



# Solar Lease Considerations for Landowners and Ag Operators

Dr. Michael Deliberto

*Louisiana State University Agricultural Center  
Department of Agricultural Economics & Agribusiness*

---

There has been an interest in leasing Louisiana's agricultural lands for the purpose of installing utility-scale solar energy panels. While the leasing of agricultural lands for this purpose is touted as being very opportunistic for landowners and agricultural operators, it should be noted that it also entails consequences for both parties as well. This staff report aims to provide parties useful information to bear in mind when evaluating solar energy development land lease opportunities. The information contained in this brief was obtained from other land grant universities, in states where solar energy development is more common. This staff report does not constitute professional or legal advice. Lease terms and conditions have long-term implications because solar energy leases last, typically, for decades. The advice of an experienced legal counsel and a certified public accountant experienced in reviewing solar energy leases can clarify lease terms and conditions. As such, landowners and ag operators are counseled to approach commercial solar energy leases with caution and should avail themselves of every means of professional guidance along the way.

Generally, when we speak of utility-scale or commercially designed photovoltaic (PV) solar energy systems, we are speaking of utility-scale designed PV solar energy systems that are capable of generating in excess of five megawatts (MW) of electricity. A utility-scale PV solar energy system connects to a substation that raises the voltage and sends electricity directly to the transmission grid. Utility-scale solar energy systems are increasingly being planned with battery storage to store electricity (Milhollin, Ernst, and Horner, 2023). Because of recent developments in the renewable energy sector, landowners and agricultural operators are being approached by solar energy project developers regarding solar energy leasing opportunities on agricultural farmland in Louisiana.

## What is a solar lease?

Commercial solar leases are employed typically when a solar energy project developer approaches a landowner/agricultural operator for the purposes of negotiating the placement of solar panels and other essential electrical components along with essential infrastructure such as roads on a piece of property for a significant period of time (from 25 to 35 years with optional extensions) for a specified rental rate per acre or, alternatively, with some form of revenue sharing similar to royalty payments in oil and gas leases. (Kirk Hall, Bachelor, and Romich, 2019).

## Site Selection

The size of solar energy projects can range based both on potential power generation (MW) and on its geographic footprint. Normally, solar energy project developers seek construction sites that are near existing energy transmission hubs and, in most cases, coincide with the general site characteristics of ag lands- large parcels, free of standing trees, and contain frontage access. Site selection is often based upon access to the power grid and roads with little consideration for the intrinsic current and future value of the

farmland underneath. Ideally, solar systems should be placed on soils of lesser agricultural value, retaining acreage with the best soils for strictly agricultural purposes (Nuckols, 2020). As solar energy installations have the potential to displace traditional agricultural production, one consideration for an ag operator would be to inquire as to the possibility of locating solar energy installations in areas of lesser agricultural value, retaining optimal agricultural acreage for strictly agricultural purposes.

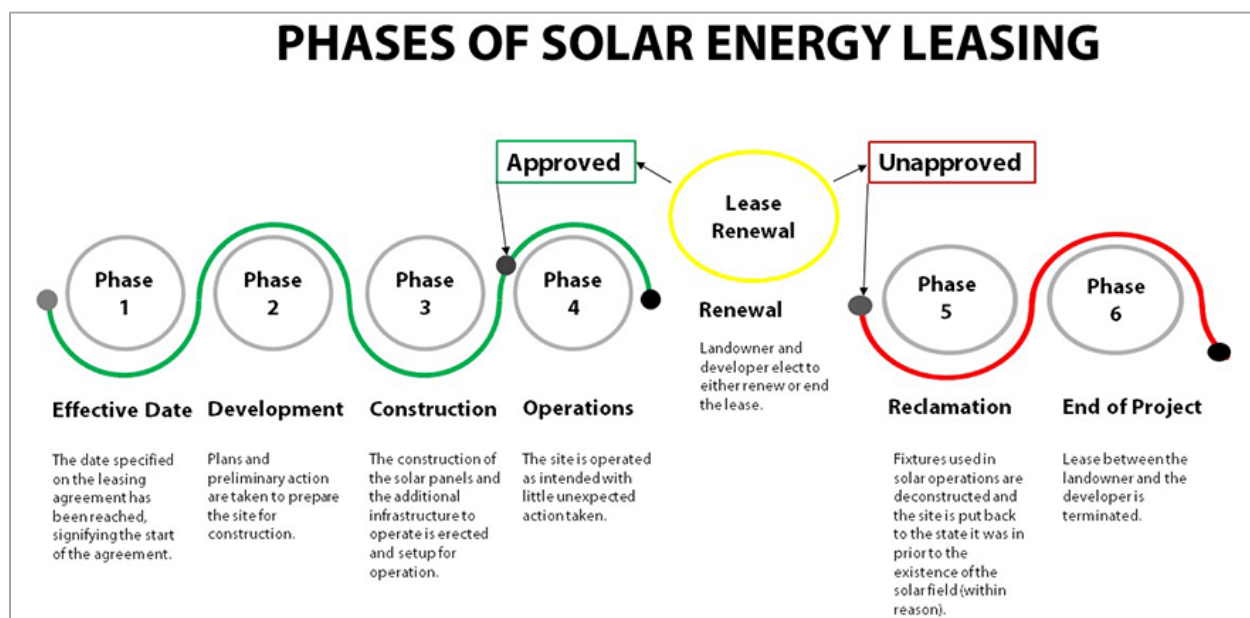
### Lease Terms

Solar leasing contracts can be complex. The issues presented in this report represent only a fraction of solar leasing concerns. Different companies use different lease agreements; however, there are similarities in contractual language. Understanding these clauses can help when consulting with an experienced attorney about potential lease options. Signing a lease agreement does not guarantee a solar lease. Signing a solar lease guarantees that the solar developer has the option to go forward with the construction of a solar project, but it does not guarantee that they will build it (Rumley, 2022). Energy developers typically request landowners to sign multiple documents during the land lease process. There are common lease documents that come in the form of a letter of intent, an option to lease, and finally the actual lease or purchase agreement (Milhollin, Ernst, and Horner, 2023).

### Phases of a Solar Lease

Each phase in the lease involves different activities that the developer will have a right to conduct on the property. Phases of solar leasing: 1. effective date. 2. development. 3. construction. 4. operations. 5. reclamation. 6. end of project (Milhollin, Ernst, and Horner, 2023). Figure 1. A landowner's rights and restrictions might also vary during these different phases as will the rental payment amount for each phase of the project. For these reasons, it is imperative to understand the different phases of a solar lease, when each phase begins and ends, and the rights and obligations that accompany each phase (Kirk Hall, Bachelor, and Romich, 2019).

Figure 1. Phase of Solar Energy Leasing.



Source: University of Missouri Extension

Option Phase. The beginning of the lease's life is known as the effective date, which is the date on which the parties have properly signed the agreed upon lease. From this point, the parties are bound by a legally binding contract. Upon the effective date, a solar lease typically enters a development or pre-construction phase. This phase of the lease typically begins once the developer announces that the project will proceed, commonly referred to as "exercising the option." Some leases refer to one development period and include construction activities and one rental amount throughout the period, while others might separate the development and construction periods into two distinct terms with different time periods and payments for each. If the parties had not already entered into an Option to Lease, then the lease might refer to this phase as the option period (Kirk Hall, Bachelor, and Romich, 2019).

Construction Phase. During the construction phase of a project, the site experiences disturbances such as site grading, soil erosion, soil compaction, damaged field tile, and noise. It is important to remember that the site becomes a major construction zone for a period of time, with heavy equipment used to grade access roads, dump trucks with stone to build laydown yards, flatbed trailers delivering equipment components to construct the arrays, trencher plows to lay cable, concrete trucks and cranes to set power enclosures, and hydraulic post drivers to set racking, as illustrated in the following photos. Such activities may disturb neighbors (Kirk Hall, Bachelor, and Romich, 2019).

General (or operational) Phase. The solar operations phase begins when the equipment is on the ground and solar energy is actively being produced. This phase can range from 15 to 30 years, which is intended to give a developer time to enter into long term power purchase agreements with energy buyers and maximize the anticipated useful life of the solar energy equipment (Kirk Hall, Bachelor, and Romich, 2019).

Decommissioning Phase. Once the solar operations phase has run its course, the cleanup phase begins. During this phase, the developer will remove the solar facility. The common amount of time for a cleanup phase is one year from the completion of the solar operations phase. The end of the cleanup phase also signals the end of the project (Kirk Hall, Bachelor, and Romich, 2019).

### Economic Considerations

The potential financial attractiveness of solar energy leases for landowners is often the first topic of discussion between developers and landowners. Even though, theoretically, landowner income may be significantly higher from solar farm income as compared to agricultural rental income, there are other implications landowners should consider. Rental rates can vary dramatically so landowners/ag operators must diligently research current rates before signing any solar lease. Another issue that is often overlooked by landowners/ag operators is how will their rental rate increase over the terms of the solar lease? It should be borne in mind that these agreements can last for more than three decades. The revenue a landowner/ag operator receives might be currently sufficient, but will that current rental rate be adequate a decade from now? Escalation clauses address this issue by building in an orderly increase in the rental rate over the life of the lease agreement (Rumley, 2022). Due diligence is required to avoid exaggerated claims of financial windfall (Cornell Extension Service, 2024).

Solar energy leases could have short-term impacts upon farm profitability. There is usually a time range given when construction commences. The exact start date could impact crop or livestock enterprises on the land. Solar energy leases will often include compensation terms for farm products impacted by the start of PV solar construction (Milhollin, Ernst, and Horner, 2023). If a solar developmental opportunity emerges, consideration must be given to the status of an agricultural tenant on the land (Branan, 2021). However, the landowner must remember to give the farmer notice of termination. The landowner may not have the authority to allow a solar developer to enter upon the farmer's tenancy for land evaluation,

particularly if it would potentially interfere with farming operations or damage crops (Branan, 2021). While solar projects have cost appeal to energy companies, they require more crop production land (as opposed to wind energy installations). Because of site system design, frames for solar systems are normally constructed close to the ground's surface, thus preventing farmers from pursuing traditional agriculture on those acres (Haigwood, 2023a).

Landowners should be aware of potential crop damage during a project's construction phase and ensure that the contract stipulates how compensation for such damage will be calculated (Haigwood, 2023b; Heatherly, 2023). Crop damage is likely, therefore, a lease mechanism that clearly calculates those damages is advantageous. Some solar energy contracts may limit damages to a one-year term, which may not be long enough for an ag operator to recoup unrecovered costs (Haigwood, 2023c). Landowners and ag operators should inquire if the solar developer is willing to locate the installation onto portions of land with the least impact to the existing farming operation.

Land is a fundamental resource for farming, and the amount of land is limited. Utility-scale solar energy land leases are often written for 20 years or more with options to renew. This creates a long-term land use constraint that could impact multiple generations of landowners and ag operators (Milhollin, Ernst, and Horner, 2023).

Current federal or state mandates and tax incentives that make this technology currently feasible may not exist in the future (Carroll, 2023). Landowners should consider the tax implications carefully. Installation of solar generating equipment on a property may potentially have significant tax implications. Land classified as agricultural may be reclassified as industrial or commercial subject to higher tax rates (Cornell Cooperative Extension Service, 2024). Landowners must also consider that the transfer of land from agricultural use may also result in additional tax liability, greater insurance requirements, personal injury/liability issues, potential future environmental mitigation, and even the inability to transfer lands into other uses (Carroll, 2023).

#### Land Use and Maintenance

Most land impacts from utility-scale solar energy projects will occur during construction. Construction and equipment may cause subsurface compaction, potentially impacting surface and subsurface drainage over both the short and intermediate time periods (Milhollin, Ernst, and Horner, 2023).

Continued use of the land for other agricultural purposes is another consideration. Generally, lease agreements will be for the life of the solar panels, typically twenty to thirty years. At the end of the lease agreement, will the contractor be required to remove the installation should they not renew the lease (Nuckols, 2020).

Easement, right of way, permission to enter the farmland at will and/or right to work of other parties should be considered carefully. Leases allow a landowner to provide a tenant exclusive right for a specific period of time. They are easily terminated. An easement provides the owner the right to continue using their land but transfers an interest in the property, and associated rights, to a third party. They are often recorded with the deed. As such, they are not easily terminated (Carroll, 2023).

#### Decommissioning

The final phase of the solar project is decommissioning. This involves cleanup, and careful attention should be paid to the decommissioning clause and who is responsible. Decommissioning may be warranted should the contracting company choose not to utilize the site, the site becomes damaged

beyond reasonable repair, as the equipment ages, or equipment becomes too inefficient to provide profit (Carroll, 2023).

The contract should also clearly state what will be removed during cleanup, from the panels and frames to the copper wiring and storage systems (Haigwood, 2023b). One of the primary obstacles currently faced by solar farms is that many of the products used consist of heavy metals and contaminants that cannot be disposed within a landfill. Many of the products will need to be recycled. Some companies offer this service for free or a small charge. However, the current concern is that there are not enough decommissioned solar panels to justify recycling of the materials. Thus, it may be difficult and costly to decommission the site (Carroll, 2023).

Louisiana recently passed legislation requiring solar producers to provide financial security for costs associated with site clean-up when shutting down their facilities. The state's decommissioning statute, (LA Rev Stat § 30:1154) imposes various end-of-life planning requirements on solar energy producers but also creates a considerable exemption for regulated utilities.

In effect, land that is leased for solar power generation will not be used for farming in the present generation, and the far horizon of the site's decommissioning is likely too far off for any concrete plans for farming. That said, care should be taken to ensure that the site will be thoroughly decommissioned at the expiration of the lease term and exhaustion of any extensions (Branan, 2021).

#### Other questions to consider.

Solar farms are gaining in popularity and both landowners and ag operators continue to see interest from solar energy companies to enter long-term leases. These types of renewable energy projects create opportunities and challenges for both parties. The decision to transfer land use from agricultural production to solar panel electrical production should be made by careful examination of immediate and long-term potential risks and benefits (Carroll, 2023). Perhaps the most troubling issue involving solar farm establishment is to consider the possibility of solar farm abandonment within the first few years of construction. An experienced attorney can be helpful in evaluating terms and conditions of a proposed solar lease agreement. Below are some of the most frequently asked questions that should be addressed when considering entering into a solar lease (Cornell University Extension Service, 2016).

- What is the term of the lease?
- If the solar installation is abandoned within the first few years of the project, what risks or financial obligation will the landowner face?
- Who is responsible for the potential increase in taxes as a result of the solar farm?
- Who is responsible for maintenance of the solar farm?
- Is the solar farm location designated prior to signing a lease?
- Who is responsible for any liability as a result of the solar farm?
- Is there a right of way to the solar farm? How big is it, and where?
- How does the solar farm lease affect my farm operation? Can I perform my regular farm practices, or will it restrict it?
- If I sign a solar lease, will I be able to sell my property?
- Who is responsible for the approvals and permits from the local municipality? Who covers those expenses?
- Is payment tied to electrical rates and/or production expectations or is it a fixed annual lease?
- Can this lease be transferred to another company?
- Am I responsible for insurance for the solar farm?

- Who is responsible for removing the solar panels when they are no longer in use?
- Does the solar farm company have the right to the land beneath the solar panels?
- When is the solar farm allowed to access their solar leases?
- What other rights does the solar farm have over my property?
- Will I have any say as to where the solar farm is situated on my property?
- Are other compatible agricultural uses within the leased parcel addressed in the lease?
- Does the landowner/ag operator retain continued use of the land for agricultural purposes?
- What kind of alterations can the solar farm company make to my land, or any neighboring parcels I may own?
- Does the lease comply with zoning and related ordinances?
- At the end of the lease, will the solar farm company restore my land to how it was before? At whose cost?
- Can I terminate the lease? If so, under what conditions?
- What if there is a disagreement between the parties? How is any disagreement handled and decided?

## References

Branan, R. “Solar Leases: Clearing Matters of Title During Solar Developer Due Diligence”, North Carolina State University Extension Service. 2021. <https://farmlaw.ces.ncsu.edu/solar-leases-clearing-matters-of-title-during-solar-developer-due-diligence/>. Date accessed: March 14, 2024.

Carroll, M. “Considerations for Transferring Agricultural Land to Solar Panel Energy Production”, North Carolina State University Extension Service. 2023. <https://craven.ces.ncsu.edu/considerations-for-transferring-agricultural-land-to-solar-panel-energy-production/> Date accessed: March 18, 2024.

Cornell Cooperative Extension Service. “Solar Land Leasing”, Cornell University Extension Service. February 27, 2024. <https://chemung.cce.cornell.edu/energy/solar-energy/solar-land-leasing>. Date accessed: March 18, 2024.

Cornell Cooperative Extension Service. “Solar Farm Leases Q and A”, Cornell University Extension Service. April 4, 2016. [https://bpb-us-e1.wpmucdn.com/blogs.cornell.edu/dist/e/1628/files/2016/04/Solar\\_Farms\\_Q\\_A\\_04-04-2016\\_FINAL-1u5vofl.pdf](https://bpb-us-e1.wpmucdn.com/blogs.cornell.edu/dist/e/1628/files/2016/04/Solar_Farms_Q_A_04-04-2016_FINAL-1u5vofl.pdf). Date accessed: March 14, 2024.

Haigwood, W. “Solar leases, Part 1: What should you consider before signing”, Delta Farm Press. August 3, 2023a. <https://www.farmprogress.com/conservation-and-sustainability/solar-leases-part-1-what-to-consider-before-signing-> Date accessed: March 19, 2024.

Haigwood, W. “Solar leases, Part 2: Phases of solar projects”, Delta Farm Press. August 15, 2023b. <https://www.farmprogress.com/conservation-and-sustainability/solar-leases-part-2-phases-of-solar-projects-> Date accessed: March 18, 2024.

Haigwood, W. “Solar leases, Part 3: Negotiating a solar contract”, Delta Farm Press. August 31, 2023c. <https://www.farmprogress.com/conservation-and-sustainability/solar-leases-part-3-negotiating-a-solar-contract-> Date accessed: March 19, 2024.

Heatherly, L.G. “Solar Lease Contracts”, Mississippi Soybean Promotion Board, September 15, 2023. <https://mssoy.org/article/solar-lease-contracts> . Date accessed: March 13, 2024.

Kirk Hall, P., E. Bachelor, and E. Romich. “Farmland Owner’s Guide to Solar Leasing”, Ohio State University Extension Service, 2019.

Milhollin, R., M. Ernst, and J. Horner. “Leasing Land for Solar Energy Development”, University of Missouri Extension Service, January 2023.

Nuckols, M. “Considerations When Leasing Agricultural Lands to Solar Developers”, *The Jefferson – Farm and Food E-news*, Cornell Cooperative Extension Service, January-February 2020.

Rumley, R. “Solar Leasing for Landowners”, The National Agricultural Law Center, December 1, 2022. <https://nationalaglawcenter.org/solar-leasing-for-landowners/> Date accessed: March 8, 2024.



Dr. Michael A. Deliberto is an Associate Professor and the Louisiana Farm Bureau Federation Endowed Professor in Agricultural Policy. He can be contacted in the LSU Department of Agricultural Economics and Agribusiness at (225) 578-7267 or by emailing [mdeliberto@agcenter.lsu.edu](mailto:mdeliberto@agcenter.lsu.edu).