# EXHIBIT J

# Economic Impact Analysis

Strategic Economic Research, LLC

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# ECONOMIC IMPACT ANALYSIS OF GOLDFINCH SOLAR PROJECT

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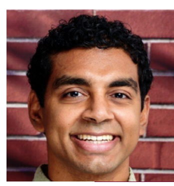


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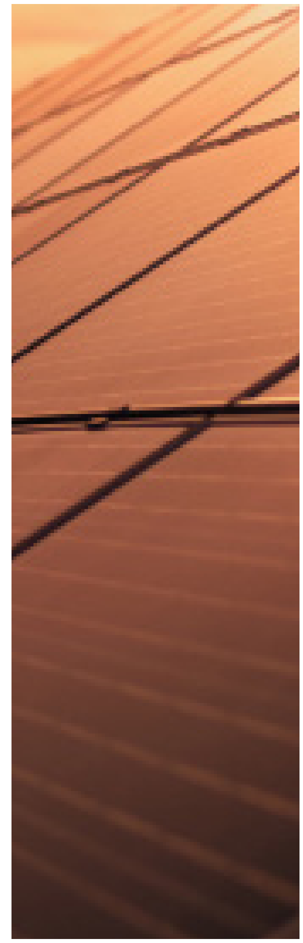

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# I. Executive Summary

Bechtel is developing the Goldfinch Solar Project in Washington County, Iowa. The purpose of this report is to aid decision makers in evaluating the economic impact of this project on Washington County and the State of Iowa. The basis of this analysis is to study the direct, indirect, and induced impacts on job creation, wages, and total economic output.

Goldfinch Solar Project is a 200-megawatt alternating current (MWac) utility-scale solar powered-electric generation facility that will utilize photovoltaic (PV) panels installed on a single-axis tracking system. The total Project represents an investment in excess of $266 million. The total development is anticipated to result in the following:

Jobs – all jobs numbers are full-time equivalents

- Over 228 new local jobs during construction for Washington County
- Over 438 new local jobs during construction for the State of Iowa
- Over 10.7 new local long-term jobs for Washington County
- Over 12.9 new local long-term jobs for the State of Iowa

Earnings

- Over $16.1 million in new local earnings during construction for Washington County
- Over $35.5 million in new local earnings during construction for the State of Iowa
- Over $442 thousand in new local long-term earnings for Washington County annually
- Over $796 thousand in new local long-term earnings for the State of Iowa annually

Output

- Over $23.6 million in new local output during construction for Washington County
- Over $56.2 million in new local output during construction for the State of Iowa
- Over $1.3 million in new local long-term output for Washington County annually
- Over $2.1 million in new local long-term output for the State of Iowa annually

Property Taxes

- Over $4.9 million in total school district revenue over the life of the Project
- Over $4.1 million in total county property taxes for Washington County over the life of the Project
- Over $10 million in property taxes in total for all taxing districts over the life of the Project

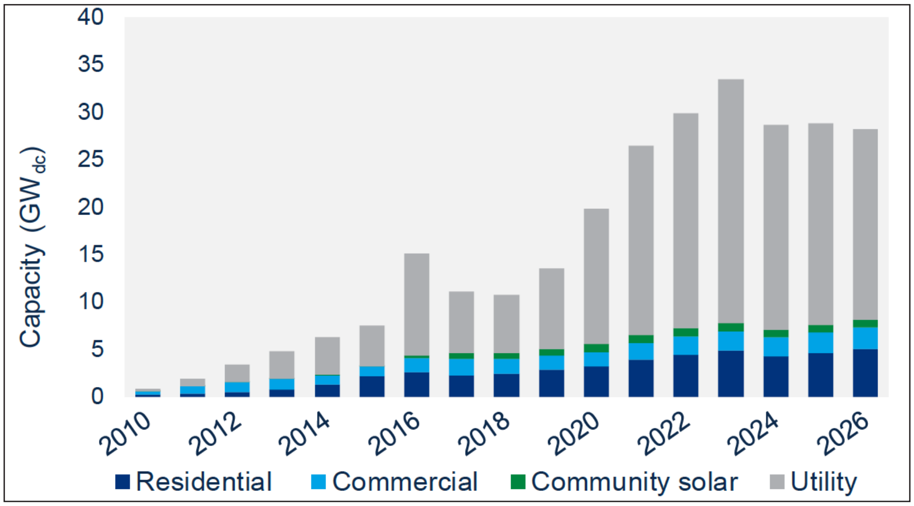
# II. U.S. Solar PV Industry Growth and Economic Development

## a. U.S. Solar PV Industry Growth

The U.S. solar industry is growing at a rapid but uneven pace, with systems installed for onsite use, including residential, commercial and industrial properties and with utility-scale solar powered-electric generation facilities intended for wholesale distribution, such as Goldfinch Solar. From 2013 to 2018, the amount of electricity generated from solar had more than quadrupled, increasing 444% (SEIA, 2020). The industry has continued to add increasing numbers of PV systems to the grid. In the first half of 2021, the U.S. installed over 11,000 MW direct current (MWdc) of solar PV driven mostly by utility-scale PV which exceeds most of the annual installations in the last decade. Figure 1 shows the historical capacity additions as well as the forecasted additions into 2026. The primary driver of this overall sharp pace of growth is large price declines in solar equipment. The overall price of solar PV has declined from $5.79/watt in 2010 to $1.33/watt in 2020 (SEIA, 2020). According to Figure 2, utility-scale solar fixed tilt and single-axis tracking have declined from $1.50/watt at the beginning of 2015 to near $1.00/watt by the first quarter of 2021. Solar PV also benefits from the Federal Investment Tax Credit (ITC) which provides a 26 percent tax credit for residential and commercial properties.

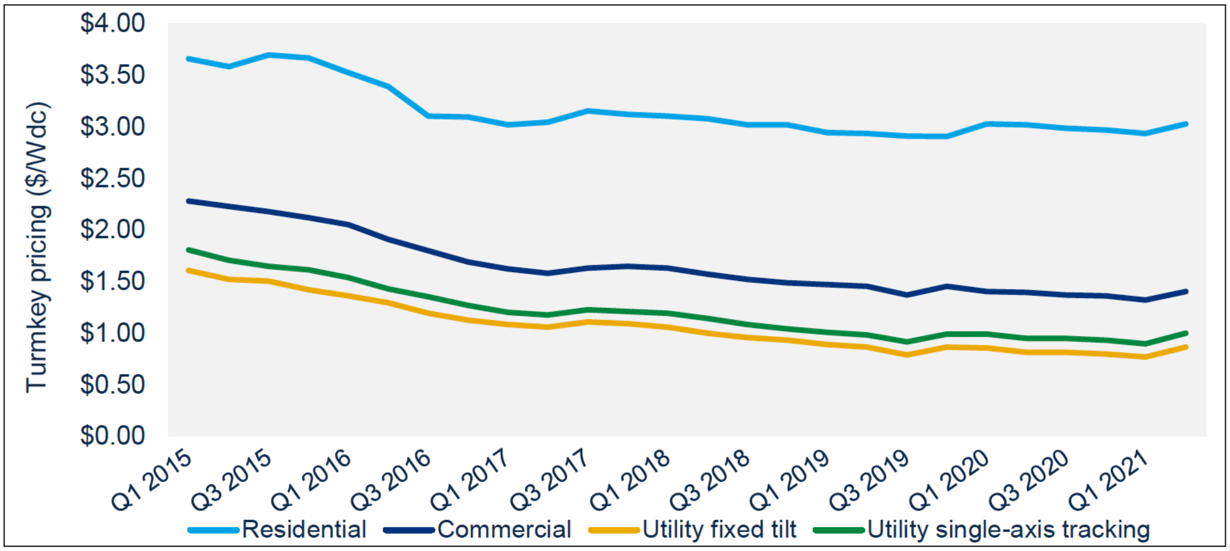
Utility-scale PV leads the installation growth in the U.S. A total of 19,200 MWdc of utility PV projects were completed in 2020. According to Figure 3, there are 85,000 MWdc of contracted utility-scale installations that have not been built yet.

Figure 1 – Annual U.S. Solar PV Installations, 2010-2026



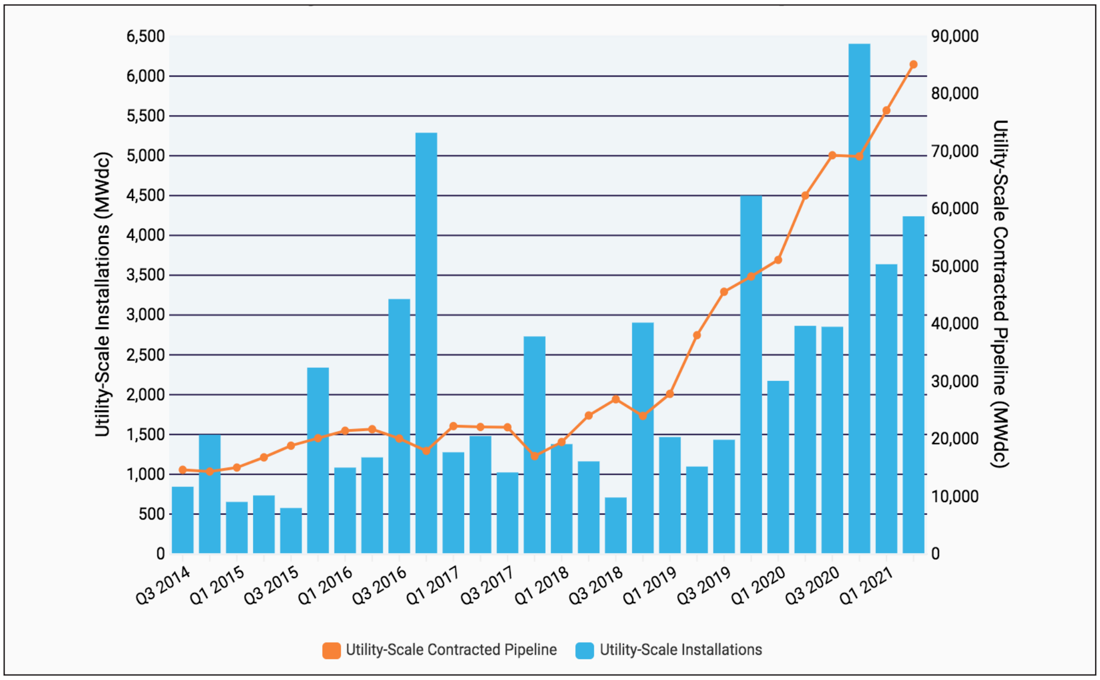

Source: Solar Energy Industries Association, Solar Market Insight Report Q3 2021

Figure 2 – U.S. Annual Solar PV Installed Price Trends Over Time




Source: Solar Energy Industries Association, Solar Market Insight Report Q3 2021

Figure 3 – U.S. Utility PV Installations vs. Contracted Pipeline




Source: Solar Energy Industries Association, Solar Market Insight Report Q2 2021

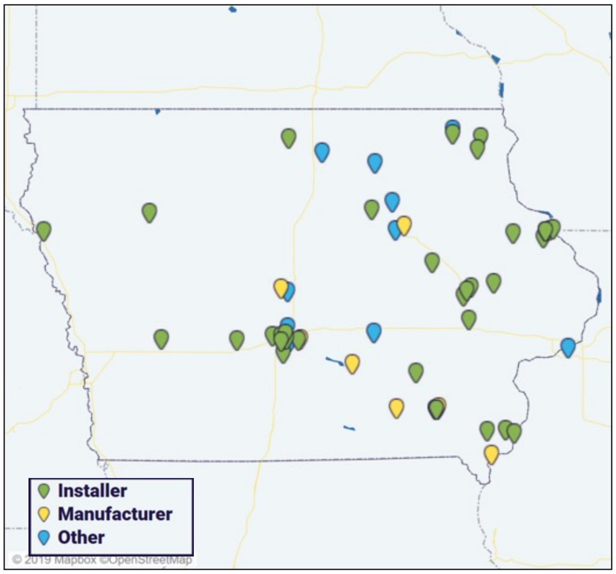
## b. Iowa Solar PV Industry

According to SEIA, Iowa is ranked 32nd in the U.S. in cumulative installations of solar PV. California, Texas, and Florida are the top 3 states for solar PV which may not be surprising because of the high solar irradiation that they receive. However, other states with similar solar irradiation to Iowa rank highly including New Jersey (8th), Massachusetts (9h), New York (11th), and Maryland (18th). In 2021, Iowa installed 159.05 MW of solar electric capacity bringing its cumulative capacity to 510.06 MW.

Iowa has great potential to expand its solar installations. Iowa has two utility-scale solar farms in operation: Wapello Solar LLC (100 MW) in Louisa County and Arbor Hill Solar (24 MW) in Adair County. The 200 MW Goldfinch Solar Project will be one of the largest installations in Iowa to date.

There are more than 66 solar companies in Iowa including 10 manufacturers, 31 installers/ developers, and 25 others.[1] Figure 4 shows the locations of solar companies in Iowa as of the time of this report. Currently, there are 773 solar jobs in the State of Iowa according to SEIA.

Figure 4 – Solar Company Locations in Iowa



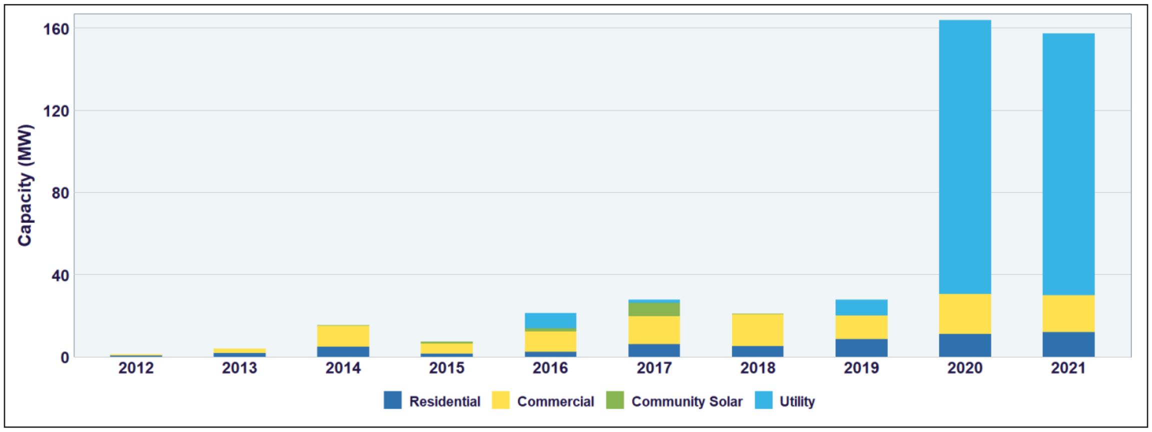

Source: Solar Energy Industries Association, Solar Spotlight: Iowa, June 2022

[1] "Other" includes Sales and Distribution, Project Management, and Engineering.

Figure 5 shows the Iowa historical installed capacity by year according to the SEIA. Huge growth was seen in 2020 and 2021 and is forecasted to continue to grow in 2022 and beyond. Over the next five years, solar in Iowa is projected to grow by 1,182.29 MW.

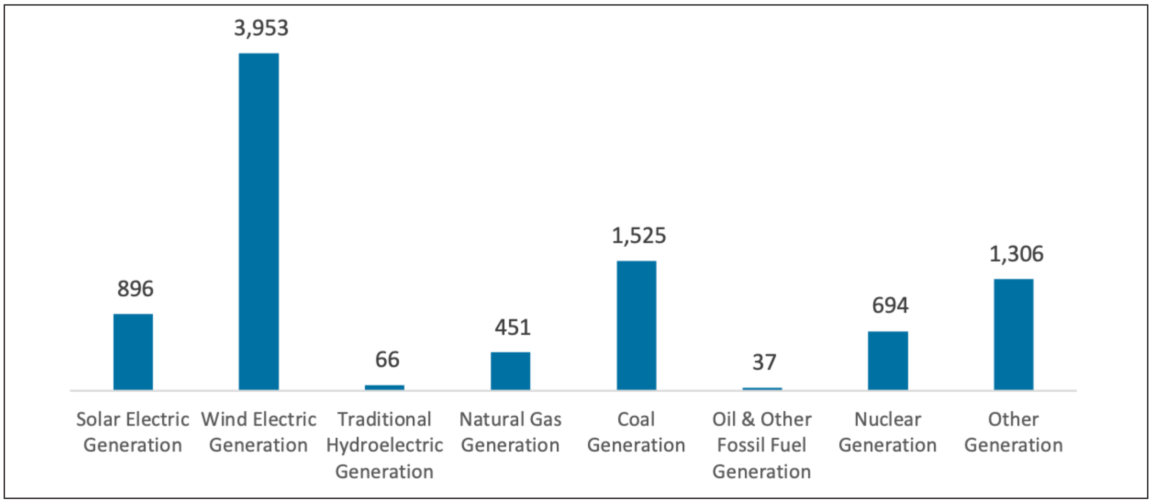
The U.S. Department of Energy sponsors the U.S. Energy and Employment Report each year. Electric Power Generation covers all utility and non-utility employment across electric generating technologies, including fossil fuels, nuclear, and renewable technologies. It also includes employees engaged in facility construction, turbine and other generation equipment manufacturing, operations and maintenance, and wholesale parts distribution for all electric generation technologies. According to Figure 6, employment in the solar energy industry (896) falls behind wind electric generation (3,953) and coal generation (1,525) but is larger than nuclear generation (694).

Figure 5 – Iowa Annual Solar Installations




Source: Solar Energy Industries Association, Solar Spotlight: Iowa, June 2022

Figure 6 – Electric Generation Employment by Technology




Source: US Energy and Employment Report 2021: Iowa

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## c. Economic Benefits of Utility-Scale Solar PV Energy

Utility-scale solar powered-electric generation facilities have numerous economic benefits. Solar PV installations create job opportunities in the local area during both the short-term construction phase and the long-term operational phase. In addition to the workers directly involved in the construction and maintenance of the solar energy project, numerous other jobs are supported through indirect supply chain purchases and the higher spending that is induced by these workers. Solar PV projects strengthen the local tax base and help improve county services and local infrastructure, such as public roads.

Numerous studies have quantified the economic benefits of Solar PV projects across the United States and have been published in peer-reviewed academic journals using the same methodology as this report. Some of these studies examine smaller-scale solar systems, and some examine utility-scale solar energy. Croucher (2012) uses NREL's Jobs and Economic Development Impacts ("JEDI") modeling methodology to find which state will receive the greatest economic impact from installing one hundred 2.5 kW residential systems. He shows that Pennsylvania ranked first supporting 28.98 jobs during installation and 0.20 jobs during operations. Illinois ranked second supporting 27.65 jobs during construction and 0.18 jobs during operations.

Several other reports quantify the economic impact of solar energy. Bezdek (2006) estimates the economic impact for the State of Ohio and finds the potential for PV market in Iowa to be $25 million with 200 direct jobs and 460 total jobs. The Center for Competitive Florida (2009) estimates the impact if the state were to install 1,500 MW of solar and finds that 45,000 direct jobs and 50,000 indirect jobs could be created. The Solar Foundation (2013) uses the JEDI modeling methodology to show that Colorado's solar PV installation to date created 10,790 job-years. They also analyze what would happen if the state were to install 2,750 MW of solar PV from 2013 to 2030 and find that it would result in nearly 32,500 job years. Berkman et. al (2011) estimates the economic and fiscal impacts of the 550 MWac Desert Sunlight Solar Farm. The project creates approximately 440 construction jobs over a 26-month period, $15 million in new sales tax revenues, $12 million in new property revenues for Riverside County, CA, and $336 million in indirect benefits to local businesses in the county.

Loomis et. al. (2016) estimates the economic impact for the State of Illinois if the state were to reach its maximum potential for solar PV. The study estimates the economic impact of three different scenarios for Illinois – building new solar installations of either 2,292 MW, 2,714 MW or 11,265 MW. The study assumes that 60% of the capacity is utility-scale solar, 30% of the capacity is commercial, and 10% of the capacity is residential. It was found that employment impacts vary from 26,753 to 131,779 job years during construction and from 1,223 to 6,010 job years during operating years.

More recently, in his economic impact analysis of the proposed Path to 100 legislation in Illinois, Loomis (2020) estimates the legislation is expected to result in constructing over 15,000 MW of wind and solar over the next 15 years yielding over 53,000 jobs during construction and over 3,200 jobs during operations. The analysis also looks at the 39 largest existing wind farms in Illinois and finds that they supported 29,295 jobs during construction and 1,307 jobs during operations for a total economic benefit of $10.2 billion over the life of the projects. In addition, a review of historical property tax records finds that existing utility-scale wind and solar projects paid over $305 million in property taxes statewide since 2003 and over $41.4 million in 2019 alone.

Michaud et. al (2020) performed an analysis of the economic impact of utility-scale solar energy projects in the State of Ohio. They detail three scenarios: low (2.5 GW), moderate (5 GW) and high (7.5 GW). Using the JEDI model, they find that between 18,039 and 54,113 jobs would be supported during construction and between 207 and 618 jobs would be supported annually during operations. In addition, between $22.5 million and $67.5 million annually in tax revenues would come from these projects.

Finally, Jenniches (2018) performed a review of the literature assessing the regional economic impacts of renewable energy sources. After reviewing all of the different techniques for analyzing the economic impacts, he concludes “for assessment of current renewable energy developments, beyond employment in larger regions, IO [Input-Output] tables are the most suitable approach.” (Jenniches, 2018, 48). Input-Output analysis is the basis for the methodology used in the economic impact analysis of this report.

# III. Project Description and Location

## a. Goldfinch Solar Project

Bechtel is developing the Goldfinch Solar Project in Washington County, Iowa. The Project consists of an estimated 200-megawatt alternative current (MWac) utility-scale solar powered-electric generation facility that will utilize photovoltaic (PV) panels installed on a single-axis tracking system. The total Project represents an investment in excess of $266 million.

## b. Washington County, Iowa

Washington County is located in the Southeastern part of Iowa (see Figure 7). It has a total area of 571 square miles and the U.S. Census estimates that the 2020 population was 22,565 with 9,573 housing units. The county has a population density of 40 (persons per square mile) compared to 57.1 for the State of Iowa. Median household income in the county was $63,532 (U.S. Census Bureau).

Figure 7 – Location of Washington County, Iowa

## i. Economic and Demographic Statistics

As shown in Table 1, the largest industry is "Agriculture, Forestry, Fishing and Hunting" followed by "Retail Trade," "Administrative Government" and "Construction." These data for Table 1 come from IMPLAN covering the year 2020 (the latest year available).

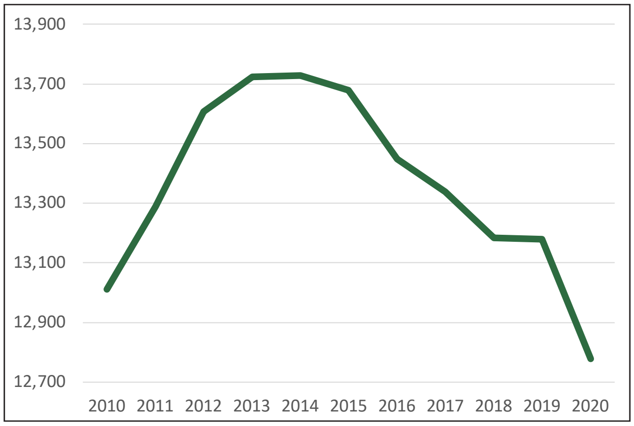
Table 1 provides the most recent snapshot of total employment but does not examine the historical trends within the county. Figure 8 shows employment from 2010 to 2020. Total employment in Washington County was at its highest at 13,727 in 2014 and its lowest at 12,779 in 2020 (BEA, 2022).

### Table 1 – Employment by Industry in Washington County

| Industry | Number | Percent |
|---|---|---|
| Agriculture, Forestry, Fishing and Hunting | 1,817 | 15.1% |
| Retail Trade | 1,375 | 11.4% |
| Administrative Government | 1,328 | 11.1% |
| Construction | 1,303 | 10.8% |
| Health Care and Social Assistance | 1,063 | 8.9% |
| Accommodation and Food Services | 989 | 8.3% |
| Manufacturing | 801 | 6.7% |
| Real Estate and Rental and Leasing | 551 | 4.6% |
| Finance and Insurance | 529 | 4.4% |
| Wholesale Trade | 426 | 3.6% |
| Transportation and Warehousing | 416 | 3.5% |
| Other Services (except Public Administration) | 377 | 3.1% |
| Professional, Scientific, and Technical Services | 375 | 3.1% |
| Arts, Entertainment, and Recreation | 238 | 2.0% |
| Administrative and Support and Waste Management and Remediation Services | 126 | 1.1% |
| Information | 84 | 0.7% |
| Educational Services | 56 | 0.5% |
| Government Enterprises | 42 | 0.4% |
| Management of Companies and Enterprises | 35 | 0.3% |
| Mining, Quarrying, and Oil and Gas Extraction | 29 | 0.2% |
| Utilities | 20 | 0.2% |

Source: Impact Analysis for Planning (IMPLAN), County Employment by Industry, 2020

### Figure 8 – Total Employment in Washington County from 2010 to 2020




Source: Bureau of Economic Analysis, Regional Data, GDP and Personal Income, 2010-2020

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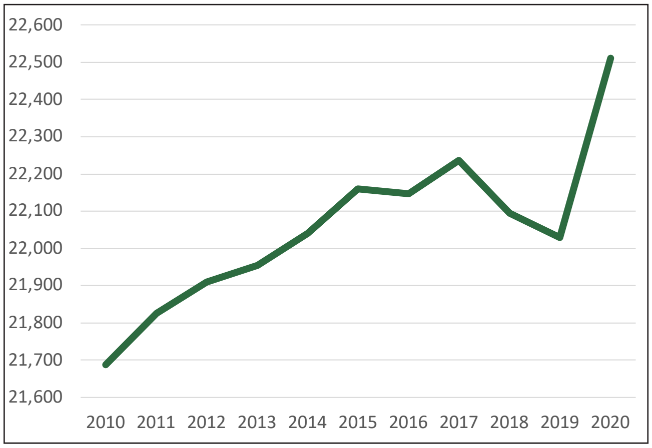
Unlike the downward trend of employment, the overall population in the county has been increasing, as shown in Figure 9. Washington County population was 21,687 in 2010 and 22,511 in 2020, a gain of 824 (FRED, 2022). The average annual population increase over this time period was 82.

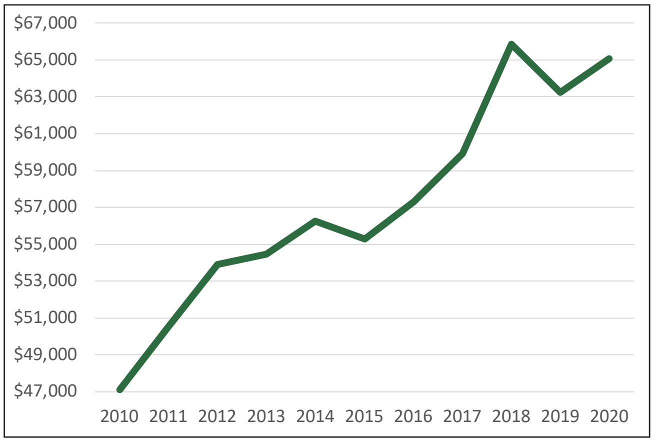
Figure 9 – Population in Washington County from 2010 to 2020




Source: Federal Reserve Bank of St. Louis Economic Data, U.S. Census Bureau, Population Estimates, 2010-2020

Similar to the population trend, household income has been trending upward in Washington County. Figure 10 shows the median household income in Washington County from 2010 to 2020. Household income was at its lowest at $47,118 in 2010 and its highest at $65,849 in 2018 (FRED, 2022).

Figure 10 – Median Household Income in Washington County from 2010 to 2020

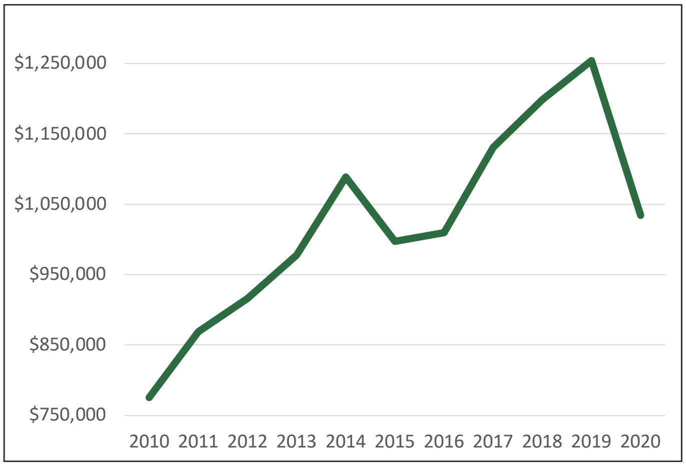



Source: Federal Reserve Bank of St. Louis Economic Data, U.S. Census Bureau, Estimate of Median Household Income, 2010-2020

Real Gross Domestic Product (GDP) is a measure of the value of goods and services produced in an area and adjusted for inflation over time. The Real GDP for Washington County was increasing since hitting a low in 2010, as shown in Figure 11 (BEA, 2022). Starting in 2019, the Real GDP started declining in the county.

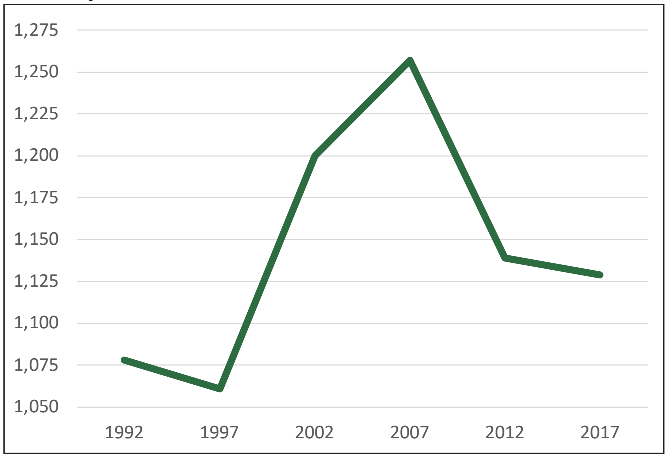
The farming industry has fluctuated in Washington County. As shown in Figure 12, the number of farms has fluctuated from a low of 1,061 in 1997 to a high of 1,257 in 2007.  The amount of land in farms has also fluctuated, hitting a low of 309,508 acres in 1992 and a high of 334,564 acres in 2002 according to Figure 13. Since 2002, the farmland in the county has decreased drastically.

Figure 11 – Real Gross Domestic Product (GDP) in Washington County from 2010 to 2020



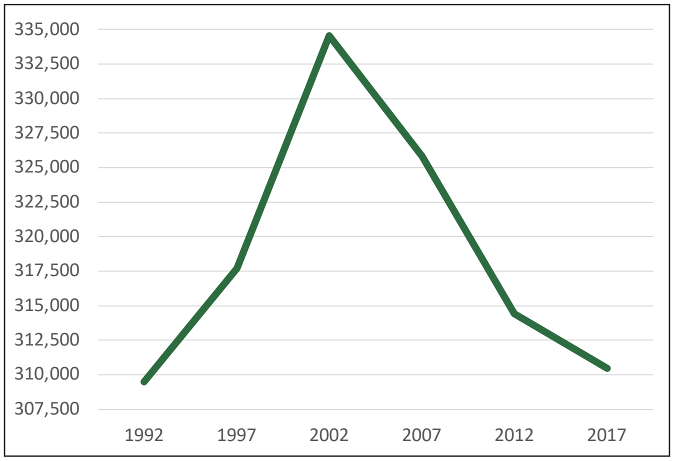

Source: Bureau of Economic Analysis, Regional Data, GDP and Personal Income, 2010-2020

Figure 12 – Number of Farms in Washington County from 1992 to 2017




Source: Census of Agriculture, 1992-2017

Figure 13 – Land in Farms in Washington County from 1992 to 2017




Source: Census of Agriculture, 1992-2017

## ii. Agricultural Statistics

Iowa is ranked second among U. S. states in total value of agricultural products sold (Census, 2017). It is ranked second in the value of livestock, and third in the value of crops (Census, 2017). In 2021, Iowa had 84,900 farms and 30.5 million acres in operation with the average farm being 359 acres (State Agricultural Overview, 2021). Iowa had 226 thousand cattle and produced 5.54 billion pounds of milk (State Agricultural Overview, 2021). In 2021, Iowa yields averaged 205 bushels per acre for grain corn with a total market value of $13.9 billion (State Agricultural Overview, 2021). Soybean yields averaged 62 bushels per acre with a total market value of $8.08 billion (State Agricultural Overview, 2021). The average net cash farm income per farm is $86,878 (Census, 2017).

In 2017, Washington County had 1,129 farms covering 310,445 acres for an average farm size of 275 acres (Census, 2017). The total market value of products sold was $671 million, with 80 percent coming from livestock sales and 20 percent coming from crop sales (Census, 2017). The average net cash farm income of operations was $150,329 (Census, 2017).

# IV. Economic Impact Methodology

The economic analysis of the solar PV project presented uses NREL's Jobs and Economic Development Impacts (JEDI) PV Model (PV12.23.16). The JEDI PV Model is an input-output model that measures the spending patterns and location-specific economic structures that reflect expenditures supporting varying levels of employment, income, and output. That is, the JEDI Model takes into account that the output of one industry can be used as an input for another. For example, when a PV system is installed, there are both soft costs consisting of permitting, installation and customer acquisition costs, and hardware costs, of which the PV module is the largest component. The purchase of a module not only increases demand for manufactured components and raw materials, but also supports labor to build and install a module. When a module is purchased from a manufacturing facility, the manufacturer uses some of that money to pay employees. The employees use a portion of their compensation to purchase goods and services within their community. Likewise, when a developer pays workers to install the systems, those workers spend money in the local economy that boosts economic activity and employment in other sectors. The goal of economic impact analysis is to quantify all of those reverberations throughout the local and state economy.

The first JEDI Model was developed in 2002 to demonstrate the economic benefits associated with developing wind farms in the United States. Since then, JEDI models have been developed for biofuels, natural gas, coal, transmission lines and many other forms of energy. These models were created by Marshall Goldberg of MRG & Associates, under contract with the National Renewable Energy Laboratory. The JEDI model utilizes state-specific industry multipliers obtained from IMPLAN (IMpact analysis for PLANning). IMPLAN software and data are managed and updated by the Minnesota IMPLAN Group, Inc., using data collected at federal, state, and local levels. This study analyzes the gross jobs that the new solar energy project development supports and does not analyze the potential loss of jobs due to declines in other forms of electric generation.

The total economic impact can be broken down into three distinct types: direct impacts, indirect impacts, and induced impacts. **Direct impacts** during the construction period refer to the changes that occur in the onsite construction industries in which the direct final demand (i.e., spending on construction labor and services) change is made. Onsite construction-related services include installation labor, engineering, design, and other professional services. Direct impacts during operating years refer to the final demand changes that occur in the onsite spending for the solar operations and maintenance workers.

The initial spending on the construction and operation of the solar PV installation will create a second layer of impacts, referred to as "supply chain impacts" or "indirect impacts." **Indirect impacts** during the construction period consist of changes in inter-industry purchases resulting from the direct final demand changes and include construction spending on materials and PV equipment, as well as other purchases of goods and offsite services. Utility-scale solar PV indirect impacts include PV modules, invertors, tracking systems, cabling, and foundations.

**Induced impacts** during construction refer to the changes that occur in household spending as household income increases or decreases as a result of the direct and indirect effects of final demand changes. Local spending by employees working directly or indirectly on the Project that receive their paychecks and then spend money in the community is included. The model includes additional local jobs and economic activity that are supported by the purchases of these goods and services.

# V. Economic Impact Results

The economic impact results were derived from detailed project cost estimates supplied by Bechtel. In addition, Bechtel also estimated the percentages of project materials and labor that will be coming from within Washington County and the State of Iowa.

Two separate JEDI models were produced to show the economic impact of Goldfinch Solar Project. The first JEDI model used the 2020 Washington County multipliers from IMPLAN. The second JEDI model used the 2020 IMPLAN multipliers for the State of Iowa and the same project costs. Because all new multipliers from IMPLAN and specific project cost data from Goldfinch Solar Project are used, the JEDI model serves only to translate the project costs into IMPLAN sectors.

Tables 2-4 show the output from these models. Table 2 lists the total employment impact from Goldfinch Solar Project for Washington County and the State of Iowa. Table 3 shows the impact on total earnings and Table 4 contains the impact on total output.

Table 2 – Total Employment Impact from Goldfinch Solar Project

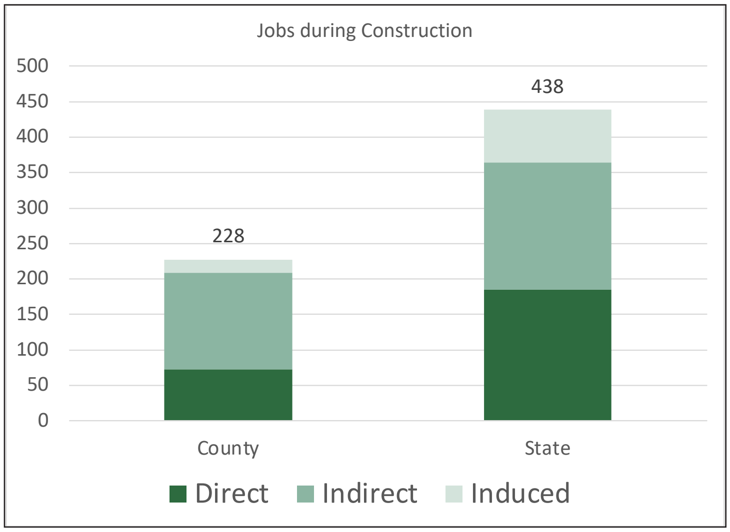
| | Washington County Jobs | State of Iowa Jobs |
|---|---|---|
| **Construction** | | |
| Project Development and Onsite Labor Impacts (direct) | 73 | 185 |
| Module and Supply Chain Impacts (indirect) | 136 | 179 |
| Induced Impacts | 19 | 74 |
| *New Local Jobs during Construction* | 228 | 438 |
| | | |
| **Operations (Annual)** | | |
| Onsite Labor Impacts (direct) | 2.8 | 2.8 |
| Local Revenue and Supply Chain Impacts (indirect) | 6.9 | 7.1 |
| Induced Impacts | 1.1 | 3.0 |
| *New Local Long-Term Jobs* | 10.7 | 12.9 |

The results from the JEDI model show significant employment impacts from Goldfinch Solar Project. Employment impacts can be broken down into several different components. Direct jobs created during the construction phase typically last anywhere from 12 to 18 months depending on the size of the project; however, the direct job numbers present in Table 2 from the JEDI model are based on a full time equivalent (FTE) basis for a year. In other words, 1 job = 1 FTE = 2,080 hours worked in a year. A part time or temporary job would constitute only a fraction of a job according to the JEDI model. For example, the JEDI model results show 73 new direct jobs during construction in Washington County, though the construction of the solar center could involve closer to 146 workers working half-time for a year. Thus, due to the short-term nature of construction projects, the JEDI model often significantly understates the number of people actually hired to work on the project. It is important to keep this fact in mind when looking at the numbers or when reporting the numbers.

As shown in Table 2, new local jobs created or retained during construction total over 228 for Washington County and over 438 for the State of Iowa. New local long-term jobs created from Goldfinch Solar Project total over 10.7 for Washington County and over 12.9 for the State of Iowa.

Direct jobs created during the operational phase last the life of the solar PV project, typically 20-30 years. Direct construction jobs and operations and maintenance jobs both require highly-skilled workers in the fields of construction, management, and engineering. These well-paid professionals boost economic development in rural communities where new employment opportunities are often welcome due to economic downturns.

Figure 14 – Total Employment Impact for Goldfinch Solar Project

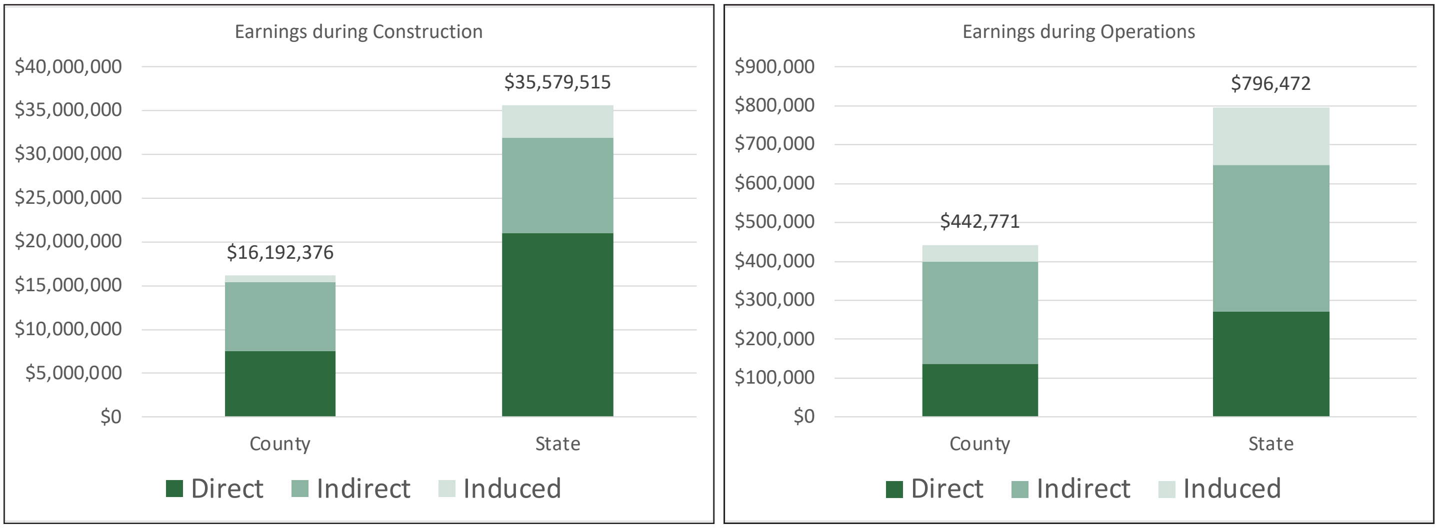



Accordingly, it is important to not just look at the number of jobs but also the earnings that they produce. Table 3 shows the earnings impacts from Goldfinch Solar Project, which are categorized by construction impacts and operations impacts. The new local earnings during construction totals over $16.1 million for Washington County and over $35.5 million for the State of Iowa. The new local long-term earnings totals over $442 thousand for Washington County and over $796 thousand for the State of Iowa.

Table 3 – Total Earnings Impact from Goldfinch Solar Project

| | Washington County | State of Iowa |
|---|---|---|
| **Construction** | | |
| Project Development and Onsite Earnings Impacts | $7,519,447 | $21,014,907 |
| Module and Supply Chain Impacts | $7,915,432 | $10,907,686 |
| Induced Impacts | $757,497 | $3,656,921 |
| *New Local Earnings during Construction* | $16,192,376 | $35,579,515 |
| | | |
| **Operations (Annual)** | | |
| Onsite Labor Impacts | $136,071 | $271,368 |
| Local Revenue and Supply Chain Impacts | $262,321 | $376,459 |
| Induced Impacts | $44,380 | $148,645 |
| *New Local Long-Term Earnings* | $442,771 | $796,472 |

Figure 15 – Total Earnings Impact from Goldfinch Solar Project

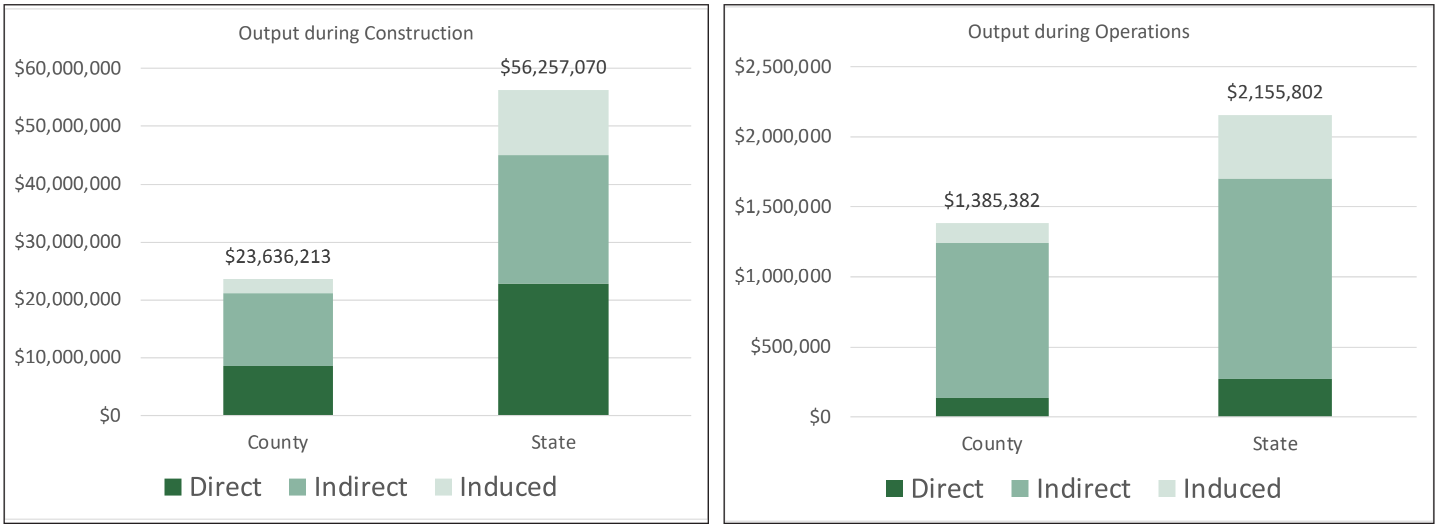


Output refers to economic activity or the value of production in the state or local economy. It is an equivalent measure to the Gross Domestic Product, which measures output on a national basis. According to Table 4, the new local output during construction totals over $23.6 million for Washington County and over $56.2 million for the State of Iowa. The new local long-term output totals over $1.3 million for Washington County and over $2.1 million for the State of Iowa.

Table 4 – Total Output Impact from Goldfinch Solar Project

| | Washington County | State of Iowa |
|---|---|---|
| **Construction** | | |
| Project Development and Onsite Jobs Impacts on Output | $8,549,729 | $22,899,275 |
| Module and Supply Chain Impacts | $12,579,138 | $22,155,542 |
| Induced Impacts | $2,507,346 | $11,202,252 |
| *New Local Output during Construction* | $23,636,213 | $56,257,070 |
| | | |
| **Operations (Annual)** | | |
| Onsite Labor Impacts | $136,071 | $271,368 |
| Local Revenue and Supply Chain Impacts | $1,104,881 | $1,431,323 |
| Induced Impacts | $144,430 | $453,112 |
| *New Local Long-Term Output* | $1,385,382 | $2,155,802 |

Figure 16 – Total Output Impact from Goldfinch Solar Project



# VI. Tax Revenue

Solar energy projects increase the property tax base of a county, creating a new revenue source for education and other local government services, such as fire protection, parks, health and safety. Goldfinch Solar Project would be subject to Iowa's Replacement Tax and the statewide property tax. In this section, we used the methodology set forth in the Center for Rural Affairs' *Taxing Utility-Scale Solar Projects in Iowa* (2021).

Tables 5-8 detail the tax implications of Goldfinch Solar Project. There are several important assumptions built into the analysis in these tables.

- First, the analysis assumes that the production of the Project will be 447,820,000 kWh in the first year and decline by 0.42% per year thereafter.
- Second, the tables assume that for statewide property tax revenue, the solar portion of the Project has a $266.5 million project cost and uses a 30-year straight-line depreciation schedule with a 70% maximum depreciation.
- Third, all tax rates are assumed to stay constant at their 2023 (2022 tax year) millage rates. For example, the Washington County Countywide/Rural tax rate is 10.11325 cents per $1000 of taxable value. The statewide property tax rate is assumed to stay constant at 3 cents per $1000 of taxable value.
- Fourth, the replacement tax is apportioned to the taxing entities according to their relative tax rates.
- Fifth, no comprehensive tax payment was calculated, and these calculations are only to be used to illustrate the economic impact of the Project.

Figure 17 – Property Taxes Paid by Goldfinch Solar Project

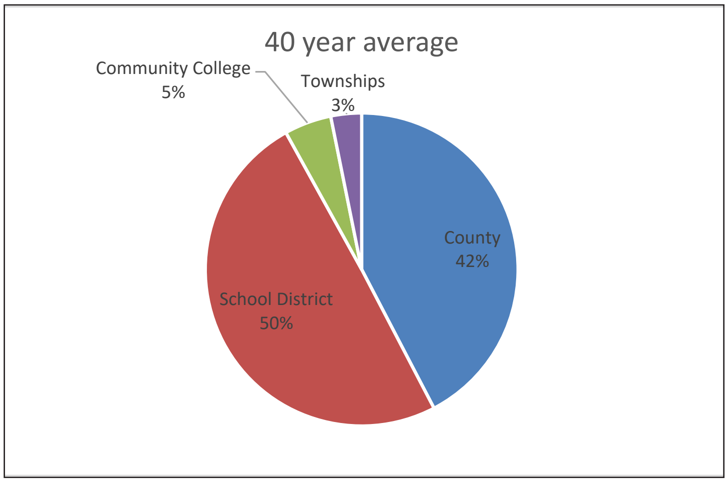


Table 5 – Total Property Taxes Paid by Goldfinch Solar Project

| Year | Total Property Taxes |
|---|---|
| 2025 | $276,421 |
| 2026 | $275,025 |
| 2027 | $273,635 |
| 2028 | $272,250 |
| 2029 | $270,869 |
| 2030 | $269,493 |
| 2031 | $268,121 |
| 2032 | $266,754 |
| 2033 | $265,392 |
| 2034 | $264,034 |
| 2035 | $262,681 |
| 2036 | $261,333 |
| 2037 | $259,989 |
| 2038 | $258,649 |
| 2039 | $257,315 |
| 2040 | $255,984 |
| 2041 | $254,658 |
| 2042 | $253,337 |
| 2043 | $252,020 |
| 2044 | $250,707 |
| 2045 | $249,399 |
| 2046 | $248,361 |
| 2047 | $247,328 |
| 2048 | $246,299 |
| 2049 | $245,275 |
| 2050 | $244,255 |
| 2051 | $243,239 |
| 2052 | $242,228 |
| 2053 | $241,220 |
| 2054 | $240,217 |
| 2055 | $239,219 |
| 2056 | $238,224 |
| 2057 | $237,233 |
| 2058 | $236,247 |
| 2059 | $235,265 |
| 2060 | $234,287 |
| 2061 | $233,313 |
| 2062 | $232,343 |
| 2063 | $231,377 |
| 2064 | $230,416 |
| **TOTAL** | **$10,064,413** |
| **AVG ANNUAL** | **$251,610** |

As shown in Table 5, a conservative estimate of the total property taxes paid by the Project starts out at over $276 thousand per year and declines due to depreciation. The expected total property taxes paid over the 40-year lifetime of the Project are over $10 million, and the average annual property taxes paid will be over $251 thousand.

Table 6 shows an estimate of the likely taxes paid to Brucellosis and Tuberculosis Eradication Fund, Washington County-Total Countywide/Rural, County Assessor, County Agricultural, and County Hospital. According to Table 6, the total amounts paid over 40 years are over $934 for Brucellosis and Tuberculosis Eradication Fund, over $3.6 million for Washington County-Total Countywide/Rural, over $134 thousand for County Assessor, over $71 thousand for County Agricultural, and over $359 thousand for County Hospital over the life of the Project.

Table 7 shows an estimate of the likely taxes paid to Highland Township, Oregon Township, Kirkwood Community College, and State's General Fund. As shown in Table 7, the total amounts paid are over $48.9 thousand for Highland Township, over $266 thousand for Oregon Township, over $482 thousand for Kirkwood Community College, and over $151 thousand for State's General Fund over the life of the Project.

## Table 6 – Property Tax Revenue from Goldfinch Solar Project for the County[2]

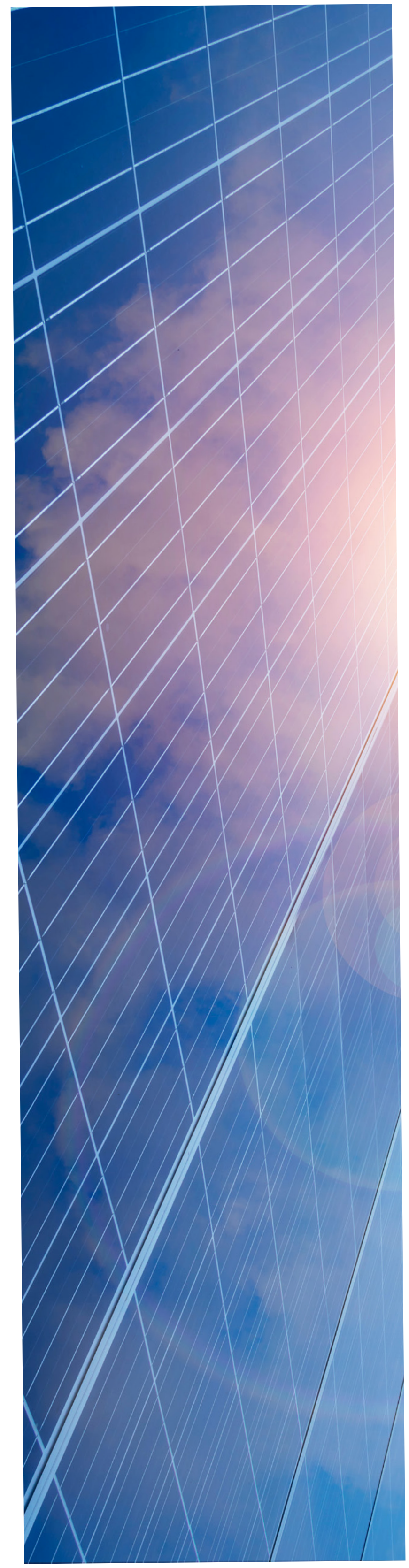
| Year | Brucellosis and Tuberculosis Eradication Fund | Washington County-Total Countywide/Rural | County Assessor | County Agricultural | County Hospital |
|---|---|---|---|---|---|
| 2025 | $25 | $98,457 | $3,636 | $1,926 | $9,735 |
| 2026 | $25 | $98,044 | $3,620 | $1,918 | $9,695 |
| 2027 | $25 | $97,632 | $3,605 | $1,910 | $9,654 |
| 2028 | $25 | $97,222 | $3,590 | $1,902 | $9,613 |
| 2029 | $25 | $96,814 | $3,575 | $1,894 | $9,573 |
| 2030 | $25 | $96,407 | $3,560 | $1,886 | $9,533 |
| 2031 | $25 | $96,002 | $3,545 | $1,878 | $9,493 |
| 2032 | $25 | $95,599 | $3,530 | $1,871 | $9,453 |
| 2033 | $24 | $95,198 | $3,515 | $1,863 | $9,413 |
| 2034 | $24 | $94,798 | $3,500 | $1,855 | $9,374 |
| 2035 | $24 | $94,400 | $3,486 | $1,847 | $9,334 |
| 2036 | $24 | $94,003 | $3,471 | $1,839 | $9,295 |
| 2037 | $24 | $93,608 | $3,456 | $1,832 | $9,256 |
| 2038 | $24 | $93,215 | $3,442 | $1,824 | $9,217 |
| 2039 | $24 | $92,824 | $3,427 | $1,816 | $9,178 |
| 2040 | $24 | $92,434 | $3,413 | $1,809 | $9,140 |
| 2041 | $24 | $92,046 | $3,399 | $1,801 | $9,101 |
| 2042 | $24 | $91,659 | $3,384 | $1,793 | $9,063 |
| 2043 | $23 | $91,274 | $3,370 | $1,786 | $9,025 |
| 2044 | $23 | $90,891 | $3,356 | $1,778 | $8,987 |
| 2045 | $23 | $90,509 | $3,342 | $1,771 | $8,950 |
| 2046 | $23 | $90,129 | $3,328 | $1,763 | $8,912 |
| 2047 | $23 | $89,750 | $3,314 | $1,756 | $8,875 |
| 2048 | $23 | $89,373 | $3,300 | $1,749 | $8,837 |
| 2049 | $23 | $88,998 | $3,286 | $1,741 | $8,800 |
| 2050 | $23 | $88,624 | $3,272 | $1,734 | $8,763 |
| 2051 | $23 | $88,252 | $3,259 | $1,727 | $8,726 |
| 2052 | $23 | $87,881 | $3,245 | $1,720 | $8,690 |
| 2053 | $22 | $87,512 | $3,231 | $1,712 | $8,653 |
| 2054 | $22 | $87,145 | $3,218 | $1,705 | $8,617 |
| 2055 | $22 | $86,779 | $3,204 | $1,698 | $8,581 |
| 2056 | $22 | $86,414 | $3,191 | $1,691 | $8,545 |
| 2057 | $22 | $86,051 | $3,177 | $1,684 | $8,509 |
| 2058 | $22 | $85,690 | $3,164 | $1,677 | $8,473 |
| 2059 | $22 | $85,330 | $3,151 | $1,670 | $8,437 |
| 2060 | $22 | $84,971 | $3,138 | $1,663 | $8,402 |
| 2061 | $22 | $84,615 | $3,124 | $1,656 | $8,367 |
| 2062 | $22 | $84,259 | $3,111 | $1,649 | $8,332 |
| 2063 | $22 | $83,905 | $3,098 | $1,642 | $8,297 |
| 2064 | $21 | $83,553 | $3,085 | $1,635 | $8,262 |
| **TOTAL** | **$934** | **$3,632,264** | **$134,121** | **$71,070** | **$359,159** |
| **AVG ANNUAL** | **$23** | **$90,807** | **$3,353** | **$1,777** | **$8,979** |



[2]The assumed millage rate is 0.0026 for Brucellosis and Tuberculosis Eradication Fund, 10.11325 for Washington County-Total Countywide/Rural, 0.37343 for County Assessor, 0.19788 for County Agricultural, and 1 for County Hospital.

## Table 7 – Tax Revenue from Goldfinch Solar Project for Other Taxing Bodies[3]

| Year | Highland Township | Oregon Township | Kirkwood Community College | State's General Fund |
|---|---|---|---|---|
| 2025 | $1,327 | $7,221 | $13,091 | $7,729 |
| 2026 | $1,321 | $7,190 | $13,036 | $7,462 |
| 2027 | $1,316 | $7,160 | $12,981 | $7,196 |
| 2028 | $1,310 | $7,130 | $12,926 | $6,929 |
| 2029 | $1,305 | $7,100 | $12,872 | $6,663 |
| 2030 | $1,299 | $7,070 | $12,818 | $6,396 |
| 2031 | $1,294 | $7,041 | $12,764 | $6,130 |
| 2032 | $1,288 | $7,011 | $12,710 | $5,863 |
| 2033 | $1,283 | $6,982 | $12,657 | $5,597 |
| 2034 | $1,277 | $6,952 | $12,604 | $5,330 |
| 2035 | $1,272 | $6,923 | $12,551 | $5,064 |
| 2036 | $1,267 | $6,894 | $12,498 | $4,797 |
| 2037 | $1,261 | $6,865 | $12,446 | $4,531 |
| 2038 | $1,256 | $6,836 | $12,394 | $4,264 |
| 2039 | $1,251 | $6,807 | $12,341 | $3,998 |
| 2040 | $1,246 | $6,779 | $12,290 | $3,731 |
| 2041 | $1,240 | $6,750 | $12,238 | $3,465 |
| 2042 | $1,235 | $6,722 | $12,187 | $3,198 |
| 2043 | $1,230 | $6,694 | $12,135 | $2,932 |
| 2044 | $1,225 | $6,666 | $12,084 | $2,665 |
| 2045 | $1,220 | $6,638 | $12,034 | $2,399 |
| 2046 | $1,215 | $6,610 | $11,983 | $2,399 |
| 2047 | $1,209 | $6,582 | $11,933 | $2,399 |
| 2048 | $1,204 | $6,554 | $11,883 | $2,399 |
| 2049 | $1,199 | $6,527 | $11,833 | $2,399 |
| 2050 | $1,194 | $6,499 | $11,783 | $2,399 |
| 2051 | $1,189 | $6,472 | $11,734 | $2,399 |
| 2052 | $1,184 | $6,445 | $11,684 | $2,399 |
| 2053 | $1,179 | $6,418 | $11,635 | $2,399 |
| 2054 | $1,174 | $6,391 | $11,586 | $2,399 |
| 2055 | $1,169 | $6,364 | $11,538 | $2,399 |
| 2056 | $1,164 | $6,337 | $11,489 | $2,399 |
| 2057 | $1,160 | $6,311 | $11,441 | $2,399 |
| 2058 | $1,155 | $6,284 | $11,393 | $2,399 |
| 2059 | $1,150 | $6,258 | $11,345 | $2,399 |
| 2060 | $1,145 | $6,232 | $11,297 | $2,399 |
| 2061 | $1,140 | $6,205 | $11,250 | $2,399 |
| 2062 | $1,135 | $6,179 | $11,203 | $2,399 |
| 2063 | $1,131 | $6,153 | $11,156 | $2,399 |
| 2064 | $1,126 | $6,128 | $11,109 | $2,399 |
| **TOTAL** | **$48,948** | **$266,381** | **$482,932** | **$151,905** |
| **AVG ANNUAL** | **$1,224** | **$6,660** | **$12,073** | **$3,798** |



[3]The assumed millage rate is 0.62149 for Highland Township, 0.95 for Oregon Township, 1.34462 for Kirkwood Community College, and 3 for State's General Fund.

The largest taxing jurisdictions for property taxes are local school districts. However, the tax implications for school districts are more complicated than for other taxing bodies. School districts receive state aid based on the assessed value of the taxable property within its district. As assessed value increases, the state aid to the school district is decreased.

Although the exact amount of the reduction in state aid to the school districts is uncertain, local project tax revenue is superior to relying on state aid for the following reasons: (1) the solar project can't relocate – it is a permanent structure that will be within the school district's footprint for the life of the Project; (2) the school district can raise the tax rate and increase its revenues as needed; (3) the school district does not have to deal with the year-to-year uncertainty of state aid amounts; (4) the school district does not have to wait for months (or even into the next Fiscal Year!) for payment; (5) the Project does not increase the overall cost of education in the way that a new residential development would.

Table 8 shows the direct property tax revenue coming from the Project to Highland Community School District and Washington Community School District. This tax revenue uses the assumptions outlined earlier to calculate the other tax revenue and assumes that 78% of the Project area is in Highland Community School District and 22% is in Washington Community School District. Over the 40-year life of the Project, the school districts are expected to receive over $4.9 million in tax revenue.

Table 8 –Tax Revenue from Goldfinch Solar Project for the School District[4]

| Year | Highland Community School District | Washington Community School District |
|---|---|---|
| 2025 | $98,982 | $34,292 |
| 2026 | $98,566 | $34,148 |
| 2027 | $98,152 | $34,004 |
| 2028 | $97,740 | $33,862 |
| 2029 | $97,329 | $33,719 |
| 2030 | $96,921 | $33,578 |
| 2031 | $96,514 | $33,437 |
| 2032 | $96,108 | $33,296 |
| 2033 | $95,705 | $33,157 |
| 2034 | $95,303 | $33,017 |
| 2035 | $94,902 | $32,879 |
| 2036 | $94,504 | $32,740 |
| 2037 | $94,107 | $32,603 |
| 2038 | $93,712 | $32,466 |
| 2039 | $93,318 | $32,330 |
| 2040 | $92,926 | $32,194 |
| 2041 | $92,536 | $32,059 |
| 2042 | $92,147 | $31,924 |
| 2043 | $91,760 | $31,790 |
| 2044 | $91,375 | $31,656 |
| 2045 | $90,991 | $31,523 |
| 2046 | $90,609 | $31,391 |
| 2047 | $90,228 | $31,259 |
| 2048 | $89,849 | $31,128 |
| 2049 | $89,472 | $30,997 |
| 2050 | $89,096 | $30,867 |
| 2051 | $88,722 | $30,737 |
| 2052 | $88,349 | $30,608 |
| 2053 | $87,978 | $30,480 |
| 2054 | $87,609 | $30,352 |
| 2055 | $87,241 | $30,224 |
| 2056 | $86,874 | $30,097 |
| 2057 | $86,509 | $29,971 |
| 2058 | $86,146 | $29,845 |
| 2059 | $85,784 | $29,720 |
| 2060 | $85,424 | $29,595 |
| 2061 | $85,065 | $29,471 |
| 2062 | $84,708 | $29,347 |
| 2063 | $84,352 | $29,224 |
| 2064 | $83,998 | $29,101 |
| **TOTAL** | **$3,651,612** | **$1,265,088** |
| **AVG ANNUAL** | **$91,290** | **$31,627** |

[4]The assumed miliage rate is 13.02284 for Highland Community School District and 16.0629 for Washington Community School District

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# VIII. Curriculum Vitae (Abbreviated)

David G. Loomis
Illinois State University
Department of Economics
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**Education**

Doctor of Philosophy, Economics, Temple University, Philadelphia, Pennsylvania, May 1995.

Bachelor of Arts, Mathematics and Honors Economics, Temple University, Magna Cum Laude, May 1985.

**Experience**

**1996-present** Illinois State University, Normal, IL
Full Professor – Department of Economics (2010-present)
Associate Professor - Department of Economics (2002-2009)
Assistant Professor - Department of Economics (1996-2002)

- Taught Regulatory Economics, Telecommunications Economics and Public Policy, Industrial Organization and Pricing, Individual and Social Choice, Economics of Energy and Public Policy and a Graduate Seminar Course in Electricity, Natural Gas and Telecommunications Issues.
- Supervised as many as 5 graduate students in research projects each semester.
- Served on numerous departmental committees.

**1997-present** Institute for Regulatory Policy Studies, Normal, IL
Executive Director (2005-present)
Co-Director (1997-2005)

- Grew contributing membership from 5 companies to 16 organizations.
- Doubled the number of workshop/training events annually.
- Supervised 2 Directors, Administrative Staff and internship program.
- Developed and implemented state-level workshops concerning regulatory issues related to the electric, natural gas, and telecommunications industries.

**2006-2018** Illinois Wind Working Group, Normal, IL
Director

- Founded the organization and grew the organizing committee to over 200 key wind stakeholders
- Organized annual wind energy conference with over 400 attendees
- Organized strategic conferences to address critical wind energy issues
- Initiated monthly conference calls to stakeholders
- Devised organizational structure and bylaws

**2007-2018** Center for Renewable Energy, Normal, IL
Director

- Created founding document approved by the Illinois State University Board of Trustees and Illinois Board of Higher Education.
- Secured over $150,000 in funding from private companies.
- Hired and supervised 4 professional staff members and supervised 3 faculty members as Associate Directors.
- Reviewed renewable energy manufacturing grant applications for Illinois Department of Commerce and Economic Opportunity for a $30 million program.
- Created technical “Due Diligence” documents for the Illinois Finance Authority loan program for wind farm projects in Illinois.

**2011-present** Strategic Economic Research, LLC
President

- Performed economic impact analyses on policy initiatives and energy projects such as wind energy, solar energy, natural gas plants and transmission lines at the county and state level.
- Provided expert testimony before state legislative bodies, state public utility commissions, and county boards.
- Wrote telecommunications policy impact report comparing Illinois to other Midwestern states.
- Published 38 articles in leading journals such as AIMS Energy, Renewable Energy, National Renewable Energy Laboratory Technical Report, Electricity Journal, Energy Economics, Energy Policy, and many others
- Testified over 57 times in formal proceedings regarding wind, solar and transmission projects
- Raised over $7.7 million in grants
- Raised over $2.7 million in external funding

Bryan A. Loomis
Strategic Economic Research, LLC
Vice President

**Education**

Master of Business Administration (M.B.A.), Marketing and Healthcare, Belmont University, Nashville, Tennessee, 2017.

**Experience**

**2019-present** Strategic Economic Research, LLC, Bloomington, IL
Vice President
(2021-present)
Property Tax Analysis and Land Use Director
(2019-2021)

- Directed the property tax analysis by training other associates on the methodology and overseeing the process for over twenty states
- Improved the property tax analysis methodology by researching various state taxing laws and implementing depreciation, taxing jurisdiction millage rates, and other factors into the tax analysis tool
- Executed land use analyses by running Monte Carlo simulations of expected future profits from farming and comparing that to the solar lease
- Performed economic impact modeling using JEDI and IMPLAN tools
- Improved workflow processes by capturing all tasks associated with economic modeling and report-writing, and created automated templates in Asana workplace management software

**2019-2021** Viral Healthcare Founders LLC, Nashville, TN
CEO and Founder

- Founded and directed marketing agency for healthcare startups
- Managed three employees
- Mentored and worked with over 30 startups to help them grow their businesses
- Grew an email list to more than 2,000 and LinkedIn following to 3,500
- Created a Slack community and grew to 450 members
- Created weekly video content for distribution on Slack, LinkedIn and Email

Christopher Thankan
Strategic Economic Research, LLC
Economic Analyst

**Education**

Bachelor of Science in Sustainable & Renewable Energy (B.A.), Minor in Economics, Illinois State University, Normal, IL, 2021

**Experience**

2021-present Strategic Economic Research, LLC, Bloomington, IL
Economic Analyst

- Create economic impact results on numerous renewable energy projects Feb 2021-Present
- Utilize IMPLAN multipliers along with NREL's JEDI model for analyses
- Review project cost Excel sheets
- Conduct property tax analysis for different US states
- Research taxation in states outside research portfolio
- Complete ad hoc research requests given by the president
- Hosted a webinar on how to run successful permitting hearings
- Research school funding and the impact of renewable energy on state aid to school districts
- Quality check coworkers JEDI models
- Started more accurate methodology for determining property taxes that became the main process used

SER Strategic Economic Research, LLC

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