



*Frequently Asked Questions
Orleans Solar Project
January 2020*

A: General Questions:

Describe the Project

Orleans Solar is a proposed 200 Megawatt (MW) solar power plant in Orleans County, New York. Community Energy (CE) began developing the project in 2019 with the goal of helping New York State meet its aggressive renewable energy goals. Orleans Solar will safely generate enough clean electricity to power over 36,000 homes.

Orleans Solar will be sited on ~1,800 acres of non-contiguous parcels, interspersed with woodlands and ongoing agricultural activity. Rather than one continuous array across a large area, it will be designed as a patchwork of smaller arrays connected with underground wiring.

Orleans Solar is leasing land from private landowners, providing a consistent revenue stream for the life of the project in excess of typical farm income. All of the land is located in the Towns of Barre and Shelby.

Orleans Solar will use the same type of photovoltaic panels installed on over one million homes in the US. Solar equipment is proven safe in applications from fields to rooftops of homes, schools, and businesses. Panels will be installed on a low-profile racking system. The project has little impact on the land, which can be returned to agricultural use at end of its life. Good site selection, setbacks, appropriate fencing and landscape buffering enable solar projects to blend into the community.

The Orleans Solar project will bring hundreds of construction jobs and some permanent operations and maintenance jobs to the community. Increased income for landowners, greater tax revenue for the local community, and construction spending bring significant economic benefits.

CE has developed approximately 1,700 MWs of utility-scale solar and wind energy across the country and we work closely with local communities to ensure our projects will be good neighbors for many years.

Who are Orleans Solar LLC and Community Energy?

As with all energy generating projects, the project is legally organized as a project company called Orleans Solar LLC. This project company is wholly owned by CE, a privately-held, renewable energy company. CE has been in business for more than 20 years, focused exclusively on developing and supplying clean, renewable energy. CE is headquartered in Radnor, Pennsylvania, with additional offices in Colorado and North Carolina.

Since 1999, CE has developed roughly 1,700 MW of utility scale solar and wind energy projects in nearly 20 states. We are very experienced in the development of renewable energy projects, and bring our experience and lessons learned to implement a successful project in



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Orleans County, NY. We have operating projects similar to Orleans Solar located in Virginia, Georgia, Colorado and Minnesota. We have received many awards for our work, including the 2012 Distinguished Solar Project in the East by Solar Power America.

Why here?

Interconnection capability to the NYISO transmission grid is the first screen for finding a site for a solar project of this size. We need to be able to interconnect directly to a transmission line or substation that has enough transfer capacity to support 200 MW of new generation without requiring significant upgrades to the grid. NYS has aggressive clean energy goals but to satisfy societal needs, this power must be reliable and affordable. This is largely determined by the host transmission system.

Once interconnection points are identified, we need to make sure there is enough buildable land within a reasonable proximity. We have found both here in Orleans County, NY.

Who will issue permits or approvals?

There are two key approvals for this project that come from:

- (1) The New York State Board on Electric Generation Siting and the Environment under Article 10
- (2) Electrical Grid Interconnection – New York ISO

State Permit – Board on Electric Generation Siting and the Environment. On August 4, 2011, Governor Cuomo signed into law Chapter 388 of the Laws of 2011 that enacted Article 10 of the Public Service Law. Article 10 requires new, repowered or modified electric generation facilities 25MW and larger to undergo review and approval by the Board on Electric Generation Siting and the Environment (Siting Board) in a unified proceeding rather than requiring a developer or owner of such a facility to apply for numerous state and local permits.

Article 10 requires careful consideration of compliance with local laws and ordinances; analysis of potential environmental, socioeconomic, and public health impacts; and studies regarding environmental justice and public safety. Article 10 also establishes key mechanisms to encourage local outreach and support public involvement in the Siting Board proceedings including:



- Establishing a public information coordinator within the Department of Public Service to assist and advise interested parties and members of the public in participating in the siting process.
- Providing for appointment of public members of the Siting Board from the local community where the facility is to be sited.

Electrical Grid Interconnection – New York ISO. The second approval is with the New York Independent System Operator or NYISO, the operator of the electrical grid in New York State. One of the key factors in selecting this project location was identifying an optimal location on the grid to inject the power. The project is currently in the second stage of a three-stage electrical grid interconnection study administered by the NYISO, in coordination with the local utility, Rochester Gas & Electric (RG&E). Initial results of these studies show that the project interconnection is feasible; and the project has secured senior interconnection rights in this vicinity of the electrical grid.

What is the Schedule?

The Article 10 process is expected to take about two years to complete, which means the project could break ground in February 2022. The construction process is relatively simple and moves quickly. Total time from start of site work to commercial operation is about 8-10 months, with some weather dependency. Timing of project construction and finance is dependent on securing contracts for the sale of power and renewable attributes from the project along with the completion of approvals under Article 10 and NYISO interconnection studies. We are currently targeting commercial operation by October 2022.

Are you leasing or buying the land?

We lease the land from the existing landowners but in some cases will consider a purchase. In our experience, landowners prefer to lease their land so they maintain long-term ownership. The income provided to landowners is highly reliable, supported by long-term power sales from credit-worthy power purchasers. Lease payments stabilize the uncertainty of other farm income, allowing the land to be kept in the family for future generations. Our leases allow for 30 years of operation, with the option to extend for an additional 10 years.

Will you remove the equipment and restore the land at projects end?

The landowners want the land returned to them as they gave it to us. Each lease has a decommissioning requirement. We will also provide a decommissioning plan to the Towns of Barre and Shelby and Orleans County. We would expect to implement a decommissioning plan similar to plans implemented at other CE projects of similar scale. The decommissioning plan includes a financial surety based on cost estimates for equipment removal, hauling, disposal, and land restoration, taking into account salvage and resale value.



B: Will the project impact the community or the environment?

How can you develop an energy project to have low impact?

Energy supply is key to a modern society, and demand for electric power continues to grow. Supplying clean and reliable power is clearly a public priority. New York is working on implementing a plan to achieve 70% renewable energy by 2030. This project will generate enough electricity to power over 36,000 households. Solar photovoltaic (PV) technology is the least impactful energy generation technology; the construction process is low impact, much less impactful than a housing development; operation and maintenance are very low impact; and there are no emissions.

The key to supplying safe, reliable, and affordable electric power with minimal impact lies in the technology employed and how sites are selected.

We must select sites that (1) are in close proximity to the appropriate electrical transmission infrastructure with capacity to receive the power generated and (2) can be developed with minimal impact to the surrounding environment and community.

The land we have selected in Barre and Shelby meets these criteria. The project will connect to the electric grid via existing transmission lines that cross through the project area. According to the NYISO interconnection feasibility study, this location is able to accept the power generated from this project. There are no air emissions of any type and no sound emissions outside the project fence.

With those elements in place, we have a low impact profile to augment the public good of reliable, clean energy supply. We have analyzed geographic, community, and economic factors to assure high-quality development with minimal impact.

What about runoff?

There will be less runoff from the site after completion than before. The solar panels will not create impervious surface, but rather allow rainwater to fall to the ground through gaps between each panel.

The existing land is mostly in row crop, pasture and hay production. A “Low Mow” grass cover will be planted throughout the project area, including under the panels. This will create a thick grass turf/meadow condition that stabilizes soil and produces less runoff than existing use. We have used this “Low Mow” grass mixture on many projects with great success. There is ample grass between the rows of panels to absorb rainwater. We are also investigating the use of pollinator friendly ground cover which would further enhance the sustainability of the project.

Will the project harm the soil and be a problem for future farm use?

The “Low Mow” is a fescue grass mix specified by Dr. Thomas Watschke, Emeritus Professor at Penn State, who we have used as a consultant for 6 years on many projects. According to Dr. Watschke, *“The grass under the panels will be primarily fine fescue, which has high shade tolerance, grows aggressively against weed invasion, and only requires minimal fertilization and mowing during the course of the growing season. In addition, and perhaps as important as*



anything, due to the organic matter turnover associated with the growth of the fine fescue, the soils under the panels will be enhanced/improved over the course of time that the panels are in place. Thus, at the end of the lease agreement, the soils under the panels will be more suited for farming than they were when the panels were installed.” The use of native pollinator friendly seed mixes has the potential to provide even further soil benefits above and beyond that of fescue grasses.

How about during construction?

We will submit a fully developed Erosion & Sediment (E&S) control plan as part of the approval process. It will consist of locations for silt fences, swales, and all other design measures required for the project, along with notes detailing construction sequence, ground cover specifications, and procedures for landscaping and maintenance.

Do the posts use concrete foundations that are left behind?

Small steel posts, which are simply driven into the ground, are the typical foundation for solar panel racking. The posts do not require concrete. A little concrete may be used to stabilize a small number of racking posts and/or fence posts, depending on ground conditions. These small pieces of concrete can easily be removed during decommissioning or they may stay in place, but far below the surface. In either case, the concrete will not impact farming operations after the facility is decommissioned. The posts and all other project infrastructure are removed at the end of project life leaving no remnants of the racking structure or other project components in the soil.

What is the impact on agriculture locally?

Though some of the ~1,800 solar farm acreage will be removed from active agricultural production for the life of the project, this amounts to approximately 1.5% of all the agricultural land in Orleans County.¹

At the end of the lease period, the land is available to return to farming. Our decommissioning plan assures both removal of equipment and restoration of the land to farmable condition.

Do the solar panels contain hazardous materials?

There are no hazardous materials in modern solar photovoltaic panels. Modern panels pass the TCLP test (Toxicity Characteristics Leach Procedure). The panels are the same as those found on residences. They are solid state, much like a semi-conductor, and contain no liquids. If a panel is damaged, there is nothing to spill onto the ground. We electronically monitor the projects in real-time. If there is a malfunction, we know it immediately and complete the necessary repairs. There are no special requirements for disposal of solar panels. There are now thousands of ground mounted solar projects, and we are not aware of any release of hazardous materials from the panels.

¹ http://www.orleansny.com/Portals/0/Departments/Planning/Report_Web.pdf



Will the project be safe?

We will provide security fencing that will fully encompass the solar fields. Any wires outside of our security fence will be buried. As such, no part of our solar project will be accessible to the public. Within the fence line, all solar equipment will be grounded and touch safe, fully compliant with all applicable codes and accessible only to qualified personnel, with the exception of guided tours.

Orientation will be offered to local first responders to educate them about the project, the equipment and access, and response procedures in case of unexpected events.

Contact information for our monitoring and response center will be provided and posted on the project fence to ensure the public can easily reach project representatives.

Will the project destroy wetlands?

We will avoid wetlands, and will comply with all U.S. Army Corps of Engineers (ACOE) and NYSDEC wetland requirements. Any crossing of wetlands or streams is intended to be accomplished via underground directional boring, and will comply with all ACOE and DEC requirements.

Will the project be an eyesore?

As a result of thoughtful site selection, the view shed from high-traffic public roads and surrounding residential neighbors is relatively limited. We will implement setbacks and provide landscaping (with native trees, shrubs, and tall grasses) to filter and enhance the view.

We will reach out to nearby landowners with potential view, regardless of legal requirement, to explain and discuss the project to make sure we are seeing it from their perspective and designing the project and landscaping with their interests in mind.

We will provide a detailed Operations & Maintenance Plan as part of the approval process. It will have provisions to maintain the visual “look and feel” of the project.

We intend to be a good neighbor and work in good faith with our neighbors.

What is your Decommissioning Plan?

Decommissioning of the project and restoration of the land is our responsibility. Our land leases require decommissioning and restoration, and the economics of such are factored into our project financial planning. The decommissioning plan details responsibilities and performance standards, engineering costs estimates, financial surety, and re-evaluation every 5 years to assure funds will always be available.

C: Benefits to the Community

Will there be increased tax revenue?

Yes, the project will significantly increase tax revenues to the Towns of Barre and Shelby, Orleans County, and the host school districts. The land hosting the solar project will no longer be taxed at the lower rate provided for agricultural land and will generate many



times more in taxes compared to current land use. In addition, there will roll-back taxes associated with the change in land use status.

Tax revenue discussions are ongoing with the local jurisdictions.

How do the Landowners benefit?

Landowners will receive significant and predictable annual lease payments. This is very significant income that can bolster traditional farm income and help keep the land in the family. Any additional taxes are paid by Orleans Solar. After project decommissioning, the land can be returned to its former use or another beneficial use for future generations.

Will jobs be created?

The project will cost well over a hundred million dollars to develop and construct and will employ several hundred workers during construction. This will create significant employment opportunities for local contractors and laborers. We will work to help local businesses be positioned to capitalize on this opportunity. There will be opportunities for engineering, electrical, general labor, site work, and landscaping contractors, along with an economic boom for hardware stores, fencing, landscape, and equipment suppliers, lodging and food vendors, and many others. Contractors across the supply chain will hire local workers and frequent local business for food, fuel, supplies, and lodging. We encourage all contractors to hire locally and participate in our business outreach and job fairs, but contractually must leave employment decisions to each contractor. The project will require a limited amount of ongoing operations and maintenance work to be provided by local service contracts.

What are the environmental benefits?

The project will use no fuel and create zero emissions, reducing air pollution and offsetting hundreds of thousands of tons of carbon dioxide emissions every year. Energy generation and environmental equivalents from the project are estimated to include...²

- Equivalent of powering over 36,000 average NY homes per year
- Equivalent of offsetting ~282,000 tons of CO2 per year
- Equivalent of carbon captured by ~370,000 acres of U.S. forests
- Equivalent of offsetting ~311 million pounds of coal burned per year
- Equivalent of offsetting consumption of ~655,000 barrels of oil

How else can this project help the community?

In addition to the environmental and economic benefits, there are other societal benefits that can result from such a significant renewable energy project. There is clearly a new renewable energy economy emerging in the United States and New York in particular.

This project would be one of the largest solar projects in New York and can help drive further education, investment, and employment opportunities in the region. This will be a headliner project that can manifest in many ways, including spurring young people to pursue careers in renewable energy, which is a fast-growing industry with a lot of opportunity for job growth and economic investment.

² <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>



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Summary:

This project will deliver a significant amount of clean, affordable energy to the electric grid and significant environmental and socioeconomic benefits to the landowners and community, without additional burden on municipal services and expenses that are typical of most forms of development. The project, by nature and by design, causes minimal disturbance to the land and community. As a whole we believe this project provides a significant net benefit to the host landowners, local community, and region.