



## Solar Development

# FREQUENT QUESTIONS & ANSWERS

### THE DEVELOPMENT PROCESS

#### 1. How do you select the land you want for a solar facility?

There is a lot of work that goes into the selection of a location for a proposed facility, primarily broken down into four main parts. 1) First, the ideal site will have existing transmission infrastructure already in place with available capacity to handle the power the proposed project will generate. 2) Second, we must find interested landowners with enough land to host the project, who's land is fairly flat, primarily free of environmental concerns (like wetlands or karst.) 3) Third: Location, Location, Location! In addition to being nearby transmission capacity and interested landowners, the ideal site will be near areas with significant power usage with a solar resource aligned with area power consumption needs. 4) Lastly, the project needs to be economically feasible for it to be market competitive. Costs associated with transmission connectivity/upgrades, landowner participation, project components (solar panels, steel, etc.) and/or construction can impact the project's overall cost.

#### 2. Why do solar developers look for generally flat and clear land near existing transmission lines?

Solar is currently one of the most economical forms of energy generation. To remain competitive in the energy marketplace, solar facilities need to be carefully designed for maximum efficiency and minimal cost of construction. Long interconnection lines, densely forested land (requiring clearing for use), and topographical variances all add to the overall

construction and technology costs, which may make the project less appealing to potential buyers.

#### 3. Why would a landowner choose to let a solar developer lease his land for a solar facility?

Solar project leases offer consistency and assurances the typical agricultural farmer doesn't see very often. The lease generates long-term stable and dependable income and allows the landowner to retain ownership of their family farm for future generations. In many cases, the lease payments are higher than the typical crop lease, may provide an opportunity to purchase additional land to actively work and the stability of the lease payments guards against the volatility of the agricultural market they might experience on other parcels they continue to farm. The lease remains competitive over time with a built-in escalator throughout the life of the project.

#### 4. If a county allows one solar project, is that going to open up the county to allowing solar panels on ALL our farmland?

As mentioned previously, not all farmland works for a solar facility. Developers field numerous inquiries from landowners interested in using their land for solar, with less than 1% of the land being usable, due to the factors listed above. Often the first one or two solar projects constructed in a specific area take up the available capacity on the local grid. In addition, solar is a temporary use of the land. At the end of a project's life, all components can easily be removed

and the site returned to agricultural use. In fact, our agreements with landowners require this process be completed.

### SOLAR AS A LAND USE

#### 5. Is solar compatible with agriculture?

Solar farms are low-impact land uses that can safely operate next to neighboring agricultural operations. In fact, the natural ground cover under and between the rows of panels allows the soil to rest and rebuild nutrients, just as ag conservation programs recommend, making the land more profitable upon return to agricultural use. Sheep can be used for grounds maintenance on the sight, providing stable contracts from an area sheep farm. Pollinators can be added to the benefit of neighboring farmers. And at the end of the solar farm's useful life, the pilings and equipment are easily removed, and the land is returned to its original agricultural use.

Much like the effort to keep as much of our food supply grown in the U.S., the more energy produced at 'home' will also strengthen our country.

#### 6. How do solar farms affect surrounding property values?

This is a common question from neighboring landowners. Most solar developers are committed to developing projects that respect the rural character of the surrounding community. They engage with professional appraisers with extensive experience in the evaluation of data on actual home sales next to solar projects. Their findings report

that solar facilities have no negative impact on neighboring property values. Solar simply does not have any elements that can impact property values such as noise, high traffic, smells, industrial zoning, and permanent land use impacts. Additionally, their low-profile allows for the use of setbacks and vegetative screening to minimize viewshed impacts.

## 7. Who is responsible for the decommissioning of the solar farm?

The owners of solar facilities are required by its lease agreements with the project landowners to decommission the project. Certain permitting agencies may also have decommissioning requirements as part of their permitting process, which adds an additional guarantee that the solar project will be properly dealt with at the end of its life. Neither the county nor the landowners will pay costs associated with restoring the land to its original state once the equipment is removed from the site. In addition, most of the equipment used on the site has significant salvage value and more than 90% is recyclable.

## 8. What kind of permitting processes do these projects have to go through?

### FEDERAL

Federal Wetlands; US ACOE Jurisdictional Determination; Threatened & Endangered Species

### STATE REGULATORY AGENCIES

State Siting Board or State Utility Commission Processes:  
Rigorous review process which includes environmental analyses, public hearings and review by numerous state level agencies including Departments of Environmental Quality,

Natural Resources, Cultural Resources, Wildlife, Agriculture as well as others.

Stormwater Permits

### STATE DOT

State Driveway Permits

### JURISDICTIONAL

Regional Sediment & Erosion Control, Building/Electrical Permits

### PJM / UTILITY

Utility Interconnection Studies & Agreements; Affected Systems Studies

## 9. What are the environmental benefits of a solar power plant for any community?

Solar power plants provide clean energy that has many environmental benefits to aid in the reduction of pollutants and carbon in our local atmosphere. Below stats are reflective of these impacts as measured per megawatt of installed solar capacity\*.

~1,562 pounds of atmospheric carbon annually eliminated.

The equivalent of ~79.7 gallons of gasoline eliminated.

The equivalent of ~.154 passenger vehicles removed from our streets.

The equivalent of ~.129 homes' electricity use for one year

Planting of native grasses and pollinator friendly groundcover – creates new habitats for bees, birds, small mammals, and other wildlife.

\*Source: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

## 10. What are the financial benefits of a solar facility for a community?

Solar facilities provide long-term tax revenue to the local county, create numerous construction jobs, and produces low-cost clean power that can be a great economic development draw to industry. The tax revenue provides economic impact to the local school system and other community needs while requiring little to no county services in return.

Solar development provides: 1) a steady source of income for local landowners; 2) an improved tax base for the county; and 3) the delivery of clean renewable energy to the utility grid. Renewable energy is in high demand by utilities and corporations and attracts economic development to areas where it is available.

## 11. Where does the energy go that you are producing? I hear none of it will stay here in our own community and it will be shipped to other states?

Electricity, much like agricultural produce grown locally, is a commodity which is traded and consumed nationally. For the cotton, corn, beef, soy, or milk produced locally, only a small proportion will be consumed locally, with most of it being processed, distributed, and sold across the Nation. The same applies to electricity produced by a power plant such as a coal plant or a solar farm which is transported for use via the transmission grid.

The reality of power transmission is that it's consumed as it's needed first, so although the project might be sold to an utility or corporate & industrial customer with heavy power needs somewhere else, at least some of the power will be used locally by the homeowners and community hosting

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the solar project. Beyond the ability to use the energy that's 'grown' locally, our solar projects are generating homegrown energy, reducing the need to rely on imported energy from other countries.

Though the industry does have technology that reflects solar rays, (called concentrated solar) this technology is not used in projects in this region and has historically been used in unpopulated deserts in the western U.S. and parts of the Middle East.

## ENVIRONMENTAL IMPACTS

### 12. Are there any health & safety concerns related to a solar facility?

Solar photovoltaic technology has safely been in use for more than 50 years. There are no emissions or contamination (air, water or soil). Solar farms do not emit any gases or release anything into the environment. When the system is removed, most all of the components can be recycled; much of the materials in a solar project are similar to what you might find in any building construction or even in your car. Multiple independent studies have been conducted affirming that solar technology and solar energy production is safe for the landowner, surrounding community and the environment. For additional information on this topic, please see a study completed by N.C. State University on the "Health & Safety Impacts of Solar Photovoltaics".

### 13. Will the panels cause glare that would reflect on nearby public roads and homes?

No – solar panels are specifically designed to absorb the sun's rays, not reflect them. They have an anti-reflective coating that allows them to absorb and utilize as much sunlight as possible in order to generate electricity. This fact is exemplified in the large number of solar facilities currently installed and operational at airports and military bases across the country. As you drive by a solar facility, the panels often appear purple or even black in color.

### 14. Are there long-term groundwater or stormwater concerns with utility-scale solar?

Solar projects do not increase runoff and in the long-term can improve soil and water quality. In reality, the native grass cover typically planted and maintained under and between each row of panels represents a net reduction in chemical fertilizers, pesticides, fungicides and herbicides that are often primary sources of groundwater contamination over the life of the project (which can span as many as 40 years.)

Stormwater management plans are a required part of the solar development process. These plans are prepared by professional engineers to ensure that projects do not contribute to erosion or flooding and are reviewed and approved as part of the permit request process. A solar project has maximum ground permeability and is much better in terms of stormwater runoff than most other types of development. In states where drain tiles are used, the solar engineers must develop plans to avoid or repair any disturbed tiles on the land being used for the project and in some cases, may add additional drainage systems to ensure the project's operational viability.