

Minkar Solar: A Regional Economic Impact Study



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Executive Summary

bp has proposed the Minkar Energy Project, LLC (Minkar Solar) in Lamar County, Mississippi, to produce approximately 125 megawatts (MWdc) of electricity. The utility-scale solar power energy generation project would be located on approximately 1,000 acres of non-reserved pine forest land and use approximately \$130.8 million in private capital investment. The project is in early development, and details are subject to change. As the project evolves, this report uses current information to analyze: 1.) the projected economic impact to Lamar County from project construction and operations; 2.) the project's fiscal impact on the local tax base; and 3.) the impact on the residential property values of homes adjacent to the project.

The Minkar Solar project is expected to create approximately 190 jobs during project construction. Once operational, two (2) full-time jobs will be needed to operate and maintain the solar project, each at wages above the average county income. The project is expected to generate \$11.8 million in payroll during construction. According to JobsEQ, Mississippi sources 50% of its 'Power and Communication Line and Related Structures Construction' (NAICS 237130) outside the state. Data suggests this industry grew by approximately 57% in a decade from 2012 to 2022, amounting to 220 companies in 2022. It would be expected that 39% of the project will be sourced from Lamar County businesses.

Lamar County would receive positive fiscal impacts from property tax revenues related to the solar project. The operation of the solar project is anticipated to increase county revenue by \$1.032 million to \$19.937 million over ten years. This range is derived by using a tax abatement range from 0-95%, based on the current MS statute. As a point of reference, the project is planned to be built on land that generated \$14,000 in tax revenue for the county in 2022.

Potential impacts to residential property values from this project were also examined. No clear evidence exists in referenced studies that utility-scale industrial solar facilities positively or negatively impact property values. Those studies concluded that landscaping, suitable fencing, and green space buffering zones would likely eliminate any reduction in property value.

A regional study of residential properties shows that home prices have increased in value for residences in Mississippi located within ten miles of an existing utility-scale industrial solar project. Based on the findings of national and regional studies, it is unlikely that the Minkar Energy Project will adversely impact residential property values in Lamar County and beyond.

Introduction

bp has proposed to construct and operate a utility-scale solar power energy generation project in Lamar County, Mississippi. On behalf of bp, an integrated energy company, the project is being developed by Lightsource bp, one of the world's leading developers and operators of utility-scale solar and battery storage assets. Construction and operation of the Minkar Energy Project, LLC (Minkar Solar), located on 1,000 acres of non-reserved pine forest land, is projected to generate significant tax revenue for Lamar County. Once constructed, Minkar Solar is expected to generate 125 MWdc for the existing electric grid. The project is in the early stages of development, and the final project generation capacity may vary.

This report analyzes the potential economic, fiscal, and property value impacts on land adjacent to a proposed solar project in Lamar County, Mississippi. The study focuses on economic and financial implications.

Method of Research and Scope

This report utilized various methods and sources to evaluate the economic, fiscal, and property value impacts. The impact analysis was conducted using a solar project Benefit/Cost Analysis (BCA) model developed by Tamerica. Multipliers came from the JobsEQ Input/Output model. Several subscription sources were used, including Chmura JobsEQ and ESRI Community Analyst.

This report relied on the research below to establish a data baseline for the Mississippi utility-scale solar industry and conduct an economic and fiscal impact analysis for the project.

1. Inventoried existing utility-scale solar projects in Mississippi, including locations and tax abatement terms.
2. Identified and studied three solar projects built since 2017, and the analysis examined assessed residential property values (pre- and post-construction) on parcels adjacent to operational Mississippi solar facilities before and post-construction.
 - a. Hattiesburg Solar Project (2017, Forrest County);
 - b. Sumrall Solar Project (2017, Lamar County); and
 - c. Meridian III Solar Project (2019, Lauderdale County).
3. Collected data on property tax payments on the current project site, including special assessment classifications such as timber or agricultural uses.
4. Conducted a literature review on the accuracy of post-construction project economic impact studies, such as the Nissan project in Canton, Mississippi.
5. Determined current and future potential uses for the properties adjacent to the Minkar Solar site in Lamar County.

6. Investigated the composition and location of construction phase workforces on other Mississippi solar projects.

Projected Economic and Fiscal Impact on Lamar County

Utility-scale solar facilities create most jobs during project construction, and a few permanent full-time jobs will be created to operate the project post-construction. Using local contractors can create a significant short-term stimulus. Solar projects have a positive fiscal effect by helping increase local government sales tax revenue.

Utility-scale solar facilities invest significant dollars in taxable property, potentially generating a substantial financial benefit for the community. The project is not expected to substantially impact local government services such as schools, municipal infrastructure, etc.

Economic Impact on Lamar County

The information provided shows that during the 15-month anticipated Minkar Solar construction period, approximately 190 workers would be needed to build the \$130.8 million project. It is estimated that \$68 million could be spent directly on construction. The construction workers could be a combination of local residents and those who reside outside the region. These workers could spend their earnings from the Minkar Solar construction job at local stores, restaurants, and hotels. This economic activity could support 236 jobs and generate over \$11 million in payroll during construction (see Table 1). This spending could provide a short-term benefit to the county.

Table 1.

Economic Impacts During the Construction Period

Construction Jobs on Site	190
Total County Jobs During Construction	236
Total Payroll in <i>the Construction Period</i>	\$11,824,172

Source: Taimercia Model

As summarized in Table 2, Minkar Solar would employ two full-time employees once operational. Total compensation for the two full-time employees could be approximately \$232,000 annually, three times the average county wage. Additionally, supply chains (indirect) and spending in the local economy (induced) are projected to support another nine county jobs with a total annual income of approximately \$638,000.

Table 2.

Economic Impacts from Operation

New Direct Jobs from the Project	2
New Direct Personal Income	\$232,000
New Jobs as % of County Average Wage	301%
Jobs for County Residents (5 yrs.)	9
Personal Income for County Residents (5 yrs.)	\$638,000

Source: TaimERICA Model

Fiscal Impact on Lamar County

Minkar Solar could attract \$130.8 million in private capital investment to build solar panels that generate electricity that the county will tax.

The amount of revenue will depend on the Fee-In-Lieu (FIL) tax structure the county board of supervisors could grant the project, ranging from no abatement to the statutory limit of 95% abatement. Based on this policy range, the researchers examined the four scenarios in Table 3.

The project is anticipated to generate a tax revenue of \$1,032,145 million to \$19,937,756 million over ten years for Lamar County or Mississippi, depending on the taxing structure (see Table 3). Before the 2021 renewable energy generation FIL legislation, a 2/3 abatement was common for solar projects. At the 2/3 level, the project could offer tax revenue of \$6,670,660 million over the ten-year FIL structure.

Table 3.

Tax Impact for Lamar County (Over 10 Years)

Abatement Level	Local Property Taxes
No Tax Abatement	\$19,937,756
Lamar County Historical Precedent – 2/3	\$6,670,660
Emerging MS County Precedent – 80%	\$4,017,241
Current Maximum Allowed – 95%	\$1,032,145

Source: TaimERICA Model

Table 4 summarizes the projected cost to the county from solar project operations. The study finds that the two full-time post-construction jobs will attract an additional seven households. Those households will require additional county services (e.g., an anticipated 2.8 students, etc.), resulting in a marginal increase in costs for the county of approximately \$390,000 over ten years or \$39,000 annually. The seven new households residing in the county will translate to county expenditures on government services, police, and opportunity costs. These extra costs to the county must be weighed against any potential tax revenue from the project, which, as stated in Table 3, could range from approximately \$1-20 million over ten years.

Table 4.

Additional Annual Costs to County from Operations

Additional Households in County	7
Additional K-12 students	2.8
Additional Government Cost (Over 10 Years)	\$390,000

Source: Taimerica Model

Solar Facilities in Mississippi and Tax Abatement Terms

This study evaluated the 28 utility-scale solar projects approved by the Mississippi Public Service Commission (MPSC) since 2015. Out of the 28, the following three solar facilities are sufficiently similar to Minkar Solar and were further evaluated for abatement terms:

- Hattiesburg Solar Project in Forrest County
- Sumrall Solar Project in Lamar County
- Meridian III Solar Project in Lauderdale County

The Hattiesburg Solar Project in Forrest County and the Sumrall Solar Project in Lamar County received a 2/3 abatement (see Appendix B). The Meridian III Solar in Lauderdale County received a 50% abatement to offset infrastructure funding tied to the project (see Table 5).

Table 5.

Utility Scale Solar Projects in Mississippi approved since 2015

Solar Project	County	Size	Date
MS Solar 7	Clay	200 MW	2023
SR Byhalia	Marshall	4.8 MW	2023
SR Marshall	Marshall	4.8 MW	2023
SR CL Panola I, LLC	Panola	4.8 MW	2023
SR CL Panola II, LLC	Panola	4.8 MW	2023
Fable Solar, LLC	Stone	109 MW	2023
Harvest Gold Solar	Sunflower	99 MW	2023
Sunflower Solar, LLC	Sunflower	100 MW	2023
Delta's Edge	Carroll	100 MW	2021
MS Solar 4, LLC	Covington	96 MW	2021
Wildflower Solar, LLC	Desoto	100 MW	2021
Walnut Grove	Leake	5.14 MW	2021
MS Solar 6	Lowndes	150 MW	2021
Crane Creek	Clarke	78.5 MW	2020
Moon Shot	Hancock	78.5 MW	2020
MS Solar 5	Lowndes	200 MW	2020
Pearl River Solar Park	Scott	175 MW	2020
Sunflower Solar, LLC	George	112 MW	2018
Hattiesburg Solar Project	Forrest	50 MW	2017

SR Meridian III	Lauderdale	52.5 MW	2017
Lee Solar	Lee	1 MW	2017
Chickasaw Solar, LLC	Chickasaw	1 MW	2015
SR Houston, LLC	Chickasaw	3.9 MW	2015
MS Solar 2, LLC	Lamar	52 MW	2015
MS Solar 3, LLC	Lamar	52 MW	2015

Source: Mississippi Public Service Commission <https://www.psc.ms.gov>

Changes in Assessed Adjacent Property Values Surrounding Other Mississippi Solar Sites

National Review of Residential Property Value Impacts

- Based on the reviewed literature, there is no conclusion that solar projects negatively or positively impact property values. There is evidence that there are no property value reductions when landscaping, suitable fencing, and green space buffering zones are properly utilized around solar projects.
- Some studies found positive impacts on land value because the land where the projects are placed will not be developed for 25 years or longer, allowing the soil to regenerate from being farmed and accumulate nutrients.
- Solar power generation facilities are relatively new developments in Mississippi, and more data is needed to clearly understand their effects on real estate property values. Given the variability in residential property values, more real estate transactional data is needed to discern impacts from utility-scale solar facilities. As this industry grows, more real estate transaction data will be available for further study.

A growing body of research assesses the effects of utility-scale solar facilities on the communities where they are sited. Specific studies examine the effects of utility-scale solar facilities on the value of surrounding properties. Results from the literature reviews are mixed and conclude the following:

Elmallah et al. (2023) examined extensive residential housing sales data from transactions near utility-scale solar facilities in six states (i.e., CA, MN, CT, MA, NC, NJ). The research also included transactions in different land classifications, such as rural, urban, and suburban. The data sets were historically spanned to include the adjacent property transactions before and after the development of the large-scale solar project. Elmallah et al. assembled a robust database of 1.8 million residential real estate sales within proximity to over 1,522 PV solar facilities over 1 MWdc. The team uses a DiD (difference in difference) model to test the effects of nearby solar facilities on the value of residential housing sales. DiD is a fixed effects regression model appropriately used to model dynamic environments, such as labor and residential real estate markets, where overall prices or employment numbers change. The method provides a statistical tool for isolating the effects of an experimental group from those of a control group.

The research questions investigated in the study are:

1. What effect do large-scale PV projects have on residential home prices and
2. Does the effect of large-scale PV projects differ based on prior land use, the size of the project, and the urbanicity of a home's location?

This study's database has several control variables to test the heterogeneity of results. The authors carefully tested the underlying assumptions in the DiD method (parallel trends) to ascertain that the results are robust to the assumptions underlying the method.

The findings indicate that property values of residential homes within 1/2 miles of utility-scale solar facilities could change after the construction of a solar project. However, the study states that these impacts are unique for all transactions and are not transferrable from one situation to another.

Findings displayed in Table 6 show that, on average, a nearby PV solar project being built within .25 miles of a residence reduced the value of that residence by a maximum of 2.26%, and there was no effect on value if the residence was located a mile or further from the solar project. The average distance decay function for residential sales is shown below:

Table 6.

Findings of Distance to Property Value Effects by Elmallah et al.

Distance from PV Solar Project in Miles	Effect on Value as Percentage
0-.25	-2.26%
.25-.50	-1.33%
0.5-1.0	-0.82%
> 1	0

Source: Elmallah et al. (2023)

Note that this function explains the average price response for the database of 1.8 million real estate transactions in six states. The following caveats apply to the results of the study:

- No statistically significant effects on residential prices in CA, CT, and MA states. All price effects are recorded in MN, NC, and NJ.
- Price effects are only statistically significant in rural projects on agricultural land (row crops). Price effects are insignificant on greenfield projects (forest, developed open space, shrubs/scrub).
- Price effects are only measurable for PV solar projects that are greater than 75,813 square meters (18.7 acres) in size.

The results in Elmallah et al. (2023) are consistent with other studies of price responses to PV solar facilities conducted. Unlike prior research, this report captures the heterogeneous effects on price due to prior land use and geography.

Texas serves as a good example of high amounts of data on solar projects and residential property values because the state has seen increased land mass use by increasing the number of solar projects. Keilla et al., 2023 examined Texas market trends, collected residential real estate transaction data, and interviewed local market experts. Findings indicate that in Texas, there were no negative property value impacts on properties near utility-scale solar sites (Keilla et al., 2023).

Gaur and Land, 2020 studied Massachusetts and Rhode Island solar projects and residential property values. Using transactional housing data and control areas not adjacent to solar energy sites, the study modeled outcomes. The results imply an impact on properties closest to utility-scale solar facilities. However, the study identifies that both states have the highest population density. The effects of setting these expansive facilities in small states with high populations may skew the overall results (Gaur & Lang, 2020).

Al-Hammodah et al. (2018) surveyed approximately 400 property value assessors nationwide. They reported that most respondents believe that proximity to a solar installation has either no impact or a positive impact on home values. Positive impacts include border trees and the assurance that land will not be redeveloped for 30 years into potentially unfavorable use.

Given the Elmallah, Al-Hammodah study findings, Minkar Solar's long-term land maintenance and bio-diversity plan for the site, along with buffer zones, green spaces, and other vegetation, will minimize the visual effects on nearby residences.

Research on the Impact of Utility-Scale Solar Facilities in Mississippi

This report also examined changes in assessed property values on parcels adjacent to three other Mississippi solar facilities pre-and post-construction.

- a. Meridian III Solar, completed in 2019 (Lauderdale County);
- b. The Sumrall Solar project, completed in 2017 (Lamar County); and
- c. Hattiesburg Solar, completed in 2017 (Forrest County).

Obtaining the same data set for the three projects was challenging because they were built at various times. For example, Forrest County had assessed values for at most four years. Hattiesburg Solar was completed in 2017, and the data range starting in 2019 does not show pre- and post-completion value changes.

Using Stata, a statistical examination of the obtained assessed values on parcels adjacent to the Sumrall and Meridian Solar facilities was conducted. The multiyear analysis showed no statistically significant trends in assessed valuations. This supported the determination that assessed values would not provide sufficient data to draw conclusions about the effects of utility-scale solar facilities on residential properties within a mile of the site.

The Meridian and Sumrall solar facilities are in rural areas and have been removed from population centers. Consequently, adjacent properties are not bought and sold as frequently as urban parcels. Additionally, many land parcels surrounding the solar

facilities in Meridian and Sumrall are not residential. Without frequent transactions, baseline data sources are limited.

Generally, transactional data is captured by entities other than the counties. Multiple Listing Services (MLS) provide supporting data. This data frequently contains transactional prices, appraisal information, and comparatives to nearby property prices and is available through various platforms. This type of service more accurately establishes actual property values. Changes in the transaction price can reveal the effects of externalities, like adding an adjacent utility-scale solar project on surrounding property values.

When Elmallah et al. (2023) compiled the data for the study, they benefited from the massive number (1.8M) of residential property transactions proximal to the utility-scale solar facilities. Similar data for rural Mississippi does not exist. This lack of data complicates comparisons and conclusions similar to those in other studies.

Residential properties in Mississippi within ten miles of existing utility-scale industrial solar facilities show a general increase in value. Of 30 properties, two showed a minor decrease in value. What caused the decline is unclear and not available in the data surveyed.

Given the need to establish property value trends in communities with utility-scale industrial solar facilities, ten current residential listings were gathered from each county to gain this study’s general property valuation trends. A distance of approximately 10 miles from the control sites was established. A historical range from 2016-2023 from each property listing was obtained from Zillow estimates. The benefit of this data is the historic establishment of actual sales values contrasted with the present listing amounts (see Tables 7 - 9).

Table 7.

Property Value Changes in Proximity to the Meridian Solar Project

Street Address	City	County	2016 Value	2023 Value	Change in Value %
205 Smith Spur Road	Toomsuba	Lauderdale	98,000	115,000	15%
5782 Dogwood Drive	Toomsuba	Lauderdale	204,000	405,000	50%
5477 Rainbow Pkwy	Toomsuba	Lauderdale	210,000	339,000	13%
8524 Cottonwood Drive	Meridian	Lauderdale	198,000	237,000	16%
8219 Van Zyverden	Meridian	Lauderdale	220,000	320,000	31%
7590 Lake Cove Drive	Meridian	Lauderdale	665,000	752,000	11%
6902 13 th Place	Meridian	Lauderdale	279,000	329,000	15%
1715 43 rd Street	Meridian	Lauderdale	182,000	215,000	15%
6229 16 th Avenue	Meridian	Lauderdale	152,000	219,000	31%
7925 Van Zyverden	Meridian	Lauderdale	188,000	251,000	25%
Average			239,600	318,200	22%
				181,780	17%

Source: Zillow www.zillow.com; Realtor.com

Table 8.

Property Value Changes in Proximity to Hattiesburg Solar Silicon Ranch

Street Address	City	County	2016 Value	2023 Value	Change in Value %
67 Saint Andrews	Hattiesburg	Forrest	368,000	413,000	11%
1213 Carter Drive	Hattiesburg	Forrest	139,000	275,000	49%
104 Dovercliff	Hattiesburg	Forrest	241,000	405,000	41%
1103 Rushing Drive	Hattiesburg	Forrest	130,000	230,000	43%
2809 Laramie Circle	Hattiesburg	Forrest	87,000	210,000	59%
2900 Lincoln Road #9	Hattiesburg	Forrest	110,000	109,000	(1%)
54 Clear Springs	Hattiesburg	Forrest	139,000	215,000	35%
90 Deer Run	Hattiesburg	Forrest	144,000	195,000	26%
19 Suncrest	Hattiesburg	Forrest	175,000	217,000	19%
113 Jeff Davis	Hattiesburg	Forrest	189,000	398,000	53%
Average			172,200	266,700	37%
				245,000	36%

Source: Zillow www.zillow.com; Realtor.com

Table 9.

Property Value Changes in Proximity to the Existing Sumrall Solar Project, Lamar County

Street Address	City	County	2016 Value	2023 Value	Change in Value %
114 Ratcliff Road	Sumrall	Lamar	395,000	612,000	35%
877 Oloh Road	Sumrall	Lamar	498,000	535,000	7%
4806 Highway 589	Sumrall	Lamar	183,000	327,000	44%
5089 Highway 589	Sumrall	Lamar	180,000	430,000	58%
181 Gates Bridge	Sumrall	Lamar	211,000	299,000	29%
336 Oral Church Road	Sumrall	Lamar	351,000	975,000	64%
200 Poplar Street	Sumrall	Lamar	163,000	280,000	48%
152 Highway 42	Sumrall	Lamar	448,000	441,000	(2%)
599 Highway 42	Sumrall	Lamar	341,000	710,000	52%
4519 Highway 589	Sumrall	Lamar	535,000	569,000	6%
Average			330,500	571,800	34%
Stacker 5-year change for Sumrall and Typical Home Value				237,315	27.4%

Source: Zillow www.zillow.com; Stacker.com

Tax Data for Parcels on the Proposed Minkar Solar Site

The proposed solar project is slated to be located on 1,000 acres of non-reserved forests where harvest is allowed (see Table 10). It is a pine forest; Lamar County taxes collected in 2022 were \$13,984.

Table 10.

Tax Data for Parcels on the Proposed Minkar Solar Site

Parcel PPIN	Date 2022	Classification
16315	\$369.09	9220 Non-reserved Forests
16475	\$260.15	9220 Non-reserved Forests
35913	\$324.98	9220 Non-reserved Forests
35914	\$1,454.79	9220 Non-reserved Forests
16436	\$2,359.27	9220 Non-reserved Forests
16319	\$84.83	9220 Non-reserved Forests
16316	\$1,118.66	9220 Non-reserved Forests
16318	\$395.90	9220 Non-reserved Forests
19077	\$603.15	9220 Non-reserved Forests
16311	\$2,353.43	9220 Non-reserved Forests
38114	\$20.76	9220 Non-reserved Forests
16312	\$2,262.03	9220 Non-reserved Forests
16317	\$357.60	9220 Non-reserved Forests
Total	\$13,986.64	

Source: Lamar County Real Property Tax Data <https://deltacomputersystems.com/MS/MS37/plinkquerym.html>

Literature Review on Post-Project Accuracy of Economic Impact Studies Focusing on the Nissan Project in Canton

A method of evaluating the projections and outcomes of a commercial project is to conduct an *ex-ante* and *ex-post* review. These studies are often used when public funds and abatements are included as incentives for private investments. This information is reviewed to determine if initial projections (*ex-ante*) equal the outcomes (*ex-post*). Potential job creation is often the central topic when evaluating and obtaining support for commercial undertakings. Comparing the projected employment to the actual employment numbers verifies the accuracy of initial claims and validates intended outcomes.

The robustness of economic and fiscal impact studies is contingent on the quality of data utilized to derive estimates. The models do an adequate job of projecting outcomes if the scenarios play out as anticipated and the inputs are accurate. However, unanticipated macro and microeconomic activities can often cause the model outputs to differ from what happened.

The Nissan plant in Canton, Mississippi, was projected to create 6,000 full-time jobs. All studies and data support the initial claims that employment numbers were correct. Further, the Nissan plant in Canton continues its current operations with plans to expand the project (see Table 11).

Table 11.

Projected and Current Nissan Employment in Canton

Employment	Goodman (2002) Employment Projections for 2010	NSparc (2016) Employment Findings 2016
Direct	5,300	6,000
Indirect	21,980	19,000
Total	27,280	25,000

Sources: Goodman, Lowell et al. (2002) *The Economic Impact of Nissan Mississippi*. The Goodman Group; National Strategic and Planning Analysis Research Center (2016) *Nissan Canton: A Catalyst for Advanced Manufacturing in Mississippi*

Current and Future Uses for Properties Adjacent to Minkar Solar

There are approximately 113 properties adjacent to the proposed Minkar Solar. The parcels have mixed classifications and current usage. The parcels range from farms to housing and non-reserved forests. Property owners will determine future use.

National studies show that residential property impacts from utility-scale solar sites are limited to within one mile of the project. Approximately 505 residential properties are located within one mile of the proposed Minkar project. Preliminary data for those properties are summarized in Tables 12 & 13 and compute a median household income of \$81,775, which is \$18,000 higher than the county median household income of \$64,000. The population has increased by 11% (131) since 2010, and the population of African Americans is 5% higher at 27% than the county's 22%.

Table 12.

Population Within 1-Mile of Project

Total Population (2023)	1,324
Median Household Income (2023)	\$81,775
Average Household Size	2.75
Population by Race	
White	66%
Black	27%
Other or not reporting race	7%

Source: ESRI Community Analyst 2020 Census Profile

There are 505 residential properties within one mile of the project, with the majority (72%) being owner-occupied, 23% tenant-occupied, and 4.8% vacant (see Table 13). In 2020, 37% of houses within one mile of the proposed project site were for rent, and 19% were for sale. From 2020 to 2023, four additional houses were constructed within this

area. This area is largely rural, but with residential development moving west from Hattiesburg, the area is becoming more developed.

Table 13.

Residential Properties Within 1-Mile of Project

Total Housing Units	505
Total Households	95.2%
Total Vacant	4.8%
Owner Occupied	72%
Tenant-Occupied	23%
Vacant Housing Status (2020)	
For Rent	37%
For Sale	19%

Source: ESRI Community Analyst 2020 Census Profile

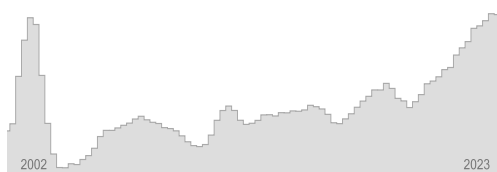
Investigate the Composition and Location of Construction Phase Workforces on Other Mississippi Solar Projects

Limited secondary data was found about the solar project construction workforce at other Mississippi solar projects. Economic developers and solar operators will need to be contacted to get this data.

Employment in Mississippi’s solar construction industry is growing. In the last ten years, it increased by 3.8%, compared to the national growth of 4.4%. The wages at \$80,000 are high for Mississippi, well above the \$47,000 average (see Figure 1). However, they are below the national average of \$95,000 for this industry.

Figure 1: Employment and Wages Comparison

EMPLOYMENT



2,785

Regional employment / **236,587** in the nation

3.8%↑

Avg Ann % Change Last 10 Years / **+4.4%** in the US

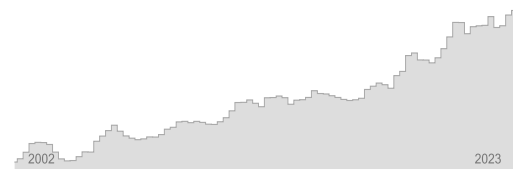


0.2%

% of Total Employment / **0.1%** in the US



WAGES



\$80,612

Avg Wages per Worker / **\$94,804** in the nation

3.9%↑

Avg Ann % Change Last 10 Years / **+3.6%** in the US



Conclusion

This report concludes that operations will have a marginal impact on direct and indirect jobs. However, the fiscal impact on Lamar County (considering potential tax abatements) will be significant. In 2022, Lamar saw only \$14,000 in tax revenue from the land on which the proposed utility-scale solar farm is built. The four tax abatement structures analyzed in this report show a significant increase ranging from \$1.032 million to \$19.937 million (over ten years).

Minkar Solar would create approximately 190 jobs during construction and approximately two full-time positions during post-construction operations, each earning three times above the county's average income. The project is expected to generate \$11.8 million in payroll during construction.

Our study has not identified residential property value impacts from nearby solar power generation facilities. However, these studies did conclude that no reductions occurred when landscaping, suitable fencing, and greenspace buffering zones were utilized.

Some studies found positive impacts on land value because the land will not be further developed for an extended period. Extensive real estate transaction data is needed to test whether utility-scale solar facilities in Mississippi impact property values.

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Appendix A: No Tax Abatement

Project at a Glance Lamar County Minkar Solar

2/22/2024 8:10

NAICS:	Solar Electric Power Generation	323111
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Direct Impacts from Operations		
Current Jobs in yr 0*		0
New Direct Jobs from project		2
Total Jobs in yr 5 with spinoff		9
Current Company Payroll	\$	-
New Direct Personal Income in yr 5	\$	232,000
Personal Income (New + Retained)	\$	232,000

Impacts during Operations		
Regional Jobs		9
Regional Personal Income	\$	638,000
Jobs for county residents (yr 5)		9
Personal Income for county residents (yr5)	\$	638,000
Share of project market outside county		100%

Parish Impacts during Construction		
Construction Jobs onsite		190
Total county jobs during construction		236
Construction period (months)		15
Total Payroll in Construction Period	\$	11,824,172
Construction Spending	\$	68,037,002
Total Company Investment	\$	130,809,728

Local Tax Benefits over 10 years (current \$, not NPV)		
Local Sales Tax all jurisdictions	\$	-
Local Property Tax with abatement	\$	19,937,756
Total Taxes	\$	19,937,756

Government Costs over 10 Years (current \$)		
County+Sheriff	\$	99,286
Schools	\$	281,479
Opportunity Costs	\$	9,242
Total Costs	\$	390,007

Incentive Package		
Property Tax(%)		0%
Benefit/ Cost Ratio		
Company Wage/worker in yr 1	\$	116,000
Company tax/worker in yr 1	\$	1,000,452

Socioeconomic Impacts		
Avg. Wage retained jobs		0
Avg. Wage New Jobs	\$	116,000
New Jobs as % of County Average Wage		301%
Additional Households in County		7
Additional K-12 students		2.8



TAIMERICA
MANAGEMENT FORECAST

Benefits and Costs of the New Investment and Jobs

Lamar County Minkar Solar

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Avg
In-County Impacts											
New Direct Jobs at Company	2	2	2	2	2	2	2	2	2	2	2
Total New Jobs for county residents	9	9	9	9	9	9	9	9	9	9	9
Total New Personal Income in county	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000
New Property Tax Digest (res. + comm. Outside of comp)	\$ 36,366	\$ 72,732	\$ 109,098	\$ 145,464	\$ 181,830	\$ 218,196	\$ 254,562	\$ 290,928	\$ 327,294	\$ 363,660	\$ 200,013
New Property Tax Digest (project only)	\$ 19,425,245	\$ 19,032,815	\$ 22,666,710	\$ 24,671,238	\$ 24,015,665	\$ 24,493,467	\$ 25,658,590	\$ 25,649,171	\$ 24,327,470	\$ 23,651,707	
Avg. Wage for Project	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000
Tax Benefits											
Property Tax											Aggregate
From Payroll Spending	\$ 675	\$ 1,350	\$ 2,024	\$ 2,699	\$ 3,374	\$ 4,049	\$ 4,723	\$ 5,398	\$ 6,073	\$ 6,748	\$ 37,112
From Project CAPEX	\$ 2,000,229	\$ 2,019,415	\$ 2,016,557	\$ 2,012,067	\$ 2,005,944	\$ 1,998,188	\$ 1,993,492	\$ 1,971,654	\$ 1,958,183	\$ 1,934,915	\$ 19,900,844
Reduction for abatement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Property Tax Impact	\$ 2,000,904	\$ 2,020,765	\$ 2,018,581	\$ 2,014,766	\$ 2,009,318	\$ 2,002,237	\$ 1,986,215	\$ 1,977,052	\$ 1,964,256	\$ 1,941,663	\$ 19,937,756
Total Tax Revenue	\$ 2,000,904	\$ 2,020,765	\$ 2,018,581	\$ 2,014,766	\$ 2,009,318	\$ 2,002,237	\$ 1,986,215	\$ 1,977,052	\$ 1,964,256	\$ 1,941,663	\$ 19,937,756
Tax by Jurisdiction											
County government (FV)	\$ 996,450	\$ 1,006,341	\$ 1,005,233	\$ 1,003,354	\$ 1,000,640	\$ 997,114	\$ 990,131	\$ 984,572	\$ 978,199	\$ 966,948	\$ 9,929,003
Schools (FV)	\$ 1,004,454	\$ 1,014,424	\$ 1,013,328	\$ 1,011,413	\$ 1,008,678	\$ 1,005,123	\$ 998,084	\$ 992,480	\$ 986,056	\$ 974,715	\$ 10,008,754
Government Costs											
Schools	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 281,479
County	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 99,286
Sheriff	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Opportunity Costs	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 9,242
Total Costs	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 390,007
Benefit/Cost Ratio	51.3	51.8	51.8	51.7	51.5	51.3	51.0	50.7	50.4	49.8	51.1

Source: Tamara EDO Cost/Benefit Model

*Opportunity costs are a method of avoiding double counting of workers already in the workforce and therefore paying taxes. They are the underemployed in the community.

Appendix B: Lamar County Historical Precedent 2/3

Project at a Glance
Lamar County Minkar Solar

2/22/2024 8:10

NAICS:	323111
Solar Electric Power Generation	

Direct Impacts from Operations	
Current Jobs in yr 0*	0
New Direct Jobs from project	2
Total Jobs in yr 5 with spinoff	9
Current Company Payroll	\$ -
New Direct Personal Income in yr 5	\$ 232,000
Personal Income (New + Retained)	\$ 232,000

Impacts during Operations	
Regional Jobs	9
Regional Personal Income	\$ 638,000
Jobs for county residents (yr 5)	9
Personal Income for county residents (yr5)	\$ 638,000
Share of project market outside county	100%

Parish Impacts during Construction	
Construction Jobs onsite	190
Total county jobs during construction	236
Construction period (months)	15
Total Payroll in Construction Period	\$ 11,824,172
Construction Spending	\$ 68,037,002
Total Company Investment	\$ 130,809,728

Local Tax Benefits over 10 years (current \$, not NPV)	
Local Sales Tax all jurisdictions	\$ -
Local Property Tax with abatement	\$ 6,670,660
Total Taxes	\$ 6,670,660

Government Costs over 10 Years (current \$)	
County+Sheriff	\$ 99,286
Schools	\$ 281,479
Opportunity Costs	\$ 9,242
Total Costs	\$ 390,007

Incentive Package	
Property Tax(%)	67%
Benefit/ Cost Ratio	17.1
Company Wage/worker in yr 1	\$ 116,000
Company tax/worker in yr 1	\$ 1,000,452

Socioeconomic Impacts	
Avg. Wage retained jobs	0
Avg. Wage New Jobs	\$ 116,000
New Jobs as % of County Average Wage	301%
Additional Households in County	7
Additional K-12 students	2.8



**Benefits and Costs of the New Investment and Jobs
Lamar County Minkar Solar**

In-County Impacts	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Avg
New Direct Jobs at Company	2	2	2	2	2	2	2	2	2	2	2
Total New Jobs for county residents	9	9	9	9	9	9	9	9	9	9	9
Total New Personal Income in county	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000
New Property Tax Digest (res. + comm. Outside of comp)	\$ 36,366	\$ 72,732	\$ 109,098	\$ 145,464	\$ 181,830	\$ 218,196	\$ 254,562	\$ 290,928	\$ 327,294	\$ 363,660	\$ 200,013
New Property Tax Digest (project only)	\$ 19,425,245	\$ 19,032,615	\$ 22,666,710	\$ 24,671,238	\$ 24,015,685	\$ 24,493,467	\$ 25,658,590	\$ 25,649,171	\$ 24,327,470	\$ 23,651,707	
Avg. Wage for Project	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000
Tax Benefits											
Property Tax											Aggregate
From Payroll Spending	\$ 675	\$ 1,350	\$ 2,024	\$ 2,699	\$ 3,374	\$ 4,049	\$ 4,723	\$ 5,398	\$ 6,073	\$ 6,748	\$ 37,112
From Project CAPEX	\$ 2,000,229	\$ 2,019,415	\$ 2,016,537	\$ 2,012,067	\$ 2,005,944	\$ 1,999,188	\$ 1,993,492	\$ 1,971,654	\$ 1,958,183	\$ 1,934,915	\$ 19,900,644
Reduction for abatement	\$ (1,333,406)	\$ (1,346,277)	\$ (1,344,371)	\$ (1,341,378)	\$ (1,337,296)	\$ (1,332,125)	\$ (1,322,328)	\$ (1,314,436)	\$ (1,305,455)	\$ (1,289,943)	\$ (13,267,096)
Total Property Tax Impact	\$ 667,418	\$ 674,488	\$ 674,210	\$ 673,388	\$ 672,022	\$ 670,111	\$ 665,807	\$ 662,616	\$ 658,801	\$ 651,719	\$ 6,670,660
Total Tax Revenue	\$ 667,418	\$ 674,488	\$ 674,210	\$ 673,388	\$ 672,022	\$ 670,111	\$ 665,807	\$ 662,616	\$ 658,801	\$ 651,719	\$ 6,670,660
Tax by Jurisdiction											
County government (FV)	\$ 332,374	\$ 335,095	\$ 335,737	\$ 335,347	\$ 334,667	\$ 333,715	\$ 331,612	\$ 329,903	\$ 328,003	\$ 324,556	\$ 3,321,989
Schools (FV)	\$ 335,044	\$ 338,393	\$ 338,433	\$ 338,041	\$ 337,355	\$ 336,396	\$ 334,275	\$ 332,633	\$ 330,718	\$ 327,163	\$ 3,348,672
Government Costs											
Schools	\$ 28,140	\$ 28,140	\$ 28,140	\$ 28,140	\$ 28,140	\$ 28,140	\$ 28,140	\$ 28,140	\$ 28,140	\$ 28,140	\$ 281,479
County	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 99,286
Sheriff	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Opportunity Costs	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 9,242
Total Costs	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 390,007
Benefit/Cost Ratio	17.1	17.3	17.3	17.3	17.2	17.2	17.1	17.0	16.9	16.7	17.1

Source: Tammerica EDO Cost/Benefit Model

*Opportunity costs are a method of avoiding double counting of workers already in the workforce and therefore paying taxes. They are the underemployed in the community.

Appendix C: Emerging County Precedent 80%

**Project at a Glance
Lamar County Minkar Solar**

2/22/2024 8:06

NAICS:	323111
Solar Electric Power Generation	

Direct Impacts from Operations	
Current Jobs in yr 0*	0
New Direct Jobs from project	2
Total Jobs in yr 5 with spinoff	9
Current Company Payroll	\$ -
New Direct Personal Income in yr 5	\$ 232,000
Personal Income (New + Retained)	\$ 232,000

Impacts during Operations	
Regional Jobs	9
Regional Personal Income	\$ 638,000
Jobs for county residents (yr 5)	9
Personal Income for county residents (yr5)	\$ 638,000
Share of project market outside county	100%

Parish Impacts during Construction	
Construction Jobs onsite	190
Total county jobs during construction	236
Construction period (months)	15
Total Payroll in Construction Period	\$ 11,824,172
Construction Spending	\$ 68,037,002
Total Company Investment	\$ 130,809,728

Local Tax Benefits over 10 years (current \$, not NPV)	
Local Sales Tax all jurisdictions	\$ -
Local Property Tax with abatement	\$ 4,017,241
Total Taxes	\$ 4,017,241

Government Costs over 10 Years (current \$)	
County+Sheriff	\$ 99,286
Schools	\$ 281,479
Opportunity Costs	\$ 9,242
Total Costs	\$ 390,007

Incentive Package	
Property Tax(%)	80%
Benefit/ Cost Ratio	10.3
Company Wage/worker in yr 1	\$ 116,000
Company tax/worker in yr 1	\$ 1,000,452

Socioeconomic Impacts	
Avg. Wage retained jobs	0
Avg. Wage New Jobs	\$ 116,000
New Jobs as % of County Average Wage	301%
Additional Households in County	7
Additional K-12 students	2.8



**Benefits and Costs of the New Investment and Jobs
Lamar County Minkar Solar**

In-County Impacts	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Avg
New Direct Jobs at Company	2	2	2	2	2	2	2	2	2	2	2
Total New Jobs for county residents	9	9	9	9	9	9	9	9	9	9	9
Total New Personal Income in county	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000
New Property Tax Digest (res. + comm. Outside of comp)	\$ 36,366	\$ 72,732	\$ 109,098	\$ 145,464	\$ 181,830	\$ 218,196	\$ 254,562	\$ 290,928	\$ 327,294	\$ 363,660	\$ 200,013
New Property Tax Digest (project only)	\$ 19,425,245	\$ 19,032,815	\$ 22,666,710	\$ 24,671,238	\$ 24,015,685	\$ 24,493,467	\$ 25,658,590	\$ 25,649,171	\$ 24,327,470	\$ 23,651,707	
Avg Wage for Project	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000
Tax Benefits											Aggregate
Property Tax											\$ -
From Payroll Spending	\$ 675	\$ 1,350	\$ 2,024	\$ 2,699	\$ 3,374	\$ 4,049	\$ 4,723	\$ 5,398	\$ 6,073	\$ 6,748	\$ 37,112
From Project CAPEX	\$ 2,000,229	\$ 2,019,415	\$ 2,016,557	\$ 2,012,067	\$ 2,005,944	\$ 1,998,188	\$ 1,993,492	\$ 1,971,654	\$ 1,958,183	\$ 1,934,915	\$ 19,900,644
Reduction for abatement	\$ (1,600,183)	\$ (1,615,532)	\$ (1,613,246)	\$ (1,609,654)	\$ (1,604,755)	\$ (1,598,550)	\$ (1,590,794)	\$ (1,577,323)	\$ (1,566,546)	\$ (1,547,932)	\$ (15,920,515)
Total Property Tax Impact	\$ 400,721	\$ 405,233	\$ 405,336	\$ 405,112	\$ 404,563	\$ 403,686	\$ 401,422	\$ 399,729	\$ 397,710	\$ 393,731	\$ 4,017,241
Total Tax Revenue	\$ 400,721	\$ 405,233	\$ 405,336	\$ 405,112	\$ 404,563	\$ 403,686	\$ 401,422	\$ 399,729	\$ 397,710	\$ 393,731	\$ 4,017,241
Tax by Jurisdiction											
County government (FY)	\$ 199,559	\$ 201,806	\$ 201,857	\$ 201,746	\$ 201,472	\$ 201,036	\$ 199,900	\$ 199,065	\$ 198,059	\$ 196,078	\$ 2,000,586
Schools (FY)	\$ 201,162	\$ 203,427	\$ 203,479	\$ 203,366	\$ 203,090	\$ 202,650	\$ 201,514	\$ 200,664	\$ 199,650	\$ 197,653	\$ 2,016,655
Government Costs											
Schools	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 281,479
County	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 99,286
Sheriff	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Opportunity Costs	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 9,242
Total Costs	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 390,007
Benefit/Cost Ratio	10.3	10.4	10.4	10.4	10.4	10.4	10.3	10.2	10.2	10.1	10.3

Source: Taimera EDD Cost/Benefit Model

*Opportunity costs are a method of avoiding double counting of workers already in the workforce and therefore paying taxes. They are the underemployed in the community.

Appendix D: Maximum Allowed 95% Fee-In-Lieu

**Project at a Glance
Lamar County Minkar Solar**

2/22/2024 8:08

NAICS:	323111
Solar Electric Power Generation	

Direct Impacts from Operations	
Current Jobs in yr 0*	0
New Direct Jobs from project	2
Total Jobs in yr 5 with spinoff	9
Current Company Payroll	\$ -
New Direct Personal Income in yr 5	\$ 232,000
Personal Income (New + Retained)	\$ 232,000

Impacts during Operations	
Regional Jobs	9
Regional Personal Income	\$ 638,000
Jobs for county residents (yr 5)	9
Personal Income for county residents (yr5)	\$ 638,000
Share of project market outside county	100%

Parish Impacts during Construction	
Construction Jobs onsite	190
Total county jobs during construction	236
Construction period (months)	15
Total Payroll in Construction Period	\$ 11,824,172
Construction Spending	\$ 68,037,002
Total Company Investment	\$ 130,809,728

Local Tax Benefits over 10 years (current \$, not NPV)	
Local Sales Tax all jurisdictions	\$ -
Local Property Tax with abatement	\$ 1,032,145
Total Taxes	\$ 1,032,145

Government Costs over 10 Years (current \$)	
County+Sheriff	\$ 99,286
Schools	\$ 281,479
Opportunity Costs	\$ 9,242
Total Costs	\$ 390,007

Incentive Package	
Property Tax(%)	95%
Benefit/ Cost Ratio	2.6
Company Wage/worker in yr 1	\$ 116,000
Company tax/worker in yr 1	\$ 1,000,452

Socioeconomic Impacts	
Avg. Wage retained jobs	0
Avg. Wage New Jobs	\$ 116,000
New Jobs as % of County Average Wage	301%
Additional Households in County	7
Additional K-12 students	2.8



**Benefits and Costs of the New Investment and Jobs
Lamar County Minkar Solar**

In-County Impacts	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Avg
New Direct Jobs at Company	2	2	2	2	2	2	2	2	2	2	2
Total New Jobs for county residents	9	9	9	9	9	9	9	9	9	9	9
Total New Personal Income in county	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000	\$ 638,000
New Property Tax Digest (res. + comm. Outside of comp)	\$ 36,366	\$ 72,732	\$ 109,098	\$ 145,464	\$ 181,830	\$ 218,196	\$ 254,562	\$ 290,928	\$ 327,294	\$ 363,660	\$ 200,013
New Property Tax Digest (project only)	\$ 19,425,245	\$ 19,032,815	\$ 22,666,710	\$ 24,671,238	\$ 24,015,865	\$ 24,493,467	\$ 25,658,590	\$ 25,649,171	\$ 24,327,470	\$ 23,651,707	
Avg. Wage for Project	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000	\$ 116,000
Tax Benefits											Aggregate
Property Tax											\$ -
From Payroll Spending	\$ 675	\$ 1,350	\$ 2,024	\$ 2,699	\$ 3,374	\$ 4,049	\$ 4,723	\$ 5,398	\$ 6,073	\$ 6,748	\$ 37,112
From Project CAPEX	\$ 2,000,229	\$ 2,019,415	\$ 2,016,557	\$ 2,012,067	\$ 2,005,944	\$ 1,998,188	\$ 1,993,492	\$ 1,971,654	\$ 1,958,183	\$ 1,934,915	\$ 19,900,644
Reduction for abatement	\$ (1,900,218)	\$ (1,918,444)	\$ (1,915,729)	\$ (1,911,464)	\$ (1,905,617)	\$ (1,898,279)	\$ (1,884,317)	\$ (1,873,071)	\$ (1,860,274)	\$ (1,838,169)	\$ (18,905,612)
Total Property Tax Impact	\$ 100,686	\$ 102,320	\$ 102,852	\$ 103,302	\$ 103,671	\$ 103,958	\$ 103,898	\$ 103,961	\$ 103,902	\$ 103,493	\$ 1,032,145
Total Tax Revenue	\$ 100,686	\$ 102,320	\$ 102,852	\$ 103,302	\$ 103,671	\$ 103,958	\$ 103,898	\$ 103,961	\$ 103,982	\$ 103,493	\$ 1,032,145
Tax by Jurisdiction											
County government (FV)	\$ 50,142	\$ 50,956	\$ 51,220	\$ 51,445	\$ 51,628	\$ 51,771	\$ 51,741	\$ 51,762	\$ 51,783	\$ 51,540	\$ 514,008
Schools (FV)	\$ 50,544	\$ 51,365	\$ 51,632	\$ 51,858	\$ 52,043	\$ 52,187	\$ 52,157	\$ 52,198	\$ 52,199	\$ 51,954	\$ 518,137
Government Costs											
Schools	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 28,148	\$ 281,479
County	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 9,929	\$ 99,286
Sheriff	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Opportunity Costs	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 924	\$ 9,242
Total Costs	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 39,001	\$ 390,007
Benefit/Cost Ratio	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.6

Source: Tamara EDO Cost/Benefit Model

*Opportunity costs are a method of avoiding double counting of workers already in the workforce and therefore paying taxes. They are the underemployed in the community.

Appendix E: Tax Abatements for Solar Projects in Mississippi

Mississippi's FIL statute, Miss. Code Ann. Section 27-31-46 for new factories and enterprises with capital investments of 100 million or more provides an abatement of up to 75% of the otherwise payable annual property tax. The maximum term of this abatement is ten years. Further amendments were made, adjusting the minimum investment to \$60 million.

In 2021, the Mississippi legislature passed Miss. Code Ann. Section 27-31-46 for renewable energy generation projects. Under this authorization, the county board of supervisors can grant tax abatements of 50% on renewable energy projects over \$100 million. In 2022, the legislature approved increasing the renewable energy abatement to 90%, with the remaining 10% allowable at a 50% reduction. This increases the total renewables exemption to 95%, with 5% as an FIL exemption (see Table E1).

Table E1.

Comparison of the FIL Tax Abatements for Mississippi

	Old FIL Legislation	Updated FIL Legislation
Mississippi Code	27-31-101	27-31-46
Type of Project	Factory or Enterprise	Renewable
Minimum Investment Amount	\$60 Million	\$100 Million
Duration	30 years	10 years
Assessment Rate	15%	15%
FIL Exemption	2/3 (66%)	5% (90% + 50%)

Source: Mississippi State Legislation Section 27-31-104 and 27-31-46