University of Louisiana Lafayette | Kathleen Babineaux Blanco Public Policy Center

The Impact of Utility-Scale Solar Power in Louisiana

An analysis of the impacts of solar power deployment on Louisiana's economy, land use, and workforce

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Executive Summary

Louisiana has a small solar footprint, with only 1,243 MW of installed solar capacity. However, the state is on the precipice of massive solar growth with 4,068 MW of facilities approved for interconnection and under construction or pending construction, and another 42 proposed solar projects in the state's grid interconnection queue totaling 8,685 MW of capacity.

We anticipate an expansion of utility-scale solar in Louisiana totaling 12.1 GW of new installed capacity by 2035 under a base case scenario. A high growth scenario anticipates an additional 4.1 GW installed between 2028 and 2035 under favorable policy and market conditions driven by demand from commercial and industrial users like data centers and producers of green hydrogen.

The Economic Impact of Solar Expansion in Louisiana

An economic impact analysis of the base case through 2035 estimates the solar industry will generate a total of $16.7 billion ($13.6 billion, discounted to present value) in total output through the direct, indirect, and induced effects of solar project development, installation, and operations & maintenance activities.

Those activities will result in a total value added to Louisiana's GDP of $8.9 billion ($7.3 billion discounted), including $6.4 billion ($5.3 billion discounted) in labor income for Louisiana workers and proprietors.

The employment impacts of solar sector activity will peak at over 13,000 jobs during a near term period of 2026 and 2027 when solar developers are expected to rush to get projects constructed and operational before a new deadline to qualify for clean power tax credits instituted by the One Big Beautiful Bill Act.

Solar industry activity is expected to generate state tax revenues of $490.5 million ($362.3 million discounted) through 2035. This estimate does not include revenue to parish and municipal governments through sales and property taxes.

Solar project completions are expected to hit a "cliff" once tax credit financing is no longer available, but growing sectors of the economy will bring increased demand for clean power resources in the long term. The availability of solar power may even be a contributing factor in future economic development wins for the state, especially as the economics of solar-plus-battery systems improves.

Other Key Insights About Solar in Louisiana

Solar can significantly expand tax revenues in communities where projects are sited, with a large amount of sales taxes during construction and ad valorem revenues from a solar property capable of exceeding those of a comparable agricultural property by as many as 60 times.

In addition to traditional economic benefits, solar has the potential to improve grid reliability and energy diversification in Louisiana where solar-based “community lighthouses” have already proven effective in extreme weather events. An expansion of inverter-based resources in Louisiana, especially solar-plus-battery systems, offers opportunities for grid modernization approaches that can reduce the risks of grid failure and outages.

Solar’s impact on agricultural land uses and values is often overstated. This report demonstrates the minimal impact of solar on Louisiana land use, with the projected increase in solar capacity requiring land area equivalent to only 1.1% of the total agricultural land area in the state. Solar offers additional benefits to rural communities through the implementation of agrivoltaics and through consistent, low-risk revenues for landowners and local governments.

The solar industry’s workforce needs are highly compatible with Louisiana’s existing industrial and construction workforce. Existing workforce training programs in the state offer a pathway for bringing job opportunities to more Louisiana workers. Finally, the availability of inexpensive and abundant electricity from solar generators can enable the expansion of other industries like green hydrogen production and data centers, which will bring additional workforce benefits to the state.

Acknowledgements

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Introduction

Solar has been the fastest growing source of net electricity generation in the United States every year since 2010 (U.S. Energy Information Administration, 2025). The increased deployment of solar has been fueled by advances in technology and economies of scale that have dramatically lowered the cost of solar installations and increased their efficiency, resulting in lower final costs for producing electricity. Investments have accelerated in recent years due to production tax credits (PTCs) and investment tax credits (ITCs) that were part of the Inflation Reduction Act. However, Louisiana has lagged behind other states in solar energy adoption.

Louisiana is an energy intensive state with a high concentration of industrial manufacturing that consume large amounts of power. However, despite improving economics and the work of the Climate Initiatives Task Force under former Governor John Bel Edwards to develop a Louisiana Climate Action Plan that called for significant expansions in solar deployment, solar development has not kept pace with other parts of the country, even when compared to areas with a similar economic makeup. To date, Louisiana has installed 1,243 MW of solar capacity across 15 utility-scale facilities (Thomas, 2025). For comparison, neighboring Texas has installed 24.4 GW of solar across 188 facilities.

One of the challenges has been working with state and local governments to get the necessary permits to build proposed projects as communities worked to determine how these types of projects could fit into the Louisiana landscape and economic ecosystem. In the 2025 Regular Legislative Session, the state passed a much-needed regulatory structure surrounding solar development, which provided certainty and significantly reduced project risk from future adverse regulation. This state-level policy development should support a more predictable path for development as the state continues to see demand for clean power in Louisiana grow from industrial power users like the Louisiana Energy Users Group who successfully lobbied the Louisiana Public Service Commission to enable “sleeved” power purchase agreements (PPAs) citing a desire to buy clean power directly from generators. Another notable development is the Meta data center in Richland Parish that will require 2.6 GW of power capacity, which will boost demand for solar given Meta’s commitment to source renewable energy.

The federal policy environment has had a significant impact on development efforts with major changes in recent years. In 2022, the Inflation Reduction Act (IRA) was passed introducing new PTCs and ITCs to incentive development of renewable energy projects. Between 2022 and 2024, 70 solar power projects were added to the MISO interconnection queue in Louisiana, totaling over 17 GW of capacity. More recently, the One Big Beautiful Bill Act (OBBBA) was signed into law on July 4, 2025 and significantly reduced the timeframe for solar projects to be eligible for the IRA’s tax credits. By mid-October 2025, 51 Louisiana solar projects had withdrawn applications from MISO’s interconnection queue, eliminating a combined 9.0 GW of planned solar capacity (47% of the total solar queue prior to passage of OBBBA).

Despite the recent exodus of solar projects from Louisiana, there is still a large volume of planned developments relative to Louisiana's existing solar portfolio. As of October 2025, 12 projects totaling 1,565 MW of nameplate capacity are currently under construction in Louisiana. An additional 25 projects with combined total capacity of 4,068 MW are approved, but have not yet started construction. Finally, there are 42 projects with a combined total capacity of 8,685 MW remaining in the MISO queue. An additional 752 MW sits in the interconnection queue of the Southwest Power Pool—the grid operator which oversees a portion of northwest Louisiana. Alone, the projects currently under construction or soon to begin construction in Louisiana will expand the state's solar power portfolio by more than five times its existing capacity. Despite the acceleration and deceleration of development caused by federal policy changes in recent years, the low cost of solar—coupled with increasing demand for clean power—will continue to drive demand forward in the state.

The purpose of this report is to document the impacts of utility-scale solar power deployment in Louisiana through 2035. This includes an analysis of statewide economic impacts in addition to a more nuanced review of the other potential impacts of utility scale solar including its contributions to the energy grid, how projects impact land use and rural communities, and workforce considerations in supporting future changes in the economy. As part of this assessment, we explore how the economic impact and local tax revenues from solar facilities compare to other major sources of revenue for some communities, as well as the potential for the state to capitalize on supply chain opportunities to support projects in Louisiana and beyond.

Economic Impacts

Inputs & Assumptions

The scope of the impact analysis is limited to the utility-scale solar sector, but does include solar-related activities such as the design, planning, construction, installation, and operation of large solar generating facilities in Louisiana, as well as any manufacturing activities occurring in support of those facilities. By definition, utility-scale solar facilities are large in size—generally considered greater than 1 MW, though the smallest facility in this analysis has a capacity of 50 MW—and are connected directly to the transmission grid to sell power in the wholesale market. "Behind the meter" residential and commercial rooftop solar systems are not included in the analysis.

This analysis estimates the economic impact of Louisiana's utility-scale solar sector from the present through 2035. This time horizon requires a forward-looking projection of the deployment of solar power facilities. To do this, the research team primarily relied on data from Midcontinent Independent System Operator (MISO) the regional transmission operator who manages a transmission grid connecting 15 states, including the majority of Louisiana.[1] MISO requires any new generating facility in their region to apply for an interconnection agreement in order to connect to the system's transmission network. The operator maintains a database of projects in its "interconnection queue" which includes the generator type, their planned capacity, the status of their interconnection study processes, and their locations. Our analysis uses these data, with assumptions about the does include solar-related activities such as the design, planning, construction, installation, and operation of large solar generating facilities in Louisiana, as well as any manufacturing activities occurring in support of those facilities. By definition, utility-scale solar facilities are large in size—generally considered greater than 1 MW, though the smallest facility in this analysis has a capacity of 50 MW—and are connected directly to the transmission grid to sell power in the wholesale market. "Behind the meter" residential and commercial rooftop solar systems are not included in the analysis.

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Solar Project Development & Installation

As of October, the MISO interconnection queue for Louisiana contained 42 solar project applications, totaling 8,685 MW of planned capacity. Typically, only 20-30% of projects in MISO's interconnection queue are ultimately built. Notably, these data are drawn from a period of time after major changes in federal policy that have shifted the economics of many projects. On July 4, 2024, the One Big Beautiful Bill Act (OBBBA) was signed into law and brought forward the end of production tax credits that had supported more rapid growth of solar deployment. Prior to the passage of OBBBA, there had been 19.4 GW of solar projects in the MISO queue, but 51 projects withdrew applications over the following month, removing 9.0 GW of project capacity from the queue, or about 47% of the total queue for solar projects prior to OBBBA. In addition, there are 38

[1] Data from the Southwest Power Pool (SWPP)—the grid operator covering a portion of Northwest Louisiana—was used in a similar fashion, but the large majority (92%) of planned capacity for Louisiana lies in the MISO queue.

projects totaling 5.6 GW of capacity that have been approved for interconnection but are either under construction or have not yet begun construction.

Rate of Deployment

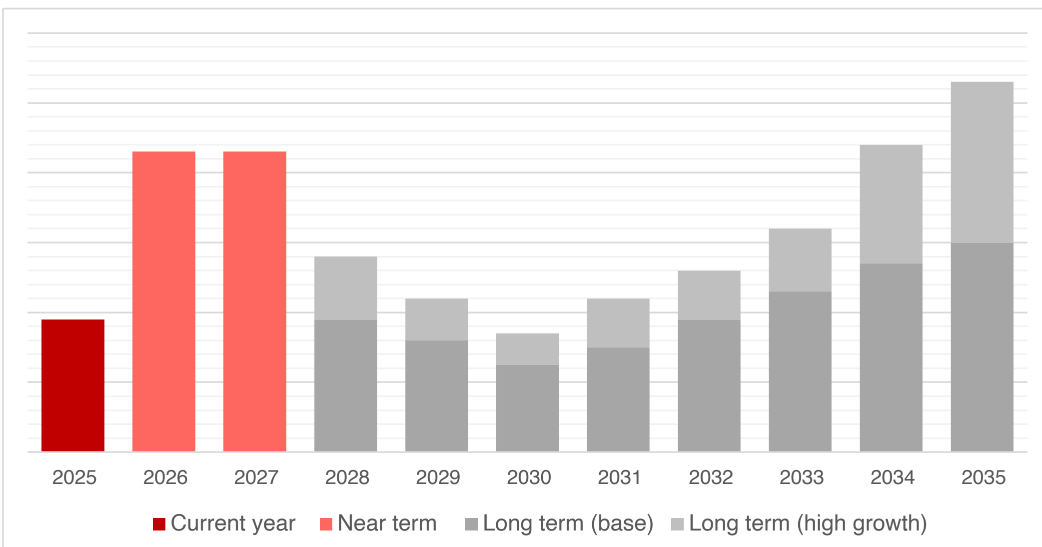
While the time it can take for a project to get approval varies, at a minimum, MISO aims to approve queued projects in 355 days (Midcontinent Independent System Operator, 2025). In practice, once projects have entered MISO's Interconnection Queue it typically takes 2-3 years before they are approved. Usually, projects will then need an additional 1-2 years before construction is completed and operations can begin. To be eligible for investment or production tax credits, the recently passed OBBBA requires projects to begin construction by July 4, 2026, or to enter service by the end of 2027. The reality of this timeline is that, without a substantial reduction in the time it takes to secure an interconnection approval and construction a facility, most projects currently in the interconnection queue will not be constructed soon enough to meet the eligibility requirements for investment or production tax credits. However, there are currently 38 projects in Louisiana that have already secured interconnection approval from MISO, with a combined capacity of 5.6 GW. A large percentage of those projects are expected to be built before the tax credit cliff arrives.

It is not known which projects in the interconnection queue will ultimately be built. Therefore, we estimate solar deployment as a percentage of total queue capacity, rather than selecting specific projects. This approach limits our ability to assess impacts at geographic scales more precise than the state level. The forecast of deployment used for the impact analysis assumes that 25% of queued projects will be completed at typical construction timelines. However, we institute a lower completion rate for 2028 and 2029, based on an assumption that some projects currently in the queue will not be economical unless they are completed before 2027 in order to be eligible for federal tax credits.

Figure 1 below demonstrates a simplified model of the deployment forecast used to generate inputs for the impact analysis. It is divided into three distinct timeframes:

1. The current year period reflecting immediate solar deployment in 2025. This represents a large increase in solar deployment in Louisiana—supported by incentives in the Inflation Reduction Act and a surge in project applications after 2021.
2. A "near term" period representing a rapid build out of planned solar projects as developers rush to build projects before the OBBBA tax credit eligibility cliff at the end of 2027.
3. A long term forecast from 2028 through 2035 characterized by a much lower rate of project completions after the tax credit cliff followed by a steady rise in deployment as market demand for solar grows and projects become increasingly economical.

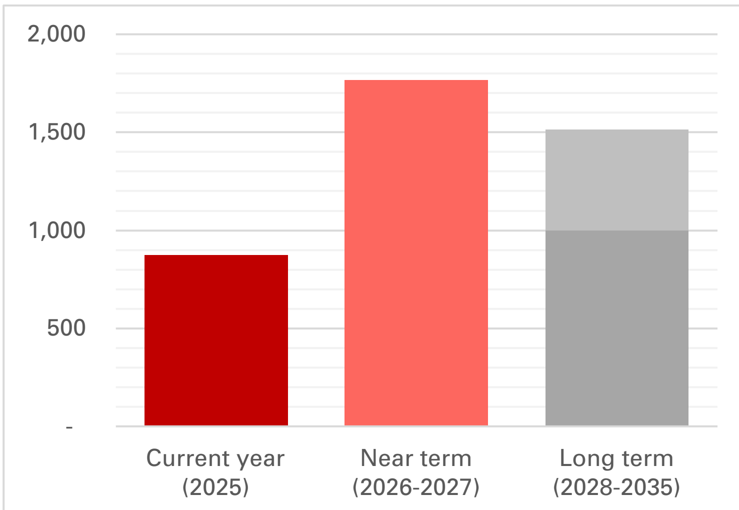
Figure 1. Demonstration of solar deployment scenario



The long term period in **Figure 1** also demonstrates a "high growth" case in which the post-OBBBA tax credit cliff is less pronounced, and solar projects grow at an expanded rate. A more robust growth scenario could be driven by two potential outcomes. The first, reflects the possibility that data center demand, which continues to grow nationally, will counterbalance some of the project losses expected from the OBBBA credit cliff should there be additional announcements in Louisiana that prioritize renewable power, or are better able to rapidly expand power generation capacity using solar as a contributing source. Second, a higher long term growth rate would be expected if there were a return to a favorable policy environment.

Figure 2 below summaries the average annual deployed MW from the deployment model during each of the time horizons used for modeling future deployment. For the current year, the model anticipates nearly 900 MW of solar added to Louisiana's portfolio. This includes 172.5 MW constructed and operating prior to October 2025 and contributions from other projects currently under construction. In the near term, the average deployed capacity jumps to nearly 1,800 MW per near term year before falling to an average of 1,000 MW across the long term of 2028 through 2035.

Figure 2. Average annual deployed solar capacity (MW) for current year, near term, and long term periods



In total, the base case capacity forecast estimates 12,415 MW of solar will be added to Louisiana's generating portfolio through 2035. This can be viewed as a significant increase in power generating capacity for the state and would represent 27% of Louisiana's 2024 total net electricity generation and 17% of estimated 2035 generation under a scenario of rising electricity demand in the state (National Renewable Energy Laboratory, 2025).[2] This level of growth in solar generation is more rapid than Louisiana has seen previously but is consistent with recent power trends. Coal generation in Louisiana has been on a steady decline as lower cost generators are able to outcompete older coal power plants, and power needs in Louisiana are rising with demand coming from data centers, EV adoption, and the electrification of manufacturing and industrial processes. Natural gas currently dominates Louisiana's electricity generation mix and is expected to play a large part in future power growth, but solar capacity additions could match or even exceed capacity additions of natural gas over the next decade.

[2] According to the EIA, Louisiana net electricity generation for 2024 was 99.6 million MWh (U.S. Energy Information Administration, 2025)Assuming a capacity factor of 25%, the total projected operating capacity of solar in the analysis would generate about 27 million MWh of electricity per year. Under a further assumption of rising demand for electricity in Louisiana—with an annual growth rate of 2% through 2035—the projected growth in solar would result in solar providing 21.5% of Louisiana's total electricity generation.

Solar System Costs and Local Purchases

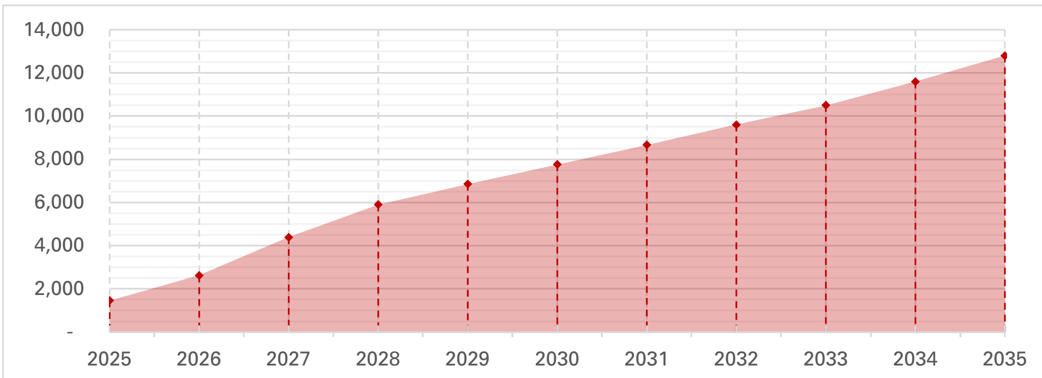
An assumption of deployed capacity is one important piece of the puzzle in analyzing the economic impacts of the solar industry. The anticipated spending on that deployment is another. To quantify solar sector spending, this study uses existing data on the per watt estimates of average solar system costs. We use a combination of information on hardware components including PV modules, inverters, electrical balance of system (EBOS) hardware, and structural balance of system (SBOS) hardware (Barnes & al., 2025) (Ramasamy & al., 2023). In addition, the analysis incorporates soft costs, which include direct labor, design & engineering, permitting & interconnection, logistics, civil (site preparation), and overhead & margin.

Many of the hardware components used in utility-scale solar systems are imported from overseas and thus do not incur an economic impact beyond wholesale and logistics activities. However, solar components are increasingly being sourced from domestic suppliers in order to meet domestic content requirements for federal incentives. There is now a large solar module manufacturing presence in Louisiana with First Solar's new manufacturing facility in Iberia Parish and a growing solar supply chain including manufacturers of intermediate inputs for modules and producers of other solar components. In cases where components are sourced from a Louisiana manufacturer, the impact of the spending is much greater as the dollars spent will stay in the local economy. Data from the SEIA Solar and Storage Supply Chain Dashboard and internal data from the IMPLAN impact software were used to determine the proportion of hardware spending flowing to Louisiana manufacturers (Solar Energy Industry Association, 2025). Future development within the state will help the Louisiana-based supply chain grow and can be expected to generate larger economic impacts for every dollar spent in future years. However, given the uncertainty of how much future growth might come to Louisiana, the economic impact analysis relied on Louisiana's current industrial mix with no additional assumptions for future growth.

Operations & Maintenance

Estimated spending on operations & maintenance (O&M) activities is also included in the impact analysis. Assumptions about per watt O&M spending were informed by research by the National Renewable Energy Laboratory (NREL) and direct input from industry participants (National Renewable Energy Laboratory, 2025). These costs are divided into activities related to site maintenance & landscaping, solar system maintenance & repair, and site monitoring and management.

Figure 3. Projected annual operating solar capacity (MW)



As with spending on project construction and installation, O&M spending is based on the projected growth of operating solar systems in Louisiana. As of October 2025, there were 1,243 MW of utility solar systems operating in Louisiana. Our analysis assumes a portion of the projected capacity installed in a given year as operational in that year, with the remaining portion operational in the following year. As seen in **Figure 3**, the forecast of operating solar capacity for state increases from 1.5 GW at the end of 2025 to a final operating capacity of 12.8 GW in 2035.

Economic Impact Methodology

Economic impact assessments capture more than a company's direct spending and employment—they capture the broader set of economic activities generated by an initial infusion of new dollars into the economy. When new economic activity occurs, businesses purchase additional inputs, jobs are created, and workers have additional dollars for purchasing goods and services. Economic impact studies account for indirect spending by businesses and induced spending by workers who benefit from additional dollars. Typically, these studies focus on how new dollars that enter a regional economy—whether a parish, state, or another geographic area—circulate and generate further economic activity.

The full impact of the indirect and induced effects within a regional economy are quantified using a regional economic impact model including economic multipliers. Economic impact models estimate the total amount of economic activity associated with an initial round of spending using jobs, earnings, value added, and output multipliers. This methodology is based on measuring inter-industry linkages across the economy and relies on the commonly used input-output method developed by Wassily Leontief, for which he was awarded the Nobel Prize in Economics (NobelPrize.org, n.d.).

While input-output models have advanced considerably since the development of Leontief's methodology, the same fundamental principles apply. Relying on the assumption of linear relationships (and technology), the methodology captures commodity flows from producers to intermediate consumers to final consumers. IMPLAN is a tool that measures economic impact and provides the historical industry relationships. This tool, like other widely used tools for economic impact analyses, allows users to focus on constructing a model that aligns project inputs with the appropriate industries and helps researchers best reflect the expected flow of dollars through the economy. A full overview of input-output analysis is provided by Miller and Blair (Miller & Blair, 2009).

Interpreting IMPLAN Results

IMPLAN's modeling tool provides estimates for three categories of economic effects demonstrating the direct, indirect, and induced economic impacts of the activity being measured. Direct effects quantify the impact of activities directly related to the measured event and can be thought of as the "first round" of spending. In this study, direct effects encompass the employment, labor income, added value and output associated with project development, construction, installation, and operations & maintenance activities for solar projects in Louisiana. Direct employment includes any Louisiana-based jobs created by solar project development companies; engineering, procurement, and construction (EPC) contractors; manufacturers of solar hardware and structural components; operations & maintenance workers or contractors; and any other jobs directly engaged in the manufacturing, development, construction, installation, and operation of Louisiana solar systems.

"Labor Income" measures the salaries, wages, and benefits of employees, as well as any proprietor income. "Value Added" corresponds to the economic value created by the activity being measured. It can be thought of as the contribution to the selected region's GDP from the measured activity. "Output" encompasses Labor Income, Value Added and the value of any intermediate inputs, which are not included in Value Added. These economic effects are nested, meaning Output contains Value Added—plus other factors like intermediate inputs—and Value Added contains Labor Income, plus additional economic value created by the measured activity.

Indirect effects measure the impacts of business-to-business spending on the inputs required for the direct activity measured. For instance, a manufacturer of solar modules may purchase prefabricated steel or raw materials from another supplier. New demand may require suppliers to hire more employees to expand production. Energy inputs and support services are also included in indirect impacts. Lastly, induced effects measure the economic impact resulting from household spending by workers employed through the direct and indirect activities. They often include spending on groceries, restaurants, vehicles, housing expenses, and other consumer goods and services in the area.

Results

The results of the economic impact analysis presented below illustrate the economic impact of the utility solar industry in Louisiana, including an estimate of state tax revenues. Impacts are determined for activities related to project development, construction, and installation of utility solar systems, and for the operation and maintenance of those systems over the period ending in 2035. The results are divided into three distinct time periods: the current year, with immediate impacts from solar industry activities in 2025; the near term of 2026 and 2027, demonstrating the impacts of a high level of activity as developers rush to finish projects to meet the deadline to qualify for federal tax credits; and the long term, representing a lower level of activity compared to the near term peak followed by gradual growth in demand for solar resources through 2035. Results of the base case scenario are presented in the subsequent three sections. A high-level comparison to the high growth scenario can be found in the **Combined Impacts & High Growth Scenario** section.

Project Development & Installation

Project development, construction, and installation activities from the utility solar industry in Louisiana provide a large initial infusion of dollars into the economy. **Table 1** shows the average annual impacts of the utility solar project development and installation in Louisiana for each time period, as well as total impacts for the entire time horizon. In total, the activity is estimated to generate output of nearly $15.6 billion through 2035, or $12.8 billion when discounted to present value. That output includes approximately $8.4 billion ($6.9 billion discounted) in value added to Louisiana’s economy including $6.1 billion ($5.0 billion discounted) of labor income flowing to workers and proprietors in the state. Total employment created by these activities is expected to peak at nearly 12,900 workers as developers rush to secure tax credits before the end of 2027.

Table 1. Project development & installation average annual total impacts per time period

Period	Employment	Labor Income (millions)	Value Added (millions)	Output (millions)
Current year (2025)	6,378	$383.3	$527.7	$984.5
Near term (2026-2027)	12,876	$800.4	$1,102.1	$2,056.1
Long term (2028-2035)	7,295	$510.7	$703.1	$1,311.8
Total (2025-2035)	–	**$6,069.5**	**$8,357.1**	**$15,590.8**
Total Discounted	–	**$4,982.8**	**$6,860.8**	**$12,799.3**

In the current year, utility solar project development and installation will support 6,378 workers and create total labor income of $383.3 million. The sector will generate output of $984.5 million, with a contribution of $527.7 in value added to Louisiana's GDP. Direct activities related to project development and installation are responsible for supporting over 4,000 jobs, with another 2,300 jobs created through the indirect and induced effects of solar sector activities.

Table 2. Project development & installation impacts, 2025

Impact	Employment	Labor Income (millions)	Value Added (millions)	Output (millions)
Direct	4,032	$255.5	$290.3	$560.4
Indirect	994	$58.5	$101.1	$194.8
Induced	1,352	$69.2	$136.3	$229.3
Total	**6,378**	**$383.3**	**$527.7**	**$984.5**

In the near term, a rush of development is anticipated to generate the highest annual impacts within the study period. During these two years, the majority of the 5.6 GW of approved, but not yet constructed solar projects are expected to be installed. This burst of activity is estimated to result in an average annual output of approximately $2.1 billion, with $1.1 billion of value added and $800.4 million of labor income. Employment in this period is projected to double from the 2025 level—peaking at nearly 12,900 workers supported. Solar development activities are expected to drop considerably in 2028 after which uncompleted projects will no longer meet eligibility requirements for tax credit support. However, demand for solar power in Louisiana—supported by growth in the data center sector and other large commercial and industrial users—will continue to grow, with project development and installation activities rising from a low point in the late 2020s. Throughout the long term period (2028-2035), solar project development and installation activities are expected to support an average of roughly 7,300 workers, $510.7 million in labor income ($386.2 million discounted), $703.1 of value added ($531.7 million discounted), and $1.3 billion of output ($991.9 million discounted).

Operations & Maintenance

Operations and maintenance (O&M) activities for solar power facilities have a much lower annual impact than project development and installation—a result of the passive nature of solar technology—but each new development is expected to operate for many years generating notable cumulative impacts over time. As solar deployment grows in Louisiana annual operation of these projects will continue to provide stable economic benefits to the state and communities where projects are located.

Table 3 below shows the direct, indirect, and induced impact estimates for 2035, the final year of the analysis. By that year, solar operations & maintenance will have grown its annual output to an estimated $184.7 million ($120.0 million discounted). The daily operations and recurring maintenance of Louisiana solar farms will contribute $99.3 million of added value to the state's economy per year ($64.5 million discounted) and will directly employ 739 workers with a total workforce impact of over 1,000 jobs and $60.8 million of labor income ($39.5 million, discounted).

Table 3. Operations and maintenance impacts, 2035

Impact	Employment	Labor Income (millions)	Value Added (millions)	Output (millions)
Direct	739	$38.9	$57.7	$109.1
Indirect	153	$11.0	$20.1	$39.4
Induced	170	$10.9	$21.5	$36.2
Total	**1,062**	**$60.8**	**$99.3**	**$184.7**
Total Discounted	**1,062**	**$39.5**	**$64.5**	**$120.0**

Table 4. Operations & maintenance average annual total impacts per time period

Period	Employment	Labor Income (millions)	Value Added (millions)	Output (millions)
Current year (2025)	121	$5.5	$9.0	$16.8
Near term (2026-2027)	292	$13.8	$22.6	$42.0
Long Term (2028-2035)	764	$41.0	$66.9	$124.5
Total (2025-2035)	–	**$361.3**	**$589.7**	**$1,096.6**
Total Discounted	–	**$275.7**	**$449.9**	**$836.8**

Table 4 shows the average annual total impacts for each time period and the total impacts of solar facility operations and maintenance for the entire time horizon through 2035. Similar to the trend shown in **Figure 3**, this table reflects the cumulative nature of operations and maintenance impacts. In 2025, O&M activities are only expected to support employment of 121 workers and an output of $16.8 million. O&M impacts more than double in the near term, continue to grow throughout the long term despite the anticipated decline in new project installations. Over the full time horizon, O&M activities will generate an estimated output of $1.1 billion ($836.8 million discounted), added value of $589.7 million ($449.9 discounted), and labor income of $361.3 million ($275.7 million discounted). It should be noted that while these figures are lower than the impacts of project development & installation activities, they are often more concentrated in the communities where projects are deployed. This is a result of the nature of solar O&M activities which typically lean heavily towards site & vegetation management and system component maintenance tasks suited to a more local work force.

Combined Impacts & High Growth Scenario

When combined, the project development & installations and operations & maintenance activities of Louisiana's solar sector are expected to result in a total output of $16.7 billion ($13.6 billion discounted) through 2035, as seen in **Table 5**. Value added over this period is approximately $8.9 billion ($7.3 billion discounted), and peaks in the near term period of 2026-2027 at an average of $1.1 billion per year—$600 million of which results from direct impacts. For context, the Bureau of Economic Analysis estimates the utility sector's contribution to Louisiana's GDP to be $6.2 billion in 2024 (U.S. Bureau of Economic Analysis, 2025). Under the base case scenario for solar deployment, the average direct impact of the industry in the near term would represent about a 10% increase to the utility sector's GDP contribution. Employment also peaks in the near term, with the solar industry sustaining over 13,000 jobs in 2026 and 2027. Total employment across all years of the study time horizon fluctuates but is expected to remain above the current year estimate of 6,499 workers. Ultimately, the activities of the solar sector in Louisiana are expected to result in an estimated $6.4 billion ($5.3 billion discounted) in labor income for Louisiana's workers and proprietors.

Table 5. Combined impacts of project development & installation and operations & maintenance, base case scenario

Period	Employment	Labor Income (millions)	Value Added (millions)	Output (millions)
Current year (2025)	6,499	$388.8	$536.7	$1,001.3
Near term (2026-2027)	13,168	$814.3	$1,124.7	$2,098.0
Long Term (2028-2035)	8,059	$551.7	$770.1	$1,436.3
Total (2025-2035)	–	**$6,430.8**	**$8,946.8**	**$16,687.4**
Total Discounted	–	**$5,258.5**	**$7,310.8**	**$13,636.1**

The above figures reflect a base case scenario of solar growth in Louisiana, but it is worth examining the possible impacts should the industry see a return to a more favorable policy environment and/or a considerable rise in demand for clean power over the long term period, which could plausibly be led by the ongoing wave of data center investments. **Table 6** displays the impact results of the "high growth" scenario as illustrated in **Figure 1**. This scenario sees an increased growth rate of solar installations for the long term, resulting in additional output of $709.8 million. The additional activity results in a total value added of $12.0 billion ($9.5 billion discounted), and higher average employment for the long term at 11,890 jobs.

Table 6. Combined impacts of project development & installation and operations & maintenance, high growth scenario

Period	Employment	Labor Income (millions)	Value Added (millions)	Output (millions)
Current year (2025)	6,499	$388.8	$536.7	$1,001.3
Near term (2026-2027)	13,168	$814.3	$1,124.7	$2,098.0
Long Term (2028-2035)	11,890	$827.1	$1,150.6	$2,146.1
Total (2025-2035)	–	**$8,634.1**	**$11,990.9**	**$22,366.1**
Total Discounted	–	**$6,815.1**	**$9,461.3**	**$17,647.8**

State Tax Revenues

The activities associated with the solar industry in Louisiana—project development, construction & installation, operations & maintenance, system component manufacturing, wholesale trade, and logistics—as well as the indirect and induced activities associated with the core direct activity generate tax revenues for the state of Louisiana as part of their economic impact. As **Table 7** outlines below, the state of Louisiana can expect to collect a total of $490.5 million ($362.3 million discounted) in tax revenues resulting from solar sector activities through 2035.[3] The majority of this revenue will come from project development & installation activities, which generate a substantial share of sales tax revenues for the state. However, as the amount of solar installations grows in the state, tax revenues from operations & maintenance activities are expected to increase, with the annual average nearly tripling in the long term period from the near term average.

Table 7. Average annual total state tax revenues per time period, all activities

Period	Project Development & Installation (millions)	Operations & Maintenance (millions)	Total (millions)
Current year (2025)	$29.2	$0.4	$29.7
Near term (2026-2027)	$61.1	$1.1	$62.1
Long term (2028-2035)	$39.0	$3.1	$42.1
Total (2025-2035)	**$463.0**	**$27.6**	**$490.5**
Total Discounted	**$344.1**	**$18.3**	**$362.3**

The methodology of this analysis limits our ability to accurately estimate potential revenue impacts for local governments at the parish and municipal level. Local tax revenue outcomes will depend on the level of activity and tax rates for a given jurisdiction and the high degree of variability in local taxes across jurisdictions makes quantifying even a generalized assessment of local tax revenue a challenge. Finally, we note that the results of this study do not make assumptions about impacts to revenues from economic development incentives granted from state or local governments. A qualitative overview of how solar developments can bring revenues to local communities can be found in the **Land Use Tradeoffs and Compatibility** section of this report under **Ad valorem potential of solar farms in rural communities.**

[3] Increased activity in the long term period of the high growth scenario results in a total state tax revenue of $658.6 million ($461.4 million discounted).

Solar's role in supporting economic development in Louisiana

This section describes the impacts solar can have on Louisiana's economy from the activities of planning, constructing, and operating solar power facilities. But there are other, less tangible, economic benefits of solar expansion related to the characteristics of solar when compared to other electricity generation technologies. Namely, that solar is affordable, quick to deploy, and emission free and thus appeals to utility companies and large power users who are seeking to deploy large amounts of power quickly or who are trying to meet ESG commitments on greenhouse gas impacts.

The availability of solar power in Louisiana is becoming a critical factor in the state's ability to attract major commercial and industrial investments. This trend is exemplified by Meta's artificial intelligence data center project in Richland Parish, which has been touted as a nearly $30 billion investment—one of the largest private capital investments in Louisiana's history (Riegel, 2025). Meta has pledged to match its electricity use on-site with 100% clean and renewable energy, committing to interconnect at least 1,500 megawatts of new renewable generation to the grid (Wolfe, 2025). To enable the Meta project, Entergy Louisiana has said it will invest $6 billion in electric infrastructure. The boom in solar development to meet the Meta data center's power needs is evident when mapping solar projects in MISO's interconnection queue, as can be seen in the cluster of proposed developments in Richland, Morehouse, and Ouachita parishes near Meta's selected site. This case illustrates a broader national trend in corporate site selection, where the ability to quickly meet energy needs has become a critical third factor alongside traditional considerations of quantity and cost. Research from consulting firms like McKinsey confirms that "time to power" has emerged as the biggest consideration for data center operators when building new sites (Green & et. al., 2025).

Companies are also prioritizing access to *renewable* energy sources to meet their sustainability commitments. For instance, Louisiana's existing industrial base has been vocal about the urgent need for expanded renewable energy access. The Louisiana Energy Users Group (LEUG), a coalition of 26 major companies including Dow Chemical, Chevron, ExxonMobil, Honeywell, and Nucor Steel, successfully advocated for the ability to directly procure solar power via sleeved PPAs, expressing frustration with the pace of renewable energy development in the state (Muller, Entergy power plant for Meta data center moves toward early regulatory approval, 2025). These companies may require renewable energy to achieve corporate net-zero goals or to maintain competitiveness as clients demand more clean energy inputs in their supply chain. The state's ability to provide cost-effective solar power could increasingly determine Louisiana's success in both retaining its existing industrial employers and attracting new high-value investments in data centers, advanced manufacturing, and other energy-intensive sectors.

Contribution to Energy Diversification and Grid Reliability

According to the Louisiana Legislative Auditor, "grid reliability in Louisiana fell short of the national average and worsened between 2013 and 2023. For example, in 2023, Louisiana had one of the highest numbers and durations of outages in the southern region, even when excluding outages due to major events, such as hurricanes or tornadoes" (Waguespack, 2025). Solar energy, especially when paired with battery storage, can contribute to grid reliability and mitigate the effects of outages. Adding solar energy to the generation mix helps to diversify the electrical grid, which can enhance the resilience, reliability, and sustainability of energy supply. By integrating various energy sources, particularly renewable energy technologies such as solar power, states can support existing industrial and commercial activities while fostering future economic growth.

Contribution of Solar Energy

Distributed Generation

Solar energy promotes distributed generation, where energy is produced close to its point of use, reducing transmission losses and enhancing grid resilience. This decentralized approach helps reduce transmission grid upgrades as demand increases, and empowers industries to generate their own power, providing energy security and potentially lowering operational costs.

Scalability and Speed of Deployment

Solar installations can be scaled to meet the specific needs of industrial and commercial entities, from small rooftop systems to large utility-scale solar farms. This flexibility allows businesses to adopt solar technologies at their own pace, facilitating a smoother transition to renewable energy. In addition, solar power plants can be installed more quickly than traditional power plants, which may prove to be essential when demand is rapidly increasing due to data center usage and other increasing energy demands.

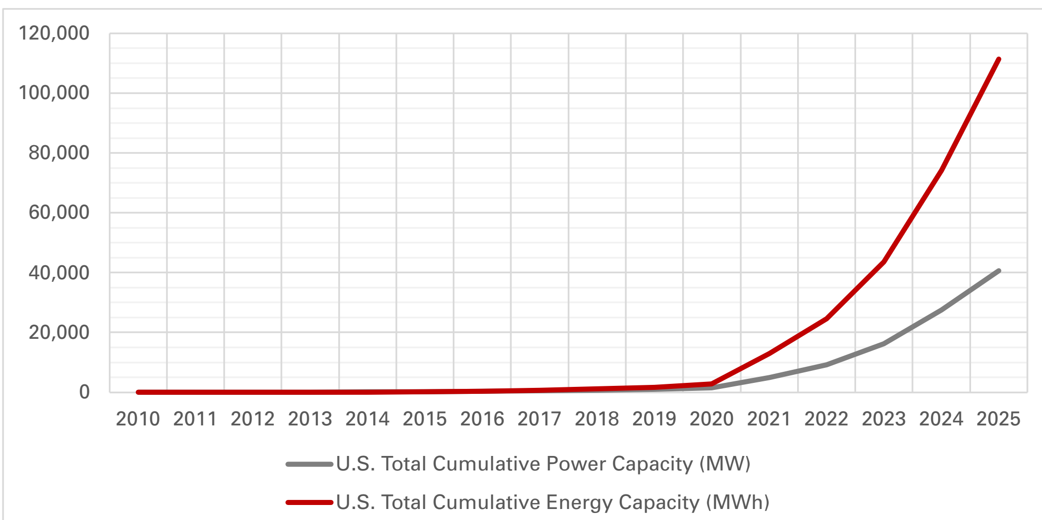
Integration with Storage

Solar energy can be effectively paired with energy storage solutions, like batteries, allowing for the storage of excess energy generated during peak sunlight hours for use during periods of high demand or low generation. This capability supports grid stability and provides businesses with a reliable energy supply. When paired with storage, solar energy systems can compete on price and functionality with natural gas peaker plants which are needed to meet surging demand, particularly in the early evening.

Opportunities for Battery Storage in Louisiana

In recent years, battery energy storage systems, or BESS, have benefitted from cost declines and increases in efficiency similar to what was seen with PV solar in the 2000s and 2010s. As of 2025, the levelized cost of energy for a solar+battery storage system is generally lower than that of a natural gas peaking plant and in some cases can be lower than that of a combined cycle gas turbine (Lazard, 2025). The installed capacity of large-scale, grid connected battery systems has grown dramatically in the United States during the last five years as a result of per MWh cost declines and the added value of services BESS can provide utilities and grid operators (see **Figure 4**). The growth trend is most prominent in electricity markets with a high penetration of solar and wind generation resources. Initial penetration of grid-scale batteries was seen in California, where BESS became prevalent as a solution to the “duck curve” issue caused by high level of adoption of behind-the-meter solar systems and the subsequent need for utility operators to balance swings in demand. Texas also witnessed a rapid expansion of BESS installations fueled by ERCOT’s competitive market structure and an abundance of wind and solar generation resources. This scenario created lucrative opportunities for energy price arbitrage, a key revenue model for battery system operators.

Figure 4. Large-scale battery storage operating capacity (2010–2025)



Data source: U.S. Energy Information Administration, November 2025 Form EIA-860M, Preliminary Monthly Electric Generator Inventory.

BESS adoption in Louisiana (and MISO in general) has lagged other markets like CAISO and ERCOT. Yet, utilities in Louisiana are starting to show interest in battery storage, which can be seen in the interconnection queue data. At present, there are only three battery storage projects in Louisiana with interconnection approvals from MISO, totaling 45 MW of generator capacity. However, there are an additional 15 active battery storage applications in the queue, totaling 3,148 MW of potential capacity. Nine of those projects, totaling 2,200 MW, were added to the queue after the passage of the One Big Beautiful Bill Act, which retained investment tax credit eligibility for battery storage projects, provided they comply with new foreign entity of concern requirements.

The growth in BESS project proposals in Louisiana can be attributed to multiple factors. The most significant opportunity for battery storage assets in vertically integrated states like Louisiana is the ability to engage in “peak shaving,” a process where utilities use batteries to store low-cost power—generated during periods of high supply and low demand—and shift its use to the early evening hours, typically a time of peak demand with higher generation costs. BESS can also provide value to utilities through ancillary services like frequency regulation, the provision of operating reserve, voltage support, and grid start services in the case of outages. The placement of batteries at strategic locations on the grid can also defer the need for transmission upgrades that are more costly. This application can provide congestion relief and stability in locations where transmission infrastructure may not be adequate to meet demand peaks.[4]

The continued expansion of solar capacity in Louisiana will enable further opportunities for BESS—allowing utilities to leverage inexpensive power generated by solar to reduce peak system costs and provide ancillary services that increase reliability and resiliency of the grid. Over time, the stability provided by BESS peak shaving and other services could allow for lower use and potentially even retirement of a utility’s most expensive and polluting assets. Transmission infrastructure upgrades have become more costly over time and come with lengthy approval processes and construction timelines. BESS enables utilities to defer transmission spending and utilize available capital for generation assets like solar that can result in lower costs for ratepayers.

Benefits of Diversifying the Electric Grid

Resilience and Reliability

A diversified electric grid mitigates the risks associated with reliance on a single energy source, thereby enhancing the reliability of power supply. This stability is crucial for industrial and commercial operations, which depend on consistent energy availability to maintain productivity and avoid costly downtimes.

Cost Stability

Diversifying the energy mix can lead to more stable energy prices over time. By incorporating renewable sources such as solar, which generally have lower operational costs once installed, states can protect businesses from volatile fossil fuel prices, contributing to a more predictable cost structure for industries. As utilities and cooperatives seek to offer affordable energy solutions, solar projects can provide a hedge against rising energy prices, particularly in a state with a history of volatile natural gas markets.

[4] A more detailed summary of the potential applications of battery storage systems, both behind and in front of the meter, can be found in chapter 23 of the U.S. Department of Energy’s Electricity Storage Handbook (Nguyen, et al.).

Attracting Investment

A robust and diversified electric grid can attract new investments. Companies are increasingly considering sustainability and energy reliability in their location decisions. States that prioritize renewable energy infrastructure can position themselves as attractive destinations for businesses seeking to minimize their carbon footprint while ensuring energy reliability. An example of this is the Meta project discussed above.

Job Creation

The transition to a diversified energy grid, especially through the integration of solar energy, has the potential to create numerous jobs in manufacturing, installation, maintenance, and operation of renewable energy systems. This job creation is essential for sustaining local economies and supporting the workforce. This issue will be discussed in more detail in the workforce section below.

Support for Innovation

By integrating advanced technologies such as smart grids, energy storage solutions, and demand response systems, states can enhance grid efficiency and support emerging industries in the clean energy sector.

Solar's contribution to grid reliability

Louisiana's vulnerability to extreme weather events like hurricanes and severe flooding makes grid resilience and reliability a critical priority for the state's economic stability and public safety. Solar power, particularly when paired with battery storage systems, offers unique capabilities that enhance grid reliability in ways that complement traditional generation resources. A tangible example of the role solar can play during weather events in Louisiana can be seen in the development of "community lighthouses" in Orleans and St. James parishes. These installations demonstrate the potential of solar to maintain critical services during grid disruptions. These community solar installations with microgrid capabilities have proven their value by providing essential power for cooling centers, emergency communications, and medical equipment during weather-related power outages (Muller, Solar 'lighthouse' project underwent first real test in Hurricane Francine, 2024). The distributed nature of these resources means they can continue operating independently when transmission infrastructure is compromised.

The above example represents a behind the meter solution that does not apply to grid-connected installations like those covered in this report's impact analysis. While grid-connected solar facilities cannot provide power during transmission system failures, they offer sophisticated grid support services that enhance overall system reliability. Inverter-based resources (IBRs) like solar installations paired with battery energy storage systems (BESS) can provide rapid response capabilities that traditional thermal generators cannot match. These systems are able to respond to grid disturbances in milliseconds, providing critical voltage support and frequency regulation that helps prevent cascading failures. This rapid response capability could be valuable to Louisiana's grid as it faces growing demand from industrial facilities and data centers, where even momentary power quality issues can result in millions of dollars in losses.

One example of this quality of IBRs can be seen in Texas where ERCOT, the state's grid operator, has seen massive additions of energy storage resources like grid-connected batteries added to its system. According to ERCOT, discharge of these resources has consistently protected the Texas grid from forced outages of thermal resources like coal and gas power plants (Woodfin, 2025). This effect is not directly tied to solar power, but the recent explosion of battery storage in Texas can be attributed to a combination of the market-driven nature of ERCOT's grid and the abundance of low-cost generation resources like wind and solar which allow battery operators to benefit from price arbitrage on the wholesale market.

As Louisiana seeks to attract energy-intensive industries requiring exceptional power quality and reliability, the deployment of solar-plus-storage systems with advanced inverter capabilities can be a useful asset for maintaining a stable, resilient grid that can support the state's economic development goals.

Land Use Tradeoffs and Compatibility

Utility–scale solar projects are often developed on land that has previously been used for agriculture, partially because the siting requirements for solar are similar to those for agriculture. Solar farms require favorable topology, ample sunshine, low land costs, and access to infrastructure like roads and grid connections. This creates a natural alignment between land use for solar and agriculture, which sometimes generates tension between these two economic uses for land well suited to both. Rural communities have sometimes opposed the development of solar power facilities in their backyards and Louisiana is no exception. While some parishes welcome the economic development opportunity presented by a proposed solar project, other parishes, like Iberia Parish and Livingston Parish have instituted moratoriums on solar development or have created restrictive siting requirements like large setbacks and the planting of vegetative visual barriers (Liebert, 2025) (Grunewald, 2025).

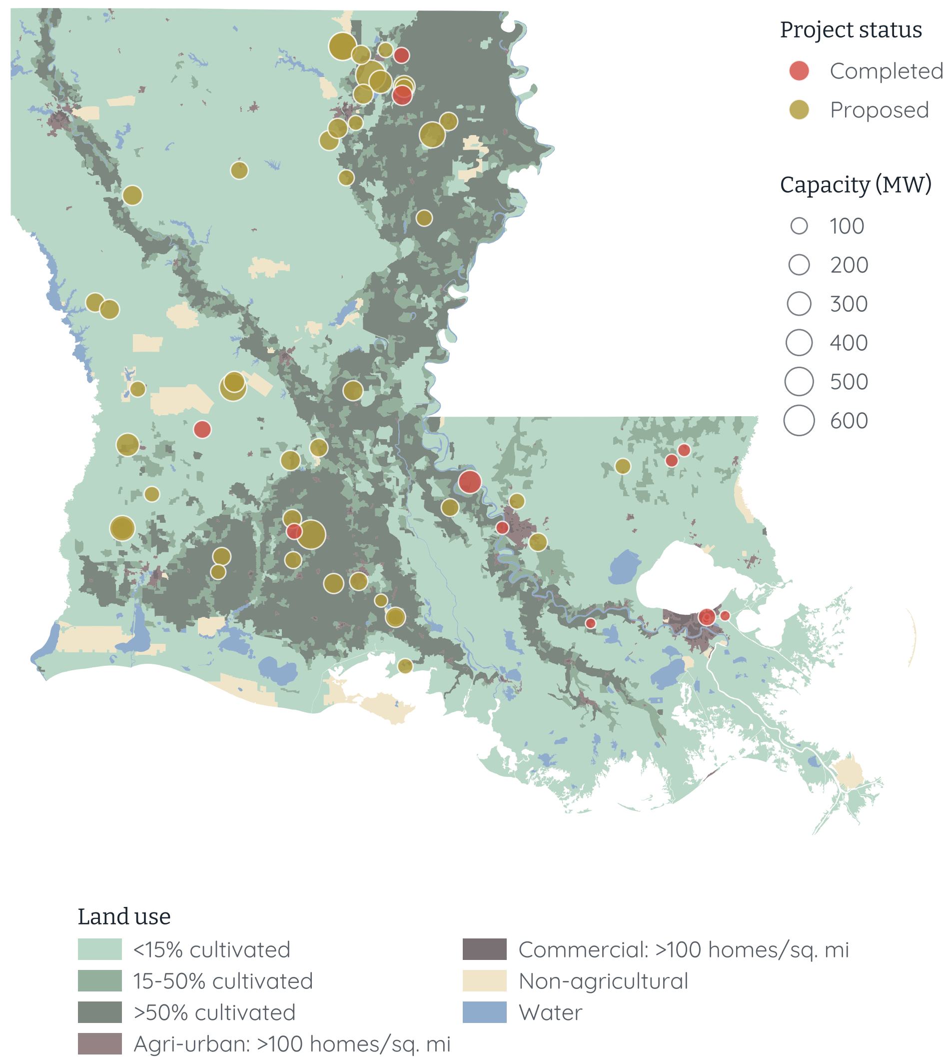
The negative reactions may be driven in part by a concern that solar development in the state would adversely affect the agriculture industry that represents an important and familiar part of the economy of the state. The fear is that a large amount of solar development would either blanket the state with solar facilities, thus impacting the agrarian aesthetic of the state, or that enough solar facilities would be built within the economic radius of a sugar or rice mill that the mill would no longer be profitable. This fear does not align with a comparison of available land and expectations for development simply because the amount of land that could feasibly be used for solar in Louisiana is very small compared to the amount of agricultural land available. The reality of the solar land footprint in comparison to agricultural land in Louisiana is demonstrated in the section below.

In fact, recent trends in solar development indicate the land use requirements for solar farms will decrease on a per MW basis over time: improvements in module efficiency means fewer acres of land are required per MW of power produced. Another industry trend is to increase the Ground Coverage Ratio (GCR) in the design of the plant, which simply means that developers are tending to put the rows of modules closer together to improve the cost-effectiveness of the projects. Since land use is directly related to module efficiency and ground coverage ratio, future solar farms can be expected to require less land to produce the same amount of electricity. Agrivoltaics, the combined use of the same land for both solar and agriculture, is a third emerging trend and an area of intense research sponsored by the US Department of Energy that could provide new opportunities for Louisiana farmers. Solar farms have already been successfully combined with farm animals such as sheep as well as certain crops, and a large amount of research activity is currently being devoted to this topic.

Solar and agricultural land use in Louisiana

The capacity forecast in our economic impact analysis offers an opportunity to explore the land use impacts of solar in Louisiana. The forecast—based on the number and power capacity of projects in the transmission interconnection queue maintained by Louisiana's grid operator, the Midcontinent Independent System Operator (MISO)—estimates utility-scale solar facilities with a combined capacity of 12,415 MW will be built in Louisiana from 2025 through 2035. The total acreage of a solar farm will depend on many factors, but on average they tend to require about 7 acres of space per MW. Thus, the projected increase in Louisiana solar generation is to be estimated to require a total of 86,905 acres. By contrast, the total land area used for agricultural purposes in Louisiana is slightly short of 8 million acres (U.S. Department of Agriculture, 2022). So, the entire land area needed for a significant expansion of solar in Louisiana over the next 10 years would potentially impact only 1.1% of Louisiana farmland. It is unlikely, therefore, that the proposed growth in Louisiana solar projects will significantly alter the agrarian nature of the state, and it seems unlikely that solar facilities will create any serious difficulty for sugar cane or rice mills to receive enough product from nearby farms to remain profitable.

Figure 5. Proposed and operating solar farms in Louisiana with agricultural land use stratification.



Note: This map is intended to illustrate of the relationship between solar and agricultural land uses and is not a complete or up-to-date depiction of current and planned solar projects. It includes proposed projects sourced from the MISO interconnection queue in August 2025, some of which have withdrawn their interconnection applications. The map is also missing some projects that are approved for interconnection but are not yet constructed, for which there was no available location data.

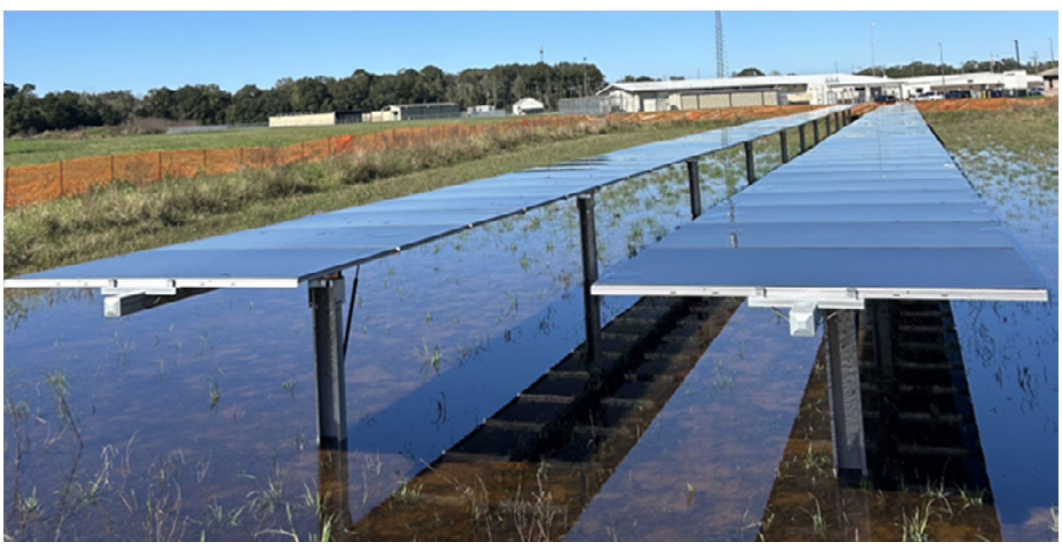
Figure 5, above, demonstrates the distribution of proposed and active solar projects in Louisiana and the extent of agricultural land use in the state. Many are located in areas with a high density of agricultural land use, but some are located in regions with lower agriculture utilization. The projects are distributed across the state, with a large cluster of proposed projects in northeast Louisiana, near where the Meta data project currently being developed is located. The green shaded areas of the map illustrate the substantial amount of land in the state dedicated to agriculture. While the number and size of solar projects is expected to grow over the next decade, it is unrealistic to assume the industry will have a meaningful impact on rural land values in the aggregate. A handful of individual sites—those that are suited to solar projects, with favorable topology and access to transmission infrastructure and roadways—will likely see interest from developers and increased valuations and may lead landowners to choose to sell, or lease land to solar developers rather than continue using the land for agriculture. In areas where land is leased to tenant farmers, some tenant farmers may have to move to new areas, but the effect on agriculture more generally, or opportunities for farming at a statewide scale will be minimal. In addition, solar has characteristics that may be beneficial to rural landowners and communities. Those possibilities are outlined in the sections below.

Opportunities for co-location of solar generation and farming

The combination of traditional farming operations and solar power generation is an established use case with examples of success throughout the United States, often in conjunction with pasture grazed livestock or shade tolerant crops. Further applications of solar and farming activities are active areas of research in Louisiana.

UL Lafayette is currently studying the combined use of solar with crawfish farming, as shown in **Figure 6** below. Other agrivoltaics research currently being conducted by the university includes studying the best kinds of crops that can be grown between the rows of solar facilities without changing the fundamental design of the solar power plant or degrading the quality of the crop due to partial shading. Future studies will explore the optimal design and operation of both the solar power plant and the farming enterprise for maximum combined revenue.

Figure 6. Combined use of solar and crawfish farming



Floating solar, as shown in **Figure 7** below, is a fourth emerging industry trend that could reduce the amount of farmland that might be converted to use for solar facilities. Louisiana has an abundance of inland bodies of water that might be suitable for solar production. This is another area of current research.

Figure 7. Floating solar test facility in Louisiana

There has also been concern that once the land has been used for solar energy production that it will thereafter no longer be suitable for agriculture. In fact, common features of utility scale solar sites can provide benefits for future agriculture. There are no harmful emissions or runoff from solar power plants that would negatively affect the soil, and when a solar plant is decommissioned properly, all the equipment can be removed in its entirety and the land can be returned to its original use. When farmland is used for solar, the land lays fallow for 25-35 years with grass planted beneath the solar panels, which may actually improve the quality of the land once it is returned to agricultural use. Of course state and local regulations can ensure projects are developed with adequate decommissioning plans to achieve these benefits.

Benefits to landowners and rural communities

Another issue of particular concern for Louisiana farmers, however, is that many Louisiana farmers do not own the land they farm; rather they often lease or rent. Since farm lease prices are typically significantly lower than solar lease prices, there is a real possibility that a tenant farmer could be priced out of the use of the land that they typically farm. Of course, this concern is balanced against the right of the landowner to pursue better economic returns for their land. Large landholders, especially, can diversify their land use by hosting both solar and agricultural uses. Solar lease revenues are often a more reliable source of income than crop farming; without the same variability in weather, market, and input cost risk that agricultural income faces. Landowners who allow solar leases on a portion of their property could utilize the stable income to support their farming operations and reduce their risk exposure.

This balance of individual concerns is an issue for local authorities to carefully consider when acting on a permit application for a solar farm. However, local governments should also consider the revenue potential from solar farms in their jurisdiction and how it compares to existing land uses. Project-related expenditures may be subject to local sales and use tax generating substantial revenue during the construction phase. Property tax assessments for agricultural land in Louisiana are set by the state constitution at 10% of the *use value* of the property, while land used for solar facilities could be considered a commercial use and assessed at a rate of 15%, or public service property if utility owned and assessed at a rate of 25% of the *fair market value* of the property. Use value of agricultural land is determined based on soil classification. The average use value in Louisiana for Class I agricultural land (highest soil value) is $415 per acre, yielding a per acre assessed value of $41.5. The fair market value of a solar facility in Louisiana is dependent on many factors and can be based on the cost approach (the value of equipment and the improvements to the land) or based on the income approach (capitalized earnings or discounted cash flow). Tax revenues can also be influenced by economic development incentives. For example, an estimate for a facility with an 80% ITEP property tax exemption and a conservative valuation approach results in a per acre assessed value of $2,600 (an example with more detail is included in the section below).

Ad valorem potential of solar farms in rural communities

Solar power facilities have a substantially larger potential for local property tax (ad valorem) revenue when compared to land used for agricultural purposes. As discussed above, agricultural property in Louisiana is assessed at a constitutionally set proportion of 10% of the use value of the property, while property where solar is sited would be considered a commercial use and assessed at 15% of the fair market value or public service property and assessed at 25% of the fair market value of the property. Data tables in annual reports compiled by the Louisiana Tax Commission enable the calculation of an aggregate per acre use value and assessed value for farmland of various classifications in each Louisiana parish (Louisiana Tax Commission, 2024). Per acre use values vary between parishes and occupy a range between $260 and $585 per acre for Class I farmland—the highest value land classification. On average, Louisiana farmland has a per acre use value of $415 and thus an average assessed value of $41.5 per acre.

The Louisiana Tax Commission does not maintain similar tables for land used for solar power facilities, but an approximation of the fair market value of a solar facility can be determined. This report's economic impact analysis assumes a per watt cost of $1.208 to develop a utility-scale solar facility, or $1.2 million per MW. Assuming a utility-scale solar plant requires 7 acres per MW, the total development cost to plan and build a solar plant amounts to $172,500 per acre. This figure represents the total cost of development and not the fair market value, which depends on the valuation methods used by assessors. A conservative, cost approach estimate that 50% of the development cost would be classified as construction costs and capitalized into the fair market value returns a per acre valuation of $86,250—more than 200 times the use value of farmland. However, some solar facilities in Louisiana have been granted a property tax exemption under the state's Industrial Tax Exemption Program, or ITEP, which allows an 80% property tax abatement for up to 10 years (Louisiana Economic Development). Under that program, the expected per acre fair market value, using a conservative assessment of 50% of the total cost of construction, is still 40 times higher than the average farmland use value of $415 during the initial year of an ITEP exemption. Combining this difference with the higher assessment rate applicable to a solar facility implies an even larger difference in local property tax revenue between the two types of land use.

Consider an example of a 1,400-acre parcel of land with a Class I agricultural land designation, located in a parish with a 100 mills parish wide property tax rate (the statewide weighted average is 109.3 mills). This property, if used for farming purposes, would have a use value of $581,000 and an assessed value of $58,100. At the 100 mills property tax rate, the property could be expected to generate $5,810 in annual ad valorem revenue for the parish government. Now consider a solar power facility with a 200 MW capacity located on the same parcel. Using a fair market valuation approach of 50% of the total development cost, this facility would have a market value of $120.8 million and an assessed value of $18.1 million. At this assessed value, the property would generate over $1.8 million in annual ad valorem revenue. With an ITEP exemption of 80%, the annual ad valorem value would shrink to $362,250 in year one, however this amount is still 60 times greater than the alternative agricultural land returns.

Over the thirty-year life span of a solar power plant, a parish can expect to receive a very significant increase in its property tax revenues compared to traditional agricultural land use—even with the facility receiving an ITEP tax exemption. A real-world example of this scenario can be seen in Morehouse Parish, where the 200 MW Oakridge Solar facility was constructed on 1,400 acres of land at a cost of $245 million. The construction of the facility led to $3 million in sales tax revenue for the parish government and a representative of the Morehouse Parish Economic Development Corporation indicated the property tax benefit from the facility, "is expected to be 55 to 60 times more," over the project lifetime (Maravi, 2024). In a rural parish like Morehouse, this amount of public revenue will make a major impact on funding for the local school board, fire and police departments, and improvements to roadways and other infrastructure.

Workforce Characteristics & Development

The solar workforce in Louisiana is already significant, even with an installed capacity of only approximately 1,200 MW. According to the International Renewable Energy Council, Solar Jobs Census, Louisiana supported an estimated 3,308 solar jobs in 2023, with a breakdown by sector shown below (Interstate Renewable Energy Council).

- 2,480 in installation & project development
- 193 in manufacturing
- 385 in wholesale trade & distribution
- 133 in operations & maintenance
- 116 in "all others"

The economic impact analysis in this report demonstrates the number of jobs supported by the solar industry is expected to grow significantly over the next decade as solar development in the state proceeds. Already, the number of manufacturing positions is expected to rise with First Solar expecting to hire over 800 employees for its Iberia Parish module manufacturing facility. This report's economic impact analysis estimates average employment of 8,226 in the installation and project development sector over the next 10 years. Furthermore, operations and maintenance employment is estimated to grow to over 1,000 positions by 2035. The number of new jobs added will ultimately depend on the amount of solar that is installed and the degree to which labor and system components are sourced from within the state. Many factors can influence solar workforce growth in Louisiana from global macroeconomic trends impacting the availability of project finance, to state and federal policy approaches toward solar deployment and manufacturing, and competition from other industries for workforce talent.

Workforce Characteristics of Solar

The Interstate Renewable Energy Council (IREC) has created a Solar Career Map that outlines the job titles that are typical for the solar industry across the four main industry sectors: 1) manufacturing, 2) system design, 3) project development, and 4) installation and operations (Interstate Renewable Energy Council). Entry level jobs might require only short-term training. Mid-level jobs likely require a degree from a technical or community college or significant industry experience, while advanced jobs typically require a university education or significant industry experience. Many of these jobs are not very different from similar jobs in other industries, making it relatively easy for a displaced worker to enter the field with minimal upskilling specific to the solar industry.

Manufacturing

The manufacturing sector includes the manufacture of solar modules, of course, but also all of the Balance of System (BOS) components, such as racks, inverters, transformers, conductors, conduit, and fasteners. Entry level jobs include CNC machine operator and advanced manufacturing technician. Mid-level jobs include instrumentation and electronics technician, quality assurance specialist, and process control technician. Advanced jobs include electrical engineer, industrial engineer, environmental engineer, mechanical engineer, and material scientist.

System Design

The system design sector starts with mid-level jobs such as IT specialist, residential PV system designer, engineering technician, and utility connection engineer. Advanced jobs include power systems engineer, structural engineer, solar energy systems designer, and software engineer.

Project Development

According to IREC, "In solar energy, project development includes things like sales and marketing, procurement and contracting, and plan review and permitting. The goal is to ensure system compliance with required codes and standards. Inspections ensure that component and system installation meet codes and standards" (Interstate Renewable Energy Council).

An entry level job in this sector would be a solar site assessor. Mid-level jobs include solar marketing specialist, and solar sales representative. In addition, there is a need for building inspectors, electrical inspectors, and code officials with solar expertise. At the advanced level, there is a need for solar utility procurement specialists, lawyers with solar expertise, and solar project developers.

Installation and Operations

The installation and operations sector is the largest industry sector by far. Entry level jobs in this sector include solar construction worker and entry-level solar installer. Mid-level jobs include roofer with solar expertise, energy storage installer, equipment operator, solar service technician, lead PV installer, HVAC technician with solar expertise, solar O&M technician, solar site supervisor, and carpenter with solar expertise. Advanced jobs include solar installation contractor, electrician with solar expertise, solar fleet manager, solar instructor, and solar project manager.

Workforce Training Programs

The University of Louisiana at Lafayette currently has a DOE-funded project called the Louisiana Solar Corps (LSC), which has the goal of building out a state-wide solar training consortium. The consortium is currently made up of two universities, five community and technical colleges, and one other training organization, which provide advanced, mid-level, and entry-level training to meet the workforce training needs of the solar industry in Louisiana. A Stakeholder Advisory Board, made up of industry representatives from all solar industry sectors, advises the LSC on its workforce needs and the required skills sets for each position. In the first year and a half of the program the Louisiana Solar Corps trained approximately 200 solar workers in Louisiana, most of which have found jobs in the solar industry.

How Solar Supports Industrial Development

Louisiana has a considerable industrial base, including petrochemical production, manufacturing, and agriculture. These sectors require substantial amounts of energy to operate efficiently, particularly during peak production periods. Industrial and commercial consumers are increasingly seeking ways to control energy costs. Fluctuating energy prices, particularly for natural gas, have prompted many businesses to explore alternative energy sources, including solar power, to stabilize their energy expenditures. Examples include the Louisiana Energy Users Group (LEUG) – a coalition of industrial power users who supported sleeved PPAs, citing desire to buy clean power directly from generation facilities, especially solar (Muller, Louisiana's largest industries tired of waiting for renewable energy, 2024).

One emerging industry trend is the demand for renewable energy to produce green hydrogen. Louisiana has a thriving hydrogen market and is constantly striving to produce lower carbon hydrogen. Green hydrogen, which is created using electrolysis, requires a large amount of electricity that would necessitate a substantial expansion in renewable resources if the industry were to scale in Louisiana. Solar energy is one way to produce green hydrogen to meet this demand. To illustrate; Louisiana produces 2.5 million metric tons of hydrogen per year, mostly as a feedstock for the production of ammonia used in fertilizer and other chemical products. Producing this amount of hydrogen using renewables powered electrolysis would require somewhere between 30-50 GW of renewable power capacity (Clean Air Task Force). It is unrealistic to imagine this massive amount of energy would be supplied by solar power alone, or that a full replacement of Louisiana's hydrogen production with green hydrogen is possible in the near future, but this example demonstrates that even a small increase in green hydrogen production would require a large supply of clean power from sources like solar and wind.

Whether engaged in hydrogen production, manufacturing, or data mining, Louisiana's industrial power users are a meaningful source of employment for the state. By investing in the development of solar capacity, the state can ensure that the power needs of these users are met and ensure continued employment and growth in the industrial sector.

Conclusion

The analysis presented in this report indicates the increasingly important role solar power will play in Louisiana's energy portfolio due to solar energy development over the next decade. As part of an "all of the above" energy strategy that includes natural gas, nuclear, wind, and other generation sources, solar offers specific advantages that align with Louisiana's economic and infrastructure needs. The base case projected deployment of 12,415 MW of solar capacity through 2035 represents a significant expansion that will generate billions of dollars in economic benefits while helping to diversify the state's generation mix.

The economic impact analysis reveals substantial benefits from solar development activities. Through 2035, the combined activities of solar project development & installation and operations & maintenance, plus the indirect and induced impacts of those activities, are projected to generate $16.7 billion in total economic output ($13.6 billion discounted), contributing $8.9 billion to Louisiana's GDP ($7.3 billion discounted). This economic activity will support employment ranging from 6,499 to 13,168 jobs annually, with peak employment occurring during the near-term period of 2026-2027. Over the study period, solar sector activities will generate an estimated $6.4 billion in labor income ($5.3 billion discounted) and contribute $490.5 million in state tax revenues ($362.3 million discounted). These impacts are primarily driven by project development and installation activities, though operations & maintenance impacts grow steadily over time, eventually supporting over 1,000 workers annually from ongoing operations by 2035.

An expansion of solar power generation can also support Louisiana's economic development objectives. Major commercial and industrial investments, such as Meta's data center project in Richland Parish, increasingly require access to renewable energy to meet corporate sustainability objectives and time-to-power goals. Louisiana's industrial power users, have advocated for direct access to solar generation through sleeved power purchase agreements, citing both cost stability and environmental considerations. Additionally, emerging industries like green hydrogen production will require substantial renewable capacity, creating potential new markets for solar generation.

Solar can provide several benefits to Louisiana's electric grid. In recent years, the levelized cost of solar energy has declined below that of other generation sources and, when paired with battery storage, solar installations can contribute to rapid-response grid stabilization services. Solar resources have proven valuable during extreme weather events, as evidenced by "community lighthouse" solar installations that have provided power to Louisiana residents during previous hurricane-related outages.

The rapid expansion of solar in the United States has left some observers concerned about the land use impacts of the industry, specifically in rural areas where low-cost farmland often has similar site characteristics to those preferred by solar developers. This concern, while valid, does not align with data as can be seen in an analysis of the land use impacts of the projected expansion of solar used in this report. At 7 acres per MW, 12,415 MW of solar would require nearly 87,000 acres of land. This figure represents only 1.1% of the total agricultural land area in Louisiana. Furthermore, solar facilities can bring benefits to rural communities through substantial sales tax during construction, and stable long-term revenues for landowners and local governments, with potential property tax revenues 60 times greater than those of a comparable agricultural property. Agrivoltaics also offer opportunities for collaboration between the solar and farming industries which are an active area of research at Louisiana universities. Solar also offers opportunities to leverage Louisiana’s existing talented workforce, especially from the construction and industrial sectors. Training programs like the Louisiana Solar Corps are helping to develop local workforce capacity.

This report offers a relatively long term forecast of the potential impacts of solar development in Louisiana. Ultimately, the level of deployment remains subject to many variables, including federal and state policy decisions, market conditions, and technological developments. But the near-term outlook for solar in Louisiana appears robust, with 1,565 MW currently under construction and an additional 4,068 MW approved for development. As Louisiana continues to balance its energy needs with economic development goals, solar energy can grow to be an important component of the state’s diversified energy strategy and can deliver meaningful economic benefits to the state’s residents.

References

Barnes, Stephen, Matthew Holland, Andrez Joseph, Edward Leland, and Emma Willis. 2025. "U.S. Solar Industry Impact: An Economic Impact Analysis." Solar Energy Industries Association, June 2025. https://seia.org/wp-content/uploads/2025/06/Solar-Industry-Economic-Impact-06-2025-1.pdf.

Clean Air Task Force. n.d. "Hydrogen Production Calculator." Accessed September 2025. https://www.catf.us/hydrogen-converter/#electrolysis.

Green, Alastair, Humayun Tai, Jesse Noffsinger, Pankaj Sachdeva, Arjita Bhan, and Raman Sharma. 2025. "How Data Centers and the Energy Sector Can Sate AI's Hunger for Power." McKinsey & Company, September 17, 2025. https://www.mckinsey.com/industries/private-capital/our-insights/how-data-centers-and-the-energy-sector-can-sate-ais-hunger-for-power.

Grunewald, Carley. 2025. "Momentum Builds in Livingston Parish to Extend Pause on Solar Farm Development." The Advocate, March 15, 2025. https://www.theadvocate.com/baton_rouge/livingston-parish-solar-panel-halt/article_9d496d2a-fe91-11ef-b8a1-274fe428c8bc.html.

Interstate Renewable Energy Council. n.d. "About the Industry." IREC Solar Career Map. Accessed September 2025. https://www.irecsolarcareermap.org/about-the-industry.

Interstate Renewable Energy Council. n.d. "Louisiana Solar and Clean Jobs." Accessed September 2025. https://irecusa.org/louisiana-solar-and-clean-energy-jobs/.

Lazard. 2025. "Levelized Cost of Energy+." June 2025. https://www.lazard.com/media/5tlbhyla/lazards-lcoeplus-june-2025-_vf.pdf.

Liebert, Benjamin. 2025. "Iberia Parish Council Approves Solar Ordinance with Reduced Setback." KLFY, July 24, 2025. https://www.klfy.com/local/iberia-parish/iberia-parish-council-approves-solar-ordinance-with-reduced-setback/.

Louisiana Economic Development. n.d. "Industrial Tax Exemption Program." Accessed August 2025. https://www.opportunitylouisiana.gov/incentive/industrial-tax-exemption.

Louisiana Tax Commission. 2024. "Annual Report." April 2024. https://stpao.org/wp-content/uploads/2025/04/LA-Tax-Commission-Annual-Report-2024.pdf.

Maravi, V. 2024. "Morehouse Parish Solar Farm Brings Roughly $3 Million Sales Tax Revenue." MyArkLaMiss, February 15, 2024. https://www.myarklamiss.com/news/morehouse-parish-solar-farm-brings-roughly-3-million-sales-tax-revenue-new-solar-farm-underway.

Midcontinent Independent System Operator. 2025. "Generator Interconnection Studies and Procedures." Accessed October 2025. https://www.misoenergy.org/planning/resource-utilization/GI_Studies.

Miller, Ronald E., and Peter D. Blair. 2009. Input-Output Analysis: Foundations and Extensions. 2nd ed. Cambridge: Cambridge University Press.

Muller, Wesley. 2024a. “Louisiana’s Largest Industries Tired of Waiting for Renewable Energy.” Louisiana Illuminator, June 21, 2024. https://lailluminator.com/2024/06/21/renewable-energy/.

Muller, Wesley. 2024b. “Solar ‘Lighthouse’ Project Underwent First Real Test in Hurricane Francine.” Louisiana Illuminator, September 25, 2024. https://lailluminator.com/2024/09/25/solar-lighthouse-project-underwent-first-real-test-in-hurricane-francine/.

Muller, Wesley. 2025. “Entergy Power Plant for Meta Data Center Moves Toward Early Regulatory Approval.” Louisiana Illuminator, August 19, 2025. https://lailluminator.com/2025/08/19/meta-power-plant-vote/.

National Renewable Energy Laboratory. 2025. “Annual Technology Baseline: Utility-Scale PV.” Accessed August 2025. https://atb.nrel.gov/electricity/2024/utility-scale_pv.

Nguyen, Tu, Raymond Byrne, Rodrigo Trevizan, Alvaro Bastos, Felipe Wilches-Bernal, Ricky Concepcion, Reinaldo Tonkoski, and Alex Headley. n.d. “Energy Storage Handbook, Chapter 23: Applications and Grid Services.” Sandia National Laboratories, U.S. Department of Energy. https://www.sandia.gov/app/uploads/sites/163/2021/09/ESHB_Ch23_Applications_Nguyen.pdf.

NobelPrize.org. n.d. “Wassily Leontief: Facts.” Accessed June 2025. https://www.nobelprize.org/prizes/economic-sciences/1973/leontief/facts/.

Ramasamy, Vignesh, Jarett Zuboy, Michael Woodhouse, Eric O’Shaughnessy, David Feldman, Jal Desai, Andy Walker, Robert Margolis, and Paul Basore. 2023. “U.S. Solar Photovoltaic System and Energy Storage Cost Benchmarks, With Minimum Sustainable Price Analysis: Q1 2023.” National Renewable Energy Laboratory, September 2023. https://docs.nrel.gov/docs/fy23osti/87303.pdf.

Riegel, Saijel. 2025. “The Price Tag for Meta’s Louisiana AI Data Center Has Nearly Tripled. Here’s the Latest.” The Times-Picayune, October 29, 2025. https://www.nola.com/news/business/meta-louisiana-data-center-richland-ai/article_1e6d0400-7f60-4379-8799-08c88773febb.html.

Solar Energy Industry Association. 2025. “Solar & Storage Supply Chain Dashboard.” July 2025. https://seia.org/research-resources/solar-storage-supply-chain-dashboard/.

Thomas, Michael. 2025. “Louisiana Solar Farms.” Cleanview. Accessed October 2025. https://cleanview.co/solar-farms/louisiana.

U.S. Bureau of Economic Analysis. 2025. “SAGDP2 Gross Domestic Product (GDP) by State.” Accessed August 2025. https://apps.bea.gov/iTable/?reqid=70&step=30&isuri=1&year_end=-1&acrdn=1&classification=naics&state=0&yearbegin=-1&unit_of_measure=levels&major_area=0&area=00000,09000,17000,42000,48000,53000&year=2019&tableid=505&category=1505&area_type=0&statistic=1,11.

U.S. Department of Agriculture. 2022. “Census of Agriculture State Profile: Louisiana.” Accessed August 2025. https://www.nass.usda.gov/Publications/AgCensus/2022/Online_Resources/County_Profiles/Louisiana/cp99022.pdf.

U.S. Energy Information Administration. 2025. “Electricity Data Browser: Net Generation for All Sectors, Annual.” Accessed October 2025. https://www.eia.gov/electricity/data/browser.

Waguespack, Michael J. 2025. “Louisiana’s Electric Profile: Louisiana Public Service Commission.” Louisiana Legislative Auditor, January 15, 2025. https://app2.lla.state.la.us/publicreports.nsf/0/e298385114b2b00a86258c12006a88b6/$file/000069cba.pdf?openelement&.7773098.

Wolfe, Sandra. 2025. “Entergy Louisiana Gets Approval to Build 3 New Combined Cycle Plants to Power Huge Meta Data Center.” Power Engineering, August 21, 2025. https://www.power-eng.com/gas/combined-cycle/entergy-louisiana-gets-approval-to-build-3-new-combined-cycle-plants-to-power-huge-meta-data-center/.

Woodfin, Dan. 2025. “Summer 2025 Operational and Market Review.” ERCOT, September 23, 2025. https://www.ercot.com/files/docs/2025/09/15/12-Summer-2025-Operational-and-Market-Review.pdf.