

Clearview Solar I, LLC

Clearview Solar

Exhibit F

Socioeconomic Report

Case No. 20-1362-EL-BGN

Economic and Fiscal Impact of the Clearview Solar Project

October 2020

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Executive Summary

The construction of the Clearview Solar Project (the “Project”) in Champaign County, Ohio will increase economic activity between \$105.6 and \$277.4 million within the state of Ohio.¹ The spending necessary to construct the Project will support between 751 and 3,312 full- and part-time jobs within Ohio, with average annual wages of approximately \$51,500 to \$62,500, depending on the construction scenario. The Project will also increase economic output in the three-county region of Champaign, Logan, and Shelby Counties by \$81.6 million during the construction phase and support 481 jobs with an average wage of approximately \$58,700.

Once construction is complete, the ongoing operations of the Project will continue to benefit Champaign, Logan and Shelby Counties and the State of Ohio, primarily through the wages paid to workers at the Project and equipment purchases for maintenance over the up-to 40-year life of the Clearview Solar Project. The State is estimated to realize an additional \$402,000 to \$2.6 million annually in increased economic activity during the operations phase, of which approximately \$278,500 million will benefit Champaign, Logan, and Shelby Counties. Employment within the State will increase by up to 13 jobs, of which approximately 7 will be at the Project in Champaign County.

During the construction and operation phases of the Project, local municipal, county, and state governments will benefit from increased tax revenues. The construction phase of the Project is estimated to generate up to \$6.1 million in combined tax revenues accruing to the schools, local jurisdictions, and the State of Ohio. The operations phase is estimated to increase revenues by approximately \$12,000 to \$15,000 annually. The Clearview Solar Project will make approximately \$1.3 million in annual payments in lieu of property taxes for the duration of the Project’s operation. While the Project is expected to positively affect the local economy, the University of Cincinnati Economics Center (Economics Center) found no adverse employment, transportation, or housing impacts from its analysis of the Project.

The Economics Center analyzed two scenarios for materials used in the construction and operation of the Project: in-state and out-of-state procurement of solar panels and racking. The majority of electrical and civil construction equipment is expected to be purchased within Ohio. The scenario in which the solar panels and racking are purchased and manufactured within Ohio is referred to as the High Ohio Content Scenario while the situation in which the panels and racking are purchased outside of Ohio is considered the Base-Case Scenario.

State and county-level results of the analysis are displayed separately to enable easy identification of relevant impacts for the State of Ohio and the three-county region comprised of Champaign, Logan and Shelby Counties. These scenarios are mutually exclusive and are not intended to complement one another. For example, the High Ohio Content scenario will support a total of 2,061 jobs during the construction phase of the Project, of which 768 are estimated to be in Champaign, Logan, and Shelby Counties.

¹ All monetary figures throughout this report are in 2020 dollars, unless otherwise stated.

Introduction

The Clearview Solar Project (Project) is a proposed solar generation facility located in Champaign County, but in close proximity to Logan and Shelby Counties, in Western Ohio. The construction and operation of the Project will increase local employment and economic activity in the three-county region. The Economics Center produced this report to analyze and quantify the Project's impacts on the area, which is laid out in the following sections:

- Project and location description
- Socioeconomic trends in Champaign, Logan, and Shelby County
- Local impacts to housing and transportation
- Compatibility with Local and Regional Economic Development Plans
- Economic impacts of the construction and operation of the Project
- Fiscal impacts of the construction and operation of the Project
- Supply chain analysis to identify which sectors benefit from the Project
- Concluding Remarks

Project and Location Description

Clearview Solar I, LLC proposes to construct a 144 megawatt alternating current (MWAC) nameplate capacity solar facility located in Champaign County and plans to commence construction in 2022. The Project will include ground-mounted photovoltaic (PV) modules and associated support facilities consisting of access roads, pyranometers, buried electrical collection lines, inverters, a facility substation, and a short transmission line ("gen-tie") that will connect the facility substation to a new utility substation. The Project is expected to operate for 40 years and is assumed to utilize thin film solar modules in this analysis. In all, 425,445 solar modules are expected to be installed, each with approximately 0.44 kilowatts of direct current (KWDC) capacity. At the end of the Project's useful life, the land could be returned to an agricultural use or be used for other developments as desired. As a result, there is no expected environmental or development impact on the land.

Socioeconomic Trends

Population and Workforce Trends

Table 1 displays the population and workforce statistics for Champaign, Logan, and Shelby Counties between 2010 and 2018. As of 2018, Champaign, Logan, and Shelby County had comparable populations of 38,864, 45,307, and 48,797 respectively. Between 2010 and 2018, these three counties lost approximately two percent of their population.

The size of the prime working age population (ages 15 – 64) as well as the number of individuals in the labor force declined slightly between 2010 and 2018. However, the number of employed individuals between these two time periods is relatively unchanged, 64,008 and 64,622 respectively. This resulted in the number of unemployed individuals dropping from 5,450 in 2010 to 3,445 in 2018. In percent terms, unemployment dropped from 7.8 percent in 2010 to 5.1 percent in 2018.

Table 1: Population and Workforce Trends by County, 2010-2018

County	Year	Population	Working Age (15 - 64)	Labor Force	Employed	Unemployed
Champaign	2010	40,140	26,119	20,253	18,643	1,610
	2011	40,092	26,107	20,020	17,907	2,113
	2012	39,982	26,043	19,912	17,854	2,058
	2013	39,855	25,939	19,482	17,251	2,231
	2014	39,628	25,709	19,809	17,779	2,030
	2015	39,393	25,493	20,044	18,230	1,814
	2016	39,175	25,256	19,645	18,234	1,411
	2017	39,005	24,984	19,539	18,119	1,420
	2018	38,864	24,824	19,545	18,365	1,180
Logan	2010	46,006	29,677	23,753	21,686	2,067
	2011	45,964	29,661	23,342	20,897	2,445
	2012	45,816	29,544	22,775	20,326	2,449
	2013	45,678	29,330	22,344	19,898	2,446
	2014	45,564	29,219	22,324	20,374	1,950
	2015	45,484	29,125	22,491	20,773	1,718
	2016	45,388	28,966	22,473	21,142	1,331
	2017	45,323	28,955	22,530	21,218	1,312
	2018	45,307	28,832	22,580	21,477	1,103
Shelby	2010	49,350	31,975	25,452	23,679	1,773
	2011	49,389	32,014	25,106	23,235	1,871
	2012	49,359	31,929	24,825	22,709	2,116
	2013	49,317	31,862	24,795	22,577	2,218
	2014	49,165	31,614	24,867	23,146	1,721
	2015	49,067	31,511	25,337	23,649	1,688
	2016	48,949	31,350	25,543	24,059	1,484
	2017	48,902	31,272	25,804	24,430	1,374
	2018	48,797	31,107	25,942	24,780	1,162

Source: American Community Survey 5-year estimates

The population between 2019 and 2030 in the three-county region is expected to remain relatively stable albeit Champaign and Shelby Counties are projected to experience slight declines, according to projections by the analytics firm Emsi, as shown in Table 2. The population of Shelby County is expected to decline at the fastest rate with an average annual decrease of 24 people per year. Overall, however, the changes in populations represent a small percent as well as nominal change to the current levels of population.

Table 2: Population Projections by County, 2019-2030

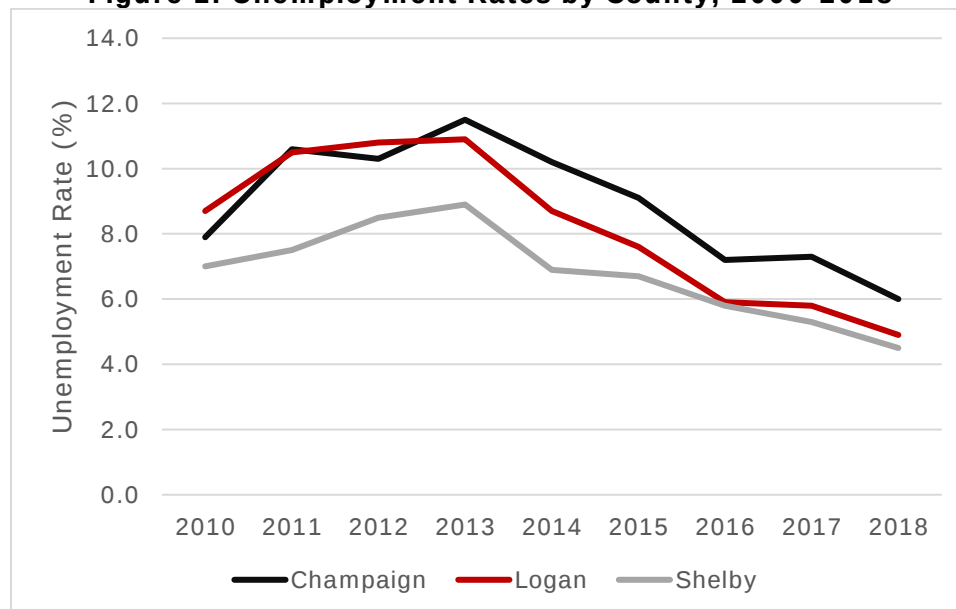
Year	Champaign	Logan	Shelby
2019	38,672	45,311	48,565
2020	38,633	45,311	48,514
2021	38,598	45,312	48,469
2022	38,565	45,313	48,427
2023	38,535	45,315	48,389
2024	38,508	45,316	48,355
2025	38,486	45,318	48,329
2026	38,469	45,319	48,309
2027	38,456	45,321	48,294
2028	38,447	45,322	48,284
2029	38,442	45,323	48,277
2030	38,440	45,325	48,273

Source: EMSI Population and Demographics Data

Unemployment and Labor Force Participation Trends

Figure 1 shows the unemployment rates for Champaign, Logan, and Shelby Counties between 2000 and 2018. The three Counties each experienced their lowest unemployment rates in 2018 and highest rates between 2012 and 2014. Additionally, the unemployment rate in each county fell below 2010 levels by 2016. Between 2010 and 2013, Shelby County had lower rates of unemployment than Champaign and Logan, however the unemployment rates of these three counties began to converge between 2014 and 2018.

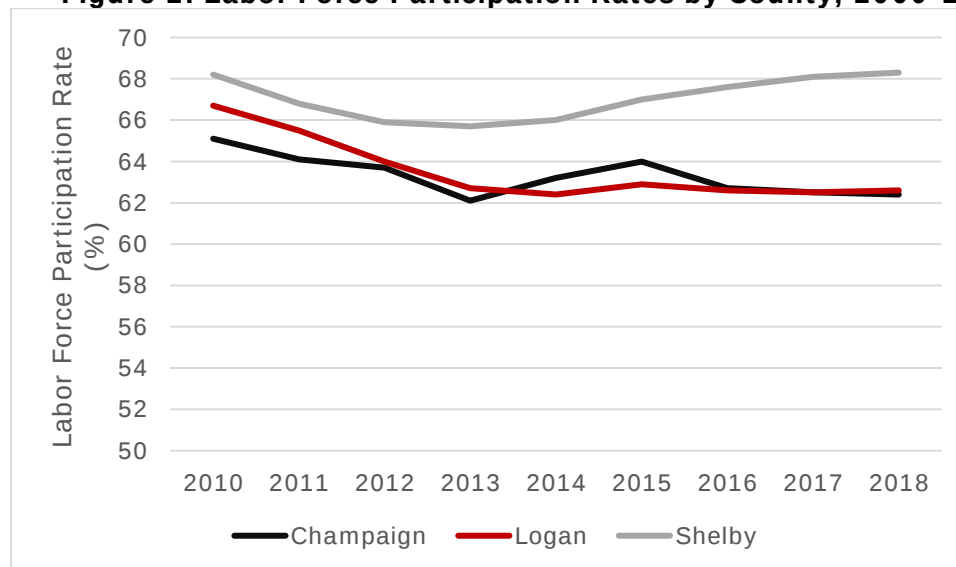
Figure 1: Unemployment Rates by County, 2000-2018



Source: U.S. Census Bureau Decennial Census and American Community Survey 5-year estimates

Labor force participation (LFP) rates decreased between 2010 and 2013 in all three counties, as shown in Figure 2. However, following 2014 there was divergent growth in Shelby County to approximately 68.0 percent whereas Champaign and Logan either decreased or maintained levels of participation at approximately 62.0 percent.

Figure 2: Labor Force Participation Rates by County, 2000-2018



Source: U.S. Census Bureau Decennial Census and American Community Survey 5-year estimates

Economic Trends

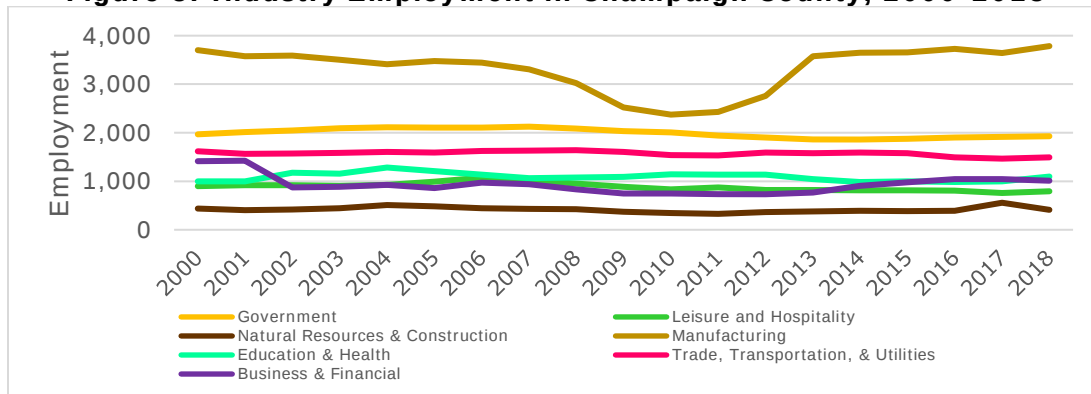
The economies of Champaign, Logan, and Shelby Counties were resilient during the Great Recession² and have stabilized since. Manufacturing is the leading industry within the three-county region and accounted for more than one-third of all employment between 2000 and 2018 with natural resources and construction also being leading industries. Industries such as Leisure and Hospitality are generally under-represented in terms of employment across the three counties and have significantly lower wages than an average job for the three-county region. Overall, between 2000 and 2018, there have not been significant changes in real wages. The sections below detail both employment and real average wages among each major industrial sector by County and Appendix A displays industry-specific employment and earnings statistics.

Economic Trends in Champaign County

Sectoral employment in Champaign County is shown in Figure 3. While most major economic industries were stagnant from 2000 to 2018, the Education and Health Sector experienced a 9.7 percent increase followed by Manufacturing with 2.2 percent growth. The Business and Financial sector shed approximately 400 jobs, or a decline of 28.4 percent which was the greatest rate of job loss across all sectors from 2000 to 2018. The Manufacturing sector is a major employer in Champaign County and represented nearly one third of all employment with an average of 3,324 jobs annually between 2000 and 2018.

² The Great Recession began in December 2007 and ended June 2009.

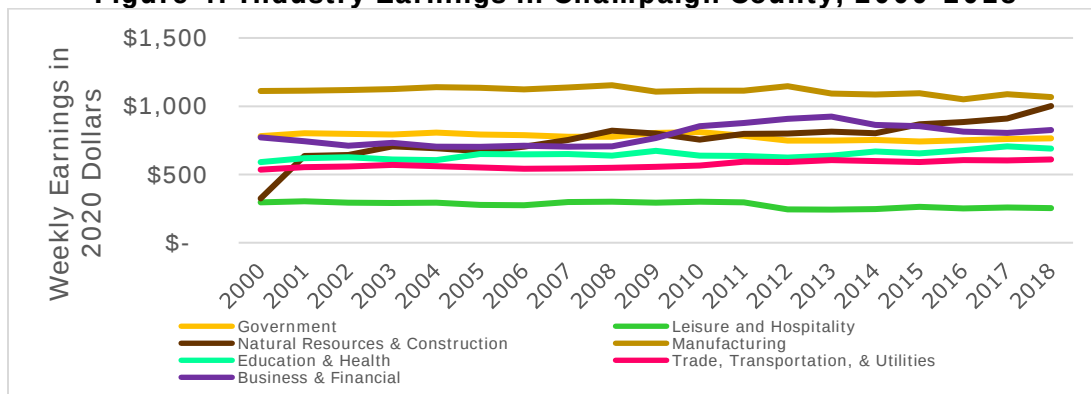
Figure 3: Industry Employment in Champaign County, 2000-2018



Source: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages

Figure 4 shows the average weekly earnings of major economic industries in Champaign County from 2000 to 2018. Manufacturing provided the highest wages in Champaign County throughout the period. Despite low employment levels as shown in Figure 3, earnings in the Natural Resources and Construction sector were high relative to other industries.

Figure 4: Industry Earnings in Champaign County, 2000-2018

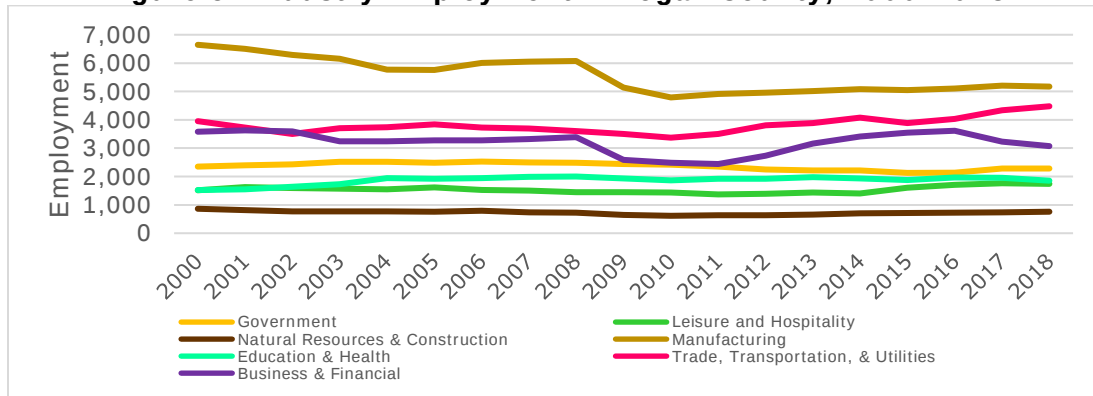


Source: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages

Economic Trends in Logan County

Employment in Logan County declined from 20,444 jobs in 2000 to 19,347 in 2018 and had an average annual employment of 19,063 individuals. The Manufacturing sector was the largest source of employment in Logan County from 2000 to 2018 and represented 29.2 percent of all employment in the County, as shown in Figure 5. Although Manufacturing was the largest employer in Logan County, the sector experienced the greatest rate of job decline at 22.2 percent and shed 1,472 jobs between 2000 and 2018. Education and Health experienced the greatest rate of growth of 21.7 percent from 2000 to 2018, while Trade, Transportation, and Utilities had the strongest nominal job growth and added 521 net new jobs.

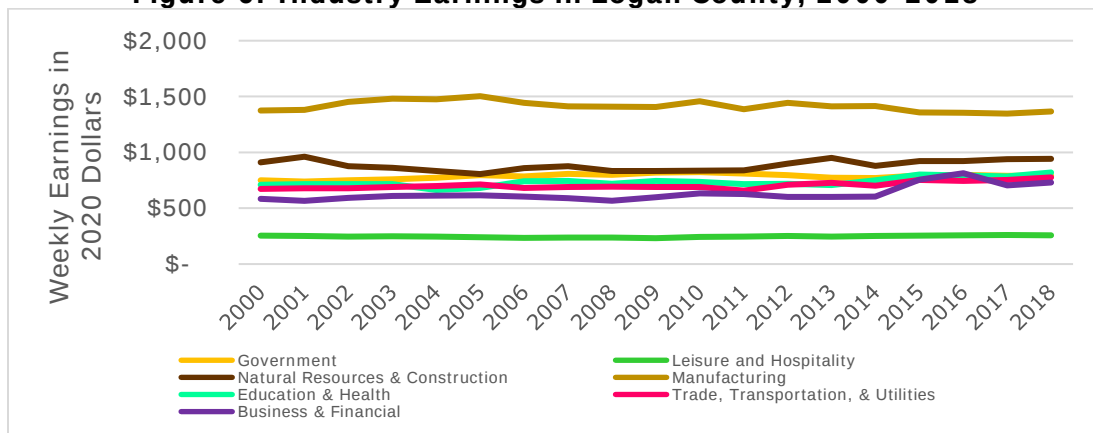
Figure 5: Industry Employment in Logan County, 2000-2018



Source: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages

The Manufacturing and Natural Resources and Construction sectors supplied the highest industry wages in Logan County with wages averaging \$1,366 and \$820 per week, as shown in Figure 6. Real wages were relatively flat for all industrial sectors throughout this time period as well.

Figure 6: Industry Earnings in Logan County, 2000-2018

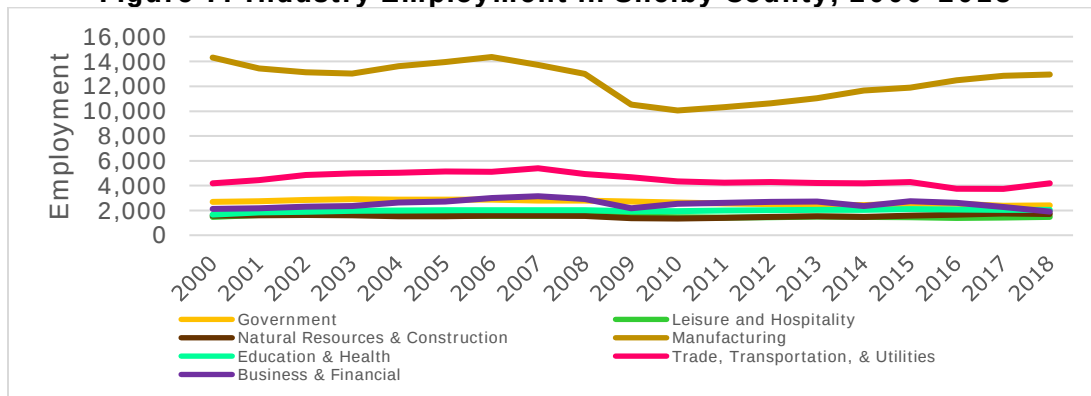


Source: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages

Economic Trends in Shelby County

Figure 7 shows employment among major sectors in Shelby County from 2000 to 2018. Employment in Shelby County declined from 28,064 jobs in 2000 to 26,672 in 2018. Employment averaged 27,238 over this period, with 2006 having the highest employment at 30,484 jobs while 2010 had the fewest jobs at 24,287. Manufacturing was the overwhelmingly largest employment sector from 2000 to 2018 as 45.8 percent of all employment in Shelby County was engaged in this sector. In percentage terms, Government experienced the greatest job losses as the sector declined by 10.9 percent (294 jobs lost), while Education and Health had the most job gains as the sector grew by 23.6 percent (392 new jobs) from 2000 to 2018.

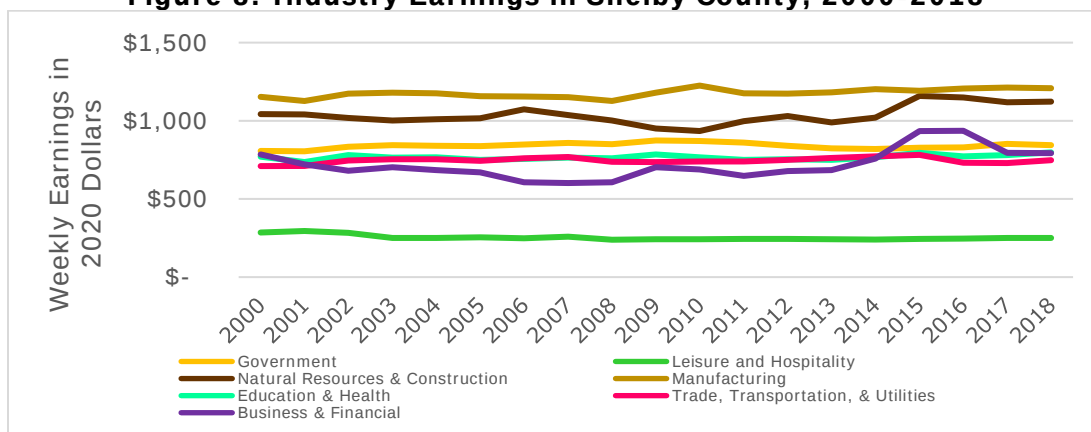
Figure 7: Industry Employment in Shelby County, 2000-2018



Source: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages

Consistent with the other two counties, manufacturing occupations were among the highest paid average weekly occupations with Natural Resources and Construction having the second highest average weekly earnings. Figure 8 shows average weekly earnings among major industries in Shelby County from 2000 to 2018.

Figure 8: Industry Earnings in Shelby County, 2000-2018



Source: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages

Local Impacts on Housing and Transportation

Housing Impacts

In 2018, there were 8,107 vacant housing units in the three-county region, accounting for 13.4 percent of all housing units, as shown in Table 3. Logan County had a significantly higher vacancy rate at 20.3 percent whereas Champaign and Shelby Counties had vacancy rates of 9.4 percent and 8.7 percent respectively. The median housing value of owner-occupied units in the three-county region was \$131,666 compared to the statewide median value of \$140,000.

Table 3: Housing Characteristics by County, 2018

County	Total Housing Units	Occupied Housing Units	Vacant Housing Units	Vacancy Rate	Median Housing Value of Owner-Occupied Units	Median Gross Rent
Champaign	16,793	15,209	1,584	9.4%	\$126,200	\$698
Logan	23,399	18,654	4,745	20.3%	\$129,100	\$733
Shelby	20,421	18,643	1,778	8.7%	\$139,100	\$731
<i>Three County Total</i>	<i>60,613</i>	<i>52,506</i>	<i>8,107</i>	<i>13.4%</i>	<i>\$131,666</i>	<i>\$723</i>
State of Ohio	5,188,270	4,654,075	534,195	10.3%	\$140,000	\$788

Source: U.S. Census American Community Survey 5-year ACS data.

In 2018, Champaign, Logan, and Shelby County had median rents of \$698, \$733, and \$731 respectively with a weighted median of \$723. The median gross rent across all of Ohio was \$788.

Although the development of the Project may have a modest impact on the housing market, the influx of construction workers and installers will likely not be detrimental to the current residents given the vacancy rates and size of the housing market within the three-county area.

Transportation Impacts

The Project site will benefit from ample access to State and U.S. routes that traverse the three-county region. Significant access to I-75 in Shelby County as well as a number of state routes (33 and 68 specifically) offer a wide range of access to the three-county region. Additionally, the three counties also have close proximity to two large Ohio cities, Columbus and Dayton.

During operations, workers are not likely to negatively affect traffic patterns due to the low demand for ongoing labor on the site.

Economic Impact

Economic Impact Methodology

Economic impact figures represent the effects that a given development project and its associated economic activities have upon a surrounding community. Developments will affect local communities through the purchases of local goods and services made by the facilities and its employees. In turn, those local businesses and households purchase goods and services at local businesses.

The Economics Center calculated the impact of the Project's construction using estimates of construction costs, the size and scope of the construction, and the requirements for the operation of the Project, which were provided by Clearview Solar. These data were used in an input-output model, which measures goods and services produced in each industry and the use of those goods and services by other industries and households in a local area.

Input-output models give a picture of the direct and indirect impacts of a given business or organization. The direct impacts of the Project are measured in terms of the total construction costs and operation of the site and in terms of the wages paid to employees hired with those monies. In turn, the construction and operations spending supports jobs and spending in other industries, which are the indirect impacts of the Project's activity. Finally, the direct and indirect impacts of inter-industry relationships create induced impacts due to the spending of private households.

Multipliers are figures that represent all inter-industry and household economic relationships measured in the input-output model. For every dollar spent by a given organization in a particular industry, multipliers reflect how many more dollars will be spent in a local economy by other businesses and households, thereby determining the total economic impact of a project or investment. The multipliers reflect two sets of economic impacts: first, the direct effect number of jobs and wages; and second, the final effects, which add the indirect and induced impacts to the direct ones.

The bill of goods, or the industries and purchases necessary to construct the Project were inspired by the National Renewable Energy Laboratory's (NREL) Jobs and Economic Development Impact Model (JEDI).³ The JEDI model was created from interviews and partnerships with solar developers to reflect the intricacies of solar energy project developments. The multipliers used for this Project were provided by the Bureau of Economic Analysis' (BEA) Regional Industrial Multiplier System (RIMS II) to ensure the multipliers used were as current as possible.⁴ Inflation adjustments for future years utilized the Office of Management and Budget's Deflators.⁵ While the NREL model is no longer updated, the framework behind the inter- and intra-industrial transactions were used as background to compiling multipliers used for this research.

For fiscal impacts, the Economics Center utilized data from the Ohio Department of Taxation⁶ to estimate taxes accruing to entities within Champaign, Logan, and Shelby Counties and to the State of Ohio. The Economics Center assumed constant sales tax rates from the current rates. For local earnings taxes, the Economics Center generated a weighted tax rate based on the population of municipalities and school districts within Champaign, Logan, and Shelby Counties, as it is currently unknown precisely where direct and indirect employees supported by the Clearview Solar Project would live. Fiscal impacts are not included in the economic impact section of this report.

Impact on the State of Ohio

High Ohio Content Scenario – Construction Phase

Table 4 shows the estimated economic impact of the Clearview Solar Project on the State of Ohio if the solar panels, racking, and electrical wiring are manufactured and purchased within Ohio. The equipment purchases and cost of construction are estimated to require approximately \$173.1 million in direct expenditures, of which approximately \$160.0 million

³ (National Renewable Energy Laboratory, 2014)

⁴ (Bureau of Economic Analysis, 2017)

⁵ (Office of Management and Budget, 2018)

⁶ (Ohio Department of Taxation, 2017); (Ohio Department of Taxation, 2017)

will occur in Ohio in this scenario after economic leakage is accounted for. The \$160.0 million in construction expenditures in Ohio will lead to further spending of \$117.4 million, resulting in total increased output within the State of Ohio of \$277.4 million.

The construction of the Project will directly support 1,035 full- and part-time jobs.⁷ The 1,035 direct jobs will support a further 2,277 full- and part-time jobs within the State of Ohio. Direct employees are estimated to earn \$77,991 annually, on average, while indirect employees are expected to earn \$39,520 annually, on average. The average annual earnings for the 3,312 jobs directly and indirectly supported during the Project's development will be \$51,542.

Table 4: Construction Impacts on the State of Ohio – High Ohio Content Scenario

Type	Output	Earnings	Employment
Direct	\$160,056,171	\$80,721,044	1,035
Indirect	\$117,377,306	\$89,986,612	2,277
Total	\$277,433,477	\$170,707,656	3,312

Source: Economics Center calculations using RIMS II multipliers, and Emsi inter-sectoral purchasing patterns. All monetary figures are in 2020 dollars.

High Ohio Content Scenario – Operations Phase

During the operations phase of the Clearview Solar Project, operation and maintenance activities will directly increase economic output in the State of Ohio by approximately \$2.2 million annually and directly employ up to 7 full- and part-time technicians, managers, and others as a result of the generation site, as shown in Table 5. The direct spending will further cause an indirect output of more than \$393,800 within the State of Ohio, for a total annual operations impact of approximately \$2.6 million. The 7 direct employees are expected to earn approximately \$37,523 annually while the 6 indirect jobs supported by the Project will have an annual wage of approximately \$23,000. Overall, 13 full- and part-time jobs are expected to be supported each year, under this scenario, during the operation of the Clearview Solar Project with annual earnings totaling approximately \$398,790.

Table 5: Operations Impacts on the State of Ohio – High Ohio Content Scenario

Type	Output	Earnings	Employment
Direct	\$2,190,384	\$262,660	7
Indirect	\$393,831	\$136,130	6
Total	\$2,584,215	\$398,790	13

Source: Economics Center calculations using RIMS II multipliers, and Emsi inter-sectoral purchasing patterns. All monetary figures are in 2020 dollars.

Base-Case Scenario – Construction Phase

Under the scenario in which the solar modules and racking are neither purchased from nor manufactured by an Ohio-based company, the direct economic benefits to Ohio during the construction of the Clearview Solar Project will be approximately \$57.3 million, as shown in Table 6. These direct purchases will cause a further \$48.3 million within the State for a total output of \$105.6 million. Approximately 400 jobs will be directly engaged in the Project's construction, with average annual earnings of \$60,068. Another 334 indirect jobs will be

⁷ The RIMS II multipliers used in this analysis do not distinguish between full- and part-time jobs.

supported by the construction of the Project and will earn annual wages of approximately \$65,331, on average.

Table 6: Construction Impacts on the State of Ohio – Base-Case Scenario

Type	Output	Earnings	Employment
Direct	\$57,283,261	\$24,207,354	403
Indirect	\$48,344,743	\$21,820,509	334
Total	\$105,628,004	\$46,027,863	737

Source: Economics Center calculations using RIMS II multipliers, and Emsi inter-sectoral purchasing patterns.
All monetary figures are in 2020 dollars.

Base-Case Scenario – Operations Phase

Under this scenario, the operations expenditures of the Project will employ up to 7 technicians and other workers within the State of Ohio with average annual wages of \$37,523. Since all of the necessary equipment for the maintenance of the facility are assumed to be sourced from outside of Ohio under this base case scenario, the earnings of the employees at the facility are equivalent to the expected economic output of the facility, as shown in Table 7. These direct expenditures will lead to a further \$139,187 in indirect expenditures each year and will support 2 full- and part-time jobs in Ohio, earning approximately \$42,835, on average. In total, Ohio's economy will benefit from more than \$400,000 in increased economic activity and 9 full- and part-time jobs with approximately \$350,000 in annual earnings.

Table 7: Operations Impacts on the State of Ohio – Base-Case Scenario

Type	Output	Earnings	Employment
Direct	\$262,660	\$262,660	7
Indirect	\$139,187	\$85,670	2
Total	\$401,847	\$348,330	9

Source: Economics Center calculations using NREL JEDI model, RIMS II multipliers, and Emsi inter-sectoral purchasing patterns. All monetary figures are in 2020 dollars.

Impact on the Region

Construction Phase

The economic impacts of the construction phase of the Clearview Solar Project on Champaign, Logan, and Shelby Counties are shown in Table 8. The construction of the Project will require the direct expenditures of \$57.3 million in the three-county economy and directly employ 328 full- and part-time workers during the construction phase. The direct expenditures for the construction of the Project, in turn, will cause the further spending of \$24.3 million for a total impact in the region of \$81.6 million. The workers directly engaged in the construction of the Project are estimated to earn an average wage of approximately \$66,243 annually, while the 153 indirect employees supported by the Project will earn \$42,532 annually, on average.

Table 8: Construction Impacts on Champaign, Logan, and Shelby Counties

Type	Output	Earnings	Employment
Direct	\$57,283,261	\$21,727,541	328
Indirect	\$24,339,658	\$6,507,399	153
Total	\$81,622,919	\$28,234,940	481

Source: Economics Center calculations using RIMS II multipliers, and Emsi inter-sectoral purchasing patterns.
All monetary figures are in 2020 dollars.

Operations Phase

The operation of the Project will directly employ up to 7 individuals and will generate approximately \$262,660 annually in operations expenditures in the three-county region, as shown in Table 9. Since the equipment necessary for the maintenance of the facility is assumed to be purchased outside of Champaign, Logan and Shelby Counties under this scenario, the earnings of the employees at the Project site are equivalent to the expected economic output of the Project. On average, Project employees are estimated to earn \$37,523 annually.

Table 9: Operations Impacts on Champaign, Logan, and Shelby Counties

Type	Output	Earnings	Employment
Direct	\$262,660	\$262,660	7
Indirect	\$15,788	\$5,657	<1
Total	\$278,448	\$268,317	7

Source: Economics Center calculations using RIMS II multipliers and Emsi inter-sectoral purchasing patterns. All monetary figures are in 2020 dollars.

Fiscal Impacts

In addition to the economic benefits demonstrated above, the proposed Clearview Solar Project will benefit local schools, municipal governments, county governments, and the State of Ohio through payments made in lieu of property taxes, as well as the sales and earnings taxes paid by the direct and indirect employees of the Project.

As displayed in Table 10, an estimated \$1.3 million are expected to be paid each year for the duration of the life of the Project as payments in lieu of taxes (PILOT). According to the Ohio Revised Code Chapter 5727.75, certain solar facilities may apply for a Qualified Energy Project Tax Exemption, commonly referred to as a PILOT. This PILOT program exempts a qualified energy project from paying tangible personal property taxes in exchange for required annual payments in lieu of these taxes.⁸ These annual payments are calculated based on the nameplate capacity of the project in question and come in two forms. A \$7,000 per MW per year payment is split between the taxing jurisdictions where the project is physically located. A second service payment of up-to \$2,000 per MW per year is paid to the county treasurer and is deposited to the credit of the county's general fund.

Clearview expects to apply for Qualified Energy Project status with the Ohio Development Services Agency (ODSA) prior to construction. At a nameplate capacity of 144 MW, the Clearview Solar Project expects to submit annual payments in lieu of taxes of \$1,008,000 to local taxing jurisdictions and an additional \$288,000 to the Champaign County General Fund. The estimated breakdown of these payments is listed in Table 10.

⁸ (LAWriter, 2006)

Table 10: Annual Payments in Lieu of Property Taxes

Government Entity	Annual Payment
Senior Citizens	\$6,851
Health District	\$6,851
Library District	\$8,564
Mental Health	\$11,990
Adams Township	\$21,410
911	\$25,692
Childrens Services	\$34,257
Roads	\$43,677
County General Fund	\$332,534
Joint Vocational School District	\$44,534
Developmental Disability	\$94,206
Fire & EMS	\$115,616
Graham Local School District	\$549,818
Total	\$1,296,000

Source: Economics Center Calculations.

Clearview's status as a Qualified Energy Project would depend on meeting several conditions imposed by Ohio Revised Code Chapter 5727.75 including structuring a bonded Road Use and Maintenance Agreement with the County, facilitating training for fire and emergency responders for response to emergency situations related to the Project, maintaining 80% full-time equivalent Ohio-domiciled workers during construction, and establishing a relationship with a university or apprenticeship program to educate and train individuals for careers in the solar energy industry. These conditions ensure minimal disruption to area commerce and services, creation of opportunities for local employment, and development of the Ohio clean energy workforce.

Table 11 quantifies the sales and earnings tax revenue estimated to accrue to state and local entities under the High Ohio Content Scenario, in which the solar panels and racking are purchased within Ohio while Table 12 displays the sales and earnings tax revenue estimated to accrue under the scenario where the panels and racking are purchased outside of Ohio. According to the Ohio Department of Taxation, sales taxes are not levied on purchases made for electric generation facilities.⁹ Therefore, the sales tax estimates shown are the result of the take-home pay of the employees supported by the construction and operation of the Project.

The fiscal benefits will largely accrue state and local government entities during the construction phase but will continue throughout the life of the Project. Under the High Ohio Content Scenario, the State of Ohio is estimated to receive nearly \$1.8 million in sales tax revenues during the construction phase of the Project and approximately \$4.0 million in earnings taxes. Once in operation, the State of Ohio is expected to receive approximately

⁹ (Ohio Department of Taxation, 2017)

\$12,000 each year, \$4,687 in sales taxes and \$7,343 in earnings taxes. Schools in Champaign, Logan, and Shelby Counties are estimated to receive more than \$69,000 during construction and nearly \$700 annually once the site is in operation.¹⁰ Local municipalities will benefit from an estimated \$248,000 in tax revenues during the construction phase and approximately \$2,300 annually during the Project's operation.

Table 11: Sales and Earnings Tax Impact of the High Ohio Content Scenario

Phase	Type	Sales	Earnings	Total
Construction	Schools	\$0	\$69,286	\$69,286
	Local Jurisdictions	\$44,639	\$203,458	\$248,097
	State	\$1,781,734	\$3,967,993	\$5,749,727
Operations	Schools	\$0	\$671	\$671
	Local Municipalities	\$384	\$1,891	\$2,275
	State	\$4,687	\$7,343	\$12,030

Source: Economics Center calculations. Local sales and earnings tax amounts were calculated using weighted averages.
All monetary figures are in 2020 dollars.

Since the equipment necessary for the operation of the Clearview Solar Project is assumed to not be manufactured nor purchased within the region under the Base Case Scenario, there is no assumed difference in the fiscal impact accruing to school and local government entities. However, the State of Ohio is estimated to receive approximately \$1.2 million as a result of the construction of the Project under the Base-Case Scenario and approximately \$9,500 in earnings and sales tax revenues each year during the operations phase of the Project.

Table 12: Sales and Earnings Tax Impact of the Base-Case Scenario¹¹

Phase	Type	Sales	Earnings	Total
Construction	Schools	\$0	\$69,286	\$69,286
	Local Jurisdictions	\$44,639	\$203,458	\$248,097
	State	\$480,409	\$1,150,427	\$1,198,836
Operations	Schools	\$0	\$671	\$671
	Local Jurisdictions	\$384	\$1,891	\$2,275
	State	\$4,094	\$5,320	\$9,414

Source: Economics Center calculations. Local sales and earnings tax amounts were calculated using weighted averages.
All monetary figures are in 2020 dollars.

Supply Chain Analysis

The solar industry indirectly supports numerous economic sectors throughout the United States. Table 13, below, shows the industry purchases of the solar electric industry (NAICS 221114) within the United States in 2018, according to Emsi. As the businesses the solar industry supports through their purchases buy goods and services themselves, other industries benefit from the growth of the solar industry throughout the United States. For example, solar energy developers indirectly support the providers of the raw materials that

¹⁰ The Economics Center used a weighted school district earnings tax rate for this analysis. Tax rates were current as of May 2020 and several are set to expire and other tax rates will vary over the useful life of the proposed project.

¹¹ Fort Loramie LSD has an earnings tax but is set to expire, per Ohio Department of Taxation, on December 31, 2024 and therefore was omitted from the fiscal impact analysis.

are required to manufacture solar panels, electrical equipment, and other supplies beyond the direct suppliers of the solar industry.

The economic sectors that benefitted most in 2018 from the solar electricity industry in the United States are transportation and warehousing (16%), manufacturing (16%), and mining, quarrying, and oil and gas extraction (15%). Together, these top three industries supported by the solar electricity industry receive nearly of half of the purchases.

Table 13: Solar Electric Purchases in the United States, 2017

NAICS	Industry	Purchases	% of Total
48	Transportation and Warehousing	\$154,776,769	16%
31	Manufacturing	\$151,598,393	16%
21	Mining, Quarrying, and Oil and Gas Extraction	\$148,220,088	15%
22	Utilities	\$131,076,709	13%
56	Administrative and Support and Waste Management and Remediation Services	\$87,806,743	9%
54	Professional, Scientific, and Technical Services	\$66,211,955	7%
23	Construction	\$50,318,978	5%
52	Finance and Insurance	\$44,250,998	5%
42	Wholesale Trade	\$41,839,668	4%
51	Information	\$29,166,429	3%
53	Real Estate and Rental and Leasing	\$25,294,582	3%
44	Retail Trade	\$18,543,095	2%
72	Accommodation and Food Services	\$12,220,009	1%
61	Educational Services	\$2,422,137	0%
90	Government	\$2,397,866	0%
11	Agriculture, Forestry, Fishing and Hunting	\$2,160,144	0%
81	Other Services (except Public Administration)	\$1,882,484	0%
71	Arts, Entertainment, and Recreation	\$1,169,077	0%
55	Management of Companies and Enterprises	\$500,102	0%
62	Health Care and Social Assistance	\$442,862	0%
Total		\$972,299,091	100%

Source: Emsi Supply Chain Analysis Industry Purchases. Numbers may not sum due to rounding.

Conclusion

The construction of the Clearview Solar Project will positively affect the economy in Champaign, Logan, and Shelby Counties and benefit local, county, and state governments through increased tax revenues without negatively affecting housing and transportation infrastructure in the region. The construction of the Project will provide one-time economic benefits of up to \$81.6 million for the three-county region. The State of Ohio would benefit from one-time economic output of \$277.4 million if the components are sourced within the state or \$105.6 million if the components are sourced out of the state.

Clearview will also make an annual PILOT of \$1.3 million per year. Through the generation of renewable electricity, the Clearview Solar Project will increase economic activity in the State of Ohio and the region, diversify the local economy, and create jobs for residents of Champaign, Logan, and Shelby Counties.

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Appendix A: Employment and Wage Statistics

County	Industry	Employment				Weekly Earnings (2020\$)			
		2000	2006	2012	2018	2000	2006	2012	2018
Champaign	Business & Financial	1,416	972	732	1,014	\$772	\$711	\$908	\$826
	Education & Health	997	1,133	1,136	1,094	\$591	\$648	\$625	\$689
	Government	1,968	2,107	1,902	1,925	\$781	\$787	\$749	\$763
	Leisure & Hospitality	896	1,073	820	792	\$295	\$274	\$245	\$254
	Manufacturing	3,704	3,442	2,760	3,785	\$1,111	\$1,122	\$1,146	\$1,067
	Natural Resources & Construction	438	447	366	411	\$324	\$704	\$799	\$1,001
	Trade, Transportation, & Utilities	1,618	1,626	1,593	1,492	\$535	\$541	\$592	\$610
	Total	11,037	10,800	9,309	10,513	\$780	\$781	\$795	\$820
Logan	Business & Financial	3,584	3,279	2,733	3,072	\$584	\$605	\$602	\$730
	Education & Health	1,523	1,948	1,917	1,853	\$710	\$741	\$720	\$820
	Government	2,354	2,527	2,252	2,277	\$751	\$783	\$796	\$792
	Leisure & Hospitality	1,519	1,523	1,392	1,740	\$255	\$234	\$250	\$258
	Manufacturing	6,645	6,003	4,962	5,173	\$1,375	\$1,443	\$1,444	\$1,366
	Natural Resources & Construction	863	787	630	755	\$911	\$859	\$898	\$943
	Trade, Transportation, & Utilities	3,956	3,724	3,809	4,477	\$674	\$681	\$709	\$776
	Total	20,444	19,791	17,695	19,347	\$877	\$891	\$881	\$892
Shelby	Business & Financial	2,123	2,999	2,698	1,905	\$785	\$607	\$679	\$792
	Education & Health	1,662	2,027	2,021	2,054	\$771	\$756	\$754	\$798
	Government	2,700	2,858	2,509	2,406	\$807	\$849	\$840	\$845
	Leisure & Hospitality	1,479	1,546	1,460	1,466	\$284	\$248	\$245	\$250
	Manufacturing	14,318	14,366	10,621	12,946	\$1,153	\$1,156	\$1,175	\$1,209
	Natural Resources & Construction	1,587	1,575	1,489	1,718	\$1,042	\$1,073	\$1,031	\$1,123
	Trade, Transportation, & Utilities	4,195	5,114	4,292	4,177	\$710	\$761	\$749	\$747
	Total	28,064	30,485	25,090	26,672	\$951	\$930	\$919	\$984

Source: Economics Center calculations using BLS Quarterly Census of Employment and Wages. Numbers may not sum due to rounding

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