The JEDI model reports jobs as full-time equivalents for one year (2,080 hours). This JEDI model output may actually underrepresent potential job creation as other empirical studies within the state of Ohio have shown closer to a 1:1 ratio of construction jobs to supply chain/induced jobs (Michaud et al. 2020). Based on the JEDI model, the economic output from the construction phase, including onsite labor and related services, supply chain impacts, and induced impacts could total between \$70 and \$90 million.



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All earnings and output are measured in 2021 dollars. A breakdown of the jobs, earnings, and economic output by labor area is provided in Table 3-1. Output refers to economic activity or the value of production in the state or local economy.

Table 3-1 Birch Solar Project Construction Economic Impacts Using the JEDI Model

Job Type	Jobs	Earnings	Output
Project Development and Onsite Earnings	417 – 503	\$32.3 – \$38.9 million	\$33.9 – \$41.9 million
Module and Supply Chain Impacts	119 – 161	\$6.5 – \$9.0 million	\$18.9 – \$25.7 million
Induced Impacts	105 – 139	\$5.6 – \$7.4 million	\$16.8 – \$22.2 million
TOTAL	642 – 802	\$44.4 – \$55.3 million	\$70 - \$90 million

In this analysis, impacts are based on additional spending infused into an economy due to construction expenditures. The expenditures are new dollars spent in the economy because of construction only and exclude the cost of land and the purchase of solar modules, which are likely to be purchased outside the affected area.

During operation of the Project, Birch Solar has estimated that 5-10 jobs will be created to handle needed operations and maintenance activities. The resulting number of annual jobs in the supply chain and induced impacts, as well as earnings, and economic output during O&M are provided in Table 3-2. Annually, JEDI estimates that the Project could result in between 24 and 36 jobs, with earnings between \$1.5 and \$2.3 million and an economic output between \$3.8 and \$5.4 million.

Table 3-2 Birch Solar Project Annual O&M Economic Impacts Using the JEDI Model

Job Type	Jobs	Earnings	Output
Project Development and Onsite Earnings	5-10	\$348,000 - \$697,000	\$348,000 - \$697,000
Module and Supply Chain Impacts	8 – 11	\$595,000 - \$752,000	\$1.8 - \$2.2 million
Induced Impacts	11 - 16	\$568,000 - \$839,000	\$1.7 - \$2.5 million
TOTAL	24 - 36	\$1.5 - \$2.3 million	\$3.8 - \$5.4 million

3.2 TAX REVENUE

Birch Solar anticipates entering into a payment in lieu of taxes (PILOT) in Allen and Auglaize Counties, whereby real property and tangible personal property taxes will be based on a fixed payment to be made based on the nameplate capacity of the Project. Benefits of the PILOT include a consistent annual payment, not subject to depreciation. PILOT payments for the Project are estimated to be approximately \$2.1 to \$2.7 million annually and approximately \$73.5 million to \$94.5 million throughout the life of the Project. The PILOT payment is split between school districts (54%), townships (24%), Allen and Auglaize Counties (17%) and the local JVS (5%). Under a non-PILOT the Utility Tax the annual payment will vary



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based on the depreciation of the Project. Distribution of funds from a Utility Tax are subject to local county millage rates. Birch Solar intends to utilize local labor whenever possible with a goal of 80% of construction jobs to be Ohio-domiciled workers in accordance with the PILOT. Many positions can be filled utilizing local labor, such as equipment operators, truck drivers, laborers, and electricians. There will be some specialized skilled positions required for construction of the Project that may require workers from outside of the region with solar energy facility construction experience. The exact distribution of local and non-regional workers cannot be estimated at this stage of the Project.

3.3 ADDITIONAL ECONOMIC PROGRAMS

The Project also has the opportunity to economically benefit the residents in proximity to the Project through Birch Solar's Neighboring Landowner Financial Benefit where any home within 500 feet of the Project will receive a payment ranging from \$10,000 to \$50,000 depending on proximity. Further, Birch Solar will be instituting a Home Value Agreement for homes in closest proximity to the Project. Neither of the adjacent landowner programs require endorsement, confidentiality or support of the Project by the landowner. Birch Solar has also committed to a \$500,000 community development fund to be used at the community's discretion with the involvement of community stakeholders.

3.4 CONCLUSIONS

During construction of the Project, between 400 and 500 construction and related support jobs are expected to be created, bringing significant economic benefit to the community through earnings and economic output from onsite construction as well as supply chain services and induced jobs. During the construction phase of the Project the economic benefit could be between \$70 and \$90 million. The operational phase of the Project will require 5-10 full time jobs over the 35 year life of the Project. Supply chain and induced jobs related to O&M services could create an additional 17 to 27 jobs. The annual economic output from the Project, based on the JEDI model, is predicted to be between \$3.8 and \$5.4 million.

In addition to the jobs, earnings, and economic output, the Project has the ability to provide economic benefits through PILOT payments estimated to be between approximately \$2.1 and \$2.7 million annually, or approximately \$73.5 million to \$94.5 million throughout the life of the Project. Financial commitments from the Neighboring Landowner Financial benefit program, Home Value Agreement, and creation of a community development fund also have the potential to provide economic benefits to the local community.



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4.0 REFERENCES

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Appendix A MODEL INPUTS



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Appendix A Model Inputs

Birch Solar Project, JEDI Model Inputs

Variable	Input
Project Information	
Project Location	Ohio
Year of Construction or Installation	2022
System Application	Utility
System Tracking (Utility - Defaults always assume fixed mount for commercial and residential)	Single-axis
Average System Size - AC Nameplate Capacity (kW)	300,000
Number of Systems Installed	1
Base Installed System Cost (\$/kWDC)	\$1,050 and \$1,200
Annual Direct Operations and Maintenance Cost (\$/kW)	\$11.67 and \$16.67
Money Value (Dollar Year)	2021
Installation Costs	
Materials and Equipment	\$930 and \$1,045/kW
Labor	\$100 and \$115/kW
Other Costs	\$20 and \$40/kW
O&M Costs	
Labor	\$1.25 and \$2.50/kW
Materials and Services	\$10.42 and \$14.17/kW
Other Parameters	
Debt Financing	%0 Local share
Tax Parameters	Sales Tax and Property Tax 100% exemption
Construction and Installation Labor	\$25.45
O&M Labor	\$25.30

*Note: two values used for certain variables to capture range of costs estimated by Birch Solar



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