

Archer Solar Project Frequently Asked Questions



These Frequently Asked Questions have been updated based on new questions that have been received and additional details that have been determined as work on the project progresses.

Archer Solar Project Basics	
What are the project specifics?	<ul style="list-style-type: none"> The Archer Solar Project is a planned 74.9-megawatt photovoltaic solar facility located on 650 acres of property 2 miles north of the City of Archer near the intersection of SW 170th St. and SW 95th Ave.
Why build it here?	<ul style="list-style-type: none"> The Archer Solar Project is carefully sited on land historically managed in planted pine that is bisected by a major high-voltage transmission line and substation, enabling responsible development of renewable energy that conserves use of rural lands. Demand for emission-free solar energy from households and businesses across the country is high. Here in sunny Florida, the state recently approved legislation establishing a goal of adding significant solar power driving the need for clean renewable energy.
Have you looked at alternative sites? <i>(Updated 7/23/20)</i>	<ul style="list-style-type: none"> We evaluated many potential sites for this solar project. However, the site that was selected has already been significantly impacted with existing electrical transmission infrastructure, including a high voltage transmission line that bisects the property and a nearby transmission substation. The site is also a pine plantation whose trees are managed for silviculture and intended for harvesting. The combination of a property that has already been impacted by electrical infrastructure and sufficient, available land is unique.
When would it be constructed?	<ul style="list-style-type: none"> If approved by Alachua County, the project is expected to begin site clearing by the end of the year, and the facility would begin operating by the end of 2021.
How long would the project operate?	<ul style="list-style-type: none"> First Solar is working with Duke Energy to acquire the project once it is fully developed and ready for construction. Pending all milestones are met, Duke Energy will then construct, own and operate the facility. The solar equipment has a lifespan of more than 30 years and a decommissioning plan will be implemented once it has reached its useful life.

<p>What utility company will this benefit? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • Duke Energy Florida will receive the power generated from the solar project. However, Duke has many customers in the area including co-ops such as Clay Electric. The customers of these co-ops include many people in the local community to whom the benefits of lower-priced, renewable energy would accrue. We are aware that Duke Energy has included the Archer Solar Project in its filing to the Florida Public Service Commission as part of its commitment to provide low-cost, renewable energy.
<p>What happens when the lease is up? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • The land will not be leased. The land will be purchased. • At the end of the project life, the decommissioning plan explained below will be implemented.
<p>Is there a decommissioning plan?</p>	<ul style="list-style-type: none"> • Yes, a preliminary decommissioning plan has been drafted, outlining how the solar facility will be deconstructed, recycled and disposed, and returned to greenfield condition. Studies have shown the recoverable value of a solar facility can exceed its decommissioning costs, resulting in a net value and the lowest decommissioning costs of all energy technologies.

Permitting Process

<p>What’s the approval process for the project?</p>	<ul style="list-style-type: none"> • The Archer Solar Project requires a Special Exception (SE) from Alachua County to allow the project site to be used for a photovoltaic solar facility on agricultural property. The SE does not rezone the site, and it will remain in Agricultural zoning. The Alachua County comprehensive plan and land development code allow utility-scale solar facilities to be sited on agricultural land with an approved SE. The SE process is designed to carefully ensure compatibility of the project with surrounding uses. • First Solar submitted the SE application on May 27. Prior to submitting the SE, First Solar hosted a virtual neighborhood workshop on May 21 to share information and seek feedback from the neighbors and the community. In accordance with county regulations, the workshop was advertised in the Gainesville Sun and neighbors within 1,320 feet were sent invitation letters. First Solar has scheduled a second virtual workshop for July 9 (6 pm) and has invited the Archer City Commission and staff to attend along with the public. • The application will be reviewed by Alachua County’s Planning Commission which will make a recommendation to the Board of County Commissioners.
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	<ul style="list-style-type: none"> • Both the Planning Commission and the Board of County Commissioners will hold public hearings where the public may attend and make comments. • We expect the process to take about four to five months and with approval, construction may begin by the end of the year.
<p>Is a solar facility compatible with an area zoned for agriculture?</p>	<ul style="list-style-type: none"> • The solar facility provides a temporary use of the land vs. permanent non-agricultural uses such as commercial or residential development. The solar facility can be readily removed and the site can be restored to its original state at the end of a project's useful life. • Responsibly developed utility-scale solar PV installations can help rehabilitate agricultural land by eliminating annual tilling, as well as fertilizer and rodenticide use. Alachua County land development code allows major utilities, like utility scale solar facilities, to be sited on land zoned for agriculture with an approved Special Exception permit.
<p>Who is going to be the watchdog to make sure all these promises are kept in the future? Who can we go to if, after the project is completed, things aren't running as smoothly as they should?</p> <p><i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • During construction and into operations, a public engagement person will be assigned to the project whom community members can directly contact with their concerns. Separately, the Growth Management Department of Alachua County has a code enforcement team who will ensure compliance with permits.
<p>Benefits</p>	
<p>What are the advantages to the community by allowing utility scale solar?</p>	<ul style="list-style-type: none"> • The Archer Solar Project will provide emission-free energy generation. Further, the Archer Solar Project is designed to provide power to meet the needs of 23,000 average homes and will displace 86,000 metric tons of CO₂, the equivalent of taking 31,500 cars off the road.

	<ul style="list-style-type: none"> • The construction of the facility will create about 200 jobs. The employees will support the local economy by frequenting businesses, restaurants and hotels while working on the project. • The Archer Solar Project will increase tax revenue for Alachua County and other local taxing authorities including the Alachua County School District, the library district, the law enforcement MSTU and the St. Johns River Water Management District. The construction of the solar facility increases the value of the project property enlarging the tax base. This will provide more resources for local government services including roads, fire, EMS, and law enforcement. • In comparison to other commercial and residential developments, once operational, the Archer Solar Project will require minimal staffing to operate and maintain the facility. As a result, there is little to no strain on public infrastructure (i.e. roads, water, and sewer) and resources (i.e. schools, libraries).
<p>How much tax revenue will be generated for Alachua County by this project? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • We estimate that the project will pay upwards of \$200,000 annually in local taxes. • The County Commission determines the allocation of tax revenues from its general fund as do the other taxing agencies. We are not in a position to determine the allocation of tax proceeds generated by the project.
<p>What’s the benefit of the project for the City of Archer ? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • Local taxes paid by the project will go toward county and other public services such as the school and library districts, law enforcement and the water management district that residents of the City of Archer benefit from and also use.
<p>Will you hire local workers during construction? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • The Archer Solar Project will be constructed by a third-party contractor experienced in Florida solar projects that will be responsible for employing construction workers. Site work is expected to begin Q4 2020 with a small number of workers. The contractor, in collaboration with Duke Energy, will host a local job fair in the first quarter of 2021. There will be a need to hire for positions such as equipment operators, electricians, solar installers, laborers and journeyman. With a commitment to hiring local talent, the contractor’s workforce is comprised of approximately 90% Florida residents, where 25% of that workforce is typically local hires. More information regarding the

	<p>job fair and employment opportunities will be made available at a later date.</p>
<p>Will the project provide power directly to the residents of the community?</p>	<ul style="list-style-type: none"> • The Archer Solar Project is a utility-scale power generation facility. It is not designed to provide direct service to individual homes. However, the power from the project will help to shift the region’s fuel mix toward lower carbon sources.
<p>Solar Safety</p>	
<p>What’s in the solar panels?</p>	<ul style="list-style-type: none"> • First Solar photovoltaic modules consist of a thin layer of cadmium telluride (CdTe) semiconductor - a fraction of the thickness of a human hair strand - encapsulated between two sheets of glass and sealed with an industrial laminate material. Since CdTe is more efficient at absorbing light than other semiconductors such as silicon, First Solar modules use 98-99% less semiconductor material than conventional crystalline silicon modules. Studies documenting the advantages and safety of First Solar’s technology have been published and are available in peer reviewed scientific journals, conference proceedings, peer review reports and an extensive sustainability library on First Solar’s website.
<p>What is Cadmium Telluride?</p>	<ul style="list-style-type: none"> • Cadmium telluride, which is used in First Solar panels, is not cadmium. CdTe differs from cadmium due to its extremely high chemical and thermal stability. CdTe is a stable compound that is insoluble in water, has a high melting point (1041°C) and a high boiling point (1050°C), and a low evaporation rate. In addition, First Solar’s thin film semiconductor is encapsulated between two sheets of glass and sealed with an industrial laminate, which further limits potential for release into the environment in the event of fire or breakage.
<p>Are the panels safe?</p>	<ul style="list-style-type: none"> • Yes. Over the past two decades, over 200 million First Solar panels have been deployed in over 18,000 projects worldwide, including over a dozen projects in Florida. The environmental benefits and safety of First Solar’s cadmium telluride (CdTe) solar panel technology have been extensively researched for over a decade and more than 50 researchers from leading international institutions, including national laboratories such as Brookhaven National Lab and National Renewable Energy Laboratory. They have concluded CdTe photovoltaic panels are safe during normal operation, in the event of breakage or fire, and through end-of-life recycling and disposal.

<p>Do the solar panels leak chemicals?</p>	<ul style="list-style-type: none"> • No. First Solar panels are solid-state devices with no liquids or vapors. The panels use heat-strengthened glass and there is 725 pounds of strength per square inch holding together the front and back glass in the PV module. For over a decade, First Solar panels have been mounted on top of the filter hall and subterranean pure water tank of the Tegel Waterworks, part of the Berlin Waterworks, delivering clean drinking water to Germany’s capital city.
<p>What happens to the panels in severe weather?</p>	<ul style="list-style-type: none"> • Just like any other building or structure, solar PV arrays are built to local building codes. The Archer Solar Project will be required to adhere to the building code ordinances of Alachua County that govern equipment. • First Solar’s systems have been proven to stand up in extreme weather. A number of projects using our PV technology sustained little to no damage during Hurricanes Florence, Michael, and Category 5 Maria. Another facility using First Solar technology in Florida sustained a direct hit from Hurricane Michael and emerged unscathed. In addition, we test to make sure the modules and their connections (e.g. clips, frame fasteners, etc.) to the underlying structure can withstand a minimum of 50 pounds per square foot (PSF) loading in both positive and negative directions (i.e. front and back). This is equivalent to 130kmph or 80mph winds (2400Pa or static pressure of 800Pa with a safety factor of 3). Sites with higher wind speeds are tested to higher loads and often have more clips and stronger beams.
<p>Will a solar facility raise local temperatures?</p>	<ul style="list-style-type: none"> • While PV modules may get hot in the sun, particularly in the afternoon, they will not raise adjacent temperatures or cause heat impacts outside of the project boundaries. • PV modules return to ambient temperatures at night with no sustained heat effect that is characteristic of "heat islands." In contrast to concrete and paved surfaces, PV modules are relatively thin, lightweight and composed primarily of glass. Because of their structure and composition, PV modules have a low thermal inertia and dissipate heat quickly. • Additionally, by converting a portion of sunlight into electricity (which is no longer available to heat the ground) and by shading the ground, PV arrays can cool rather than heat the ground surface, relative to uncovered land.
<p>Do the panels cause more heat,</p>	<ul style="list-style-type: none"> • Heating is reduced underneath the solar panels as a result of shading. The land surface underneath the solar panels is cooler and retains more moisture than uncovered land. This

<p>less heat or no heat? <i>(Updated 7/23/20)</i></p>	<p>phenomenon has resulted in a new application of solar energy called “agrivoltaics,” which combines electricity production with agriculture, taking advantage of the enhanced vegetative productivity under solar panels. Above the solar panels in the interior of the solar facility at mid-day, it is a few degrees warmer than uncovered land. However, adjacent temperatures outside of the project boundaries will not be raised. At night, the solar panels are completely cooled.</p>
<p>Will a solar facility generate electromagnetic fields?</p>	<ul style="list-style-type: none"> • Electromagnetic fields (EMF) exist anywhere electrical current flows, including in the natural environment, homes, schools and workplaces. • EMF produced by the project does not create a public health risk for neighboring residents because it is indistinguishable from background levels produced by other human and natural sources at the perimeter of the site's security fence. Solar panels produce a lower electromagnetic field exposure than most household appliances, such as televisions and refrigerators.
<p>Will the project affect WiFi reception? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • No. A solar facility produces extremely low-frequency non-ionizing electromagnetic fields (EMF) at 60 Hertz, matched with the frequency of the electricity grid. The primary EMF source is the inverter which converts direct current (DC) to alternating current (AC) for transmitting electricity to the grid. EMF extends only about 150 feet from each inverter and the closest inverter is more than 350 feet from the property boundary. The EMF is also lower frequency than telecommunications.
<p>Will there be any fencing or security to keep children from entering the project both during and after construction? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • Yes, security fencing will be erected around the project.
<p>Drainage and Water</p>	
<p>How much water will be used for the project?</p>	<ul style="list-style-type: none"> • The operations structure will use potable water for employee use and consumption. Upon the establishment of ground cover, there has not been a need for irrigation or other uses at solar facilities in Florida, to-date.

<p>Is there a plan addressing drainage?</p>	<ul style="list-style-type: none"> • The project will be required to obtain an Environmental Resource Permit (ERP) from the Florida Department of Environmental Protection. After further development and engineering, percolation tests will be completed to understand the soils percolation rates and further develop storm water control measures to ensure water is managed per regulation.
<p>Will grasses be put down to reduce runoff under the panels and how will they be irrigated?</p>	<ul style="list-style-type: none"> • Grass seeding normally takes place in two phases during construction of a solar energy facility. Initial seeding takes place after land has been cleared and graded and before panel mounting structures are installed. This provides soil stabilization and reduces construction dust. • After the panel structures are installed, an additional seeding is typically undertaken to ensure there is sufficient grass before commencing operations. Irrigation systems are not installed as a combination of Florida weather and the grass type selected are generally sufficient for maintaining the ground cover.
<p>How will the panels be kept clean without using huge amounts of water and detergents? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • Washing the panels is not planned. Rainfall in Florida has normally been sufficient to keep panels clean.

Property Value Impact

<p>Will a solar facility reduce my property value? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • The design of the Archer Solar Project includes various features that help address neighboring property value impact concerns regardless of the type of development project. Important features include the 50 foot vegetative buffer contained within a 150 foot setback from property boundaries. This will screen the project from view, maintain the existing character of the area, and help eliminate audible noise outside the project. As explained above, the First Solar modules are safe and non-hazardous and produce no emissions or waste that would cause odor. Also, with minimal staffing needed to run the facility, the traffic during operations should be similar to present. • Furthermore, several studies across the country have concluded that proximity to large-scale solar projects has no negative impact
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	<p>and in many cases a positive impact on home and property values.</p> <ul style="list-style-type: none">• Construction and operation of utility-scale solar projects positively affect the socioeconomic conditions of the location where they're built by generating increased property tax revenues over the expected life of the project.• Solar facilities also generate sales, use, and income tax revenue and make the local area more attractive to economic development seeking renewable resources to supply power demand.• While large-scale solar hasn't been around quite long enough to create a substantial property value impact history, there have been studies conducted which conclude there is no negative impact on property values caused by the siting of large-solar projects.• In North Carolina, for example, where there has been significant large-scale solar development in recent years, matched pair studies conducted by local appraisers have indicated there is no negative impact on property values.• One such study conducted by Kirkland Appraisals, LLC concluded, "There is no impact on sale price for residential, agricultural or vacant residential land that adjoins existing or proposed solar farms."• A similar study conducted by the University of Texas at Austin in 2018 concluded that residential home assessors believe that proximity to a solar installation has either no impact or a positive impact on home values.• The National Association of Realtors® and Lawrence Berkeley National Laboratory report that homes with PV systems "sell for a premium" and sell faster than those without. Homes located near large-scale solar projects may yield positive associations with renewable energy generation. Positive perception of renewable energy sources, particularly among millennial homebuyers, could potentially add value to homes located near large-scale solar projects.• In an abundance of caution, and in deference to the community's concerns, we have commissioned a study of property values in proximity to the proposed site and expect to furnish that report soon to Alachua County.
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Lighting and Glare	
What kind of lighting is required around the project?	<ul style="list-style-type: none"> • The project consists of two site locations; one for the solar arrays and another southeast of the arrays for the solar substation and interconnection to the grid. Once the facility is operational, both sites will have minimal lighting at night at the entrances and exits of the facilities. Flood lights will not be used and any lighting will be directed downward to minimize light pollution and impacts to neighbors.
Will the facility produce significant reflection and glare?	<ul style="list-style-type: none"> • First Solar's thin-film modules are designed to absorb visible light. Any glare or dazzle effects are expected to be minimal and comparable to glass facades. The modules have an anti-reflective coating (ARC), that reduces the amount of reflected light to less than that of typical glass facades. • First Solar Series 6 modules appear darker than silicon modules in nearly all conditions. This dark appearance is direct evidence that the reflected light from the Series 6 Modules is less than that from the silicon modules. • The Archer Solar Project will have a 150 foot setback from the project boundaries including the retention of a minimum 50 foot vegetative buffer screening the project from view. • Glare from a PV module can only be observed if there is an unobstructed line of sight between a person, a PV module and a cloud-free sky between the PV module and the sun. During normal operation of a tracking PV system, there will not be any solar reflections that can be seen from an observer on the ground, because the reflections are directed upward.
Noise	
Are solar facilities noisy?	<ul style="list-style-type: none"> • While PV projects do make some noise, that noise is negligible and becomes inaudible from between 50–100 feet of the facility's boundary line. • The Archer Solar Project arrays will be located approximately 150 feet from the parcel boundaries and include a minimum 50-foot vegetative buffer. With this setback, it is not anticipated that the solar facility will produce noise that can be heard outside of the facility when fully operational. • The inverter (or, more specifically, the cooling fan within the inverter) makes more noise than the panels, but not much more. At 30 feet away, the sound is about 65 decibels—or about the equivalent of the sound level of a conversation. By 200 feet, it is

	<p>totally inaudible. In the current project design, the closest inverter is 350 feet from the property boundary.</p> <ul style="list-style-type: none"> • At night, when the panels and inverters are not in use, there will be no noise.
<p>What kind of noise would we expect during construction?</p>	<ul style="list-style-type: none"> • Once constructed, the solar facility will generate little to no noise and have minimal impacts to neighbors and the community. • Throughout the construction process, the work may create temporary disturbances that we will seek to minimize as best we can while continuing to move the project forward. • Some of the temporary disturbances neighbors may experience during construction hours are increased vehicle traffic, tree and brush clearing, debris burning, noise from construction equipment and foundation post installation and other activities. • Work is often performed from sun-up to sun-down, with some weekend activity needed in order to stay on project schedule. Construction is estimated to begin in the 4th quarter of this year and be complete by the end of 2021. • There will be a public engagement resource assigned to the project that will be available for questions and concerns you may have throughout the project construction period. More details, including contact information, will be provided at a later date.
<p>Traffic</p>	
<p>How will this project affect traffic flow and roads in our residential community? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • The project will work with Alachua County to ensure all requirements are met for changes in traffic. • Once constructed, the solar facility will generate very little traffic with, on average, six light-vehicle round trips per week. However, throughout the temporary construction process there will be traffic as workers and equipment deliveries, such as modules and racking, go to the project site. It is estimated that the one to two month peak construction period will bring approximately 130 light-vehicles and 20 truck deliveries per day. We anticipate the routes to the site will primarily utilize CR 241 and SW 95th Ave. • Prior to the start of construction, the roads surrounding the project site (portions of CR 241, SW 95th Ave and Black Angus Rd.) will be evaluated and documented to record their pre-construction conditions. We will work with Alachua County to identify a process for returning the roads to their pre-construction condition or better, once the construction of the facility has been completed.

<p>Where will employees park during construction? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • During construction, there will be a temporary parking area established on the main project site.
<p>Trees/Vegetation</p>	
<p>Will you be cutting down trees?</p>	<ul style="list-style-type: none"> • We recognize the significant value trees have on the environment. As we plan to bring clean solar energy to Alachua County, we will make efforts to only remove vegetation deemed necessary in order to effectively build and maintain the solar facility. • The property has been managed in planted pine for many years, with routine harvesting, thinning and clearing activities, and represents a site that is not in its native condition. • Our development process includes an evaluation of the existing vegetation, in conformance with the the Alachua County land development code, and will pursue opportunities to establish ground cover with native species. • The preliminary site layout includes a 150-foot setback from the parcel lines. Within the setback, a minimum of 50 feet of the existing vegetation will remain to serve as a buffer. This natural vegetation will provide an area for wildlife connectivity and a visual buffer for the community. • Alachua County also requires preservation of 20 percent of the native tree canopy located on the project site. The preliminary design includes a tree preservation area in the northwest area of the site with a focus on existing oak tree canopy. • Preservation of trees in this area is designed to visually protect the existing St. Peter cemetery. This area, along with the minimum 50-foot vegetative buffer, will allow the project to meet or exceed the County requirement for tree canopy preservation.
<p>Dust</p>	
<p>What are the plans for dust suppression during construction?</p>	<ul style="list-style-type: none"> • Construction-phase concentrations of dust and particulate matter at large-scale PV plants are similar or lower than background concentrations, and post-construction levels are significantly lower than background concentrations due to the wind-shielding effects of PV panels. • Development and construction practices for large-scale solar projects are locally determined and tailored to the type of land

	<p>and biodiversity, with the goal of minimizing and mitigating dust impacts.</p> <ul style="list-style-type: none"> • Construction practices including minimizing grading wherever possible and switching to use of cable trays instead of trenching help to significantly reduce earth-disturbing practices that can create dust. Also, dust control measures help mitigate wind-driven dust and particulate matter emissions at dry and dust-prone sites. Fugitive emissions of dust can be controlled by a combination of water, palliative, and gravel during construction. • Project EPC (Engineering, Procurement, Construction) personnel are accountable for dust control on the project site and work closely with local air quality agencies or other state/local authorities to develop a dust control plan.
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Weed and Grass Control

<p>How will you control weeds and grass? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • Our practices for operating and maintaining solar facilities include plantings of low-growing grasses, and where practicable, native pollinator species. The grasses assist with storm water management, dust control and aesthetics. We try to strike a balance between low height, hardy, and cost-effectiveness. Native vegetation that meets these criteria are considered. As we evaluate our options, we will consider the use of centipede grass. • Vegetation management is a very important part of designing and operating a ground-mounted, utility-scale solar facility. Tall weeds and vegetation growing around the solar panels can create shading and cause other mechanical problems, which can negatively impact the amount of energy produced. • Maintenance of vegetation (primarily grass) is typically managed through a contract with a Florida-licensed, third-party landscaping company who has not been chosen and who may choose to use different vegetation management approaches. Mowing is the primary method for maintenance and is typically performed nine times throughout the year. The solar panels at the Archer Solar Project move with or “track” the sun throughout the day. The movement of the panels allows for mowers to reach the grass underneath the panels, minimizing the need for herbicide use. Normally, mowing can reach about 99% of the project area. Areas that cannot be managed by a mower, such as the perimeter of concrete pads that support inverters and the drive shaft for the tracker, may be targeted with the direct application of herbicides, typically applied only twice a year. Only EPA-approved herbicides applied according to the label will be
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	<p>used. The safety of the public, personnel and contractors is the priority and the limited herbicides that are used are applied per the recommended guidelines to ensure no adverse impact to people, animals or the environment</p>
<p>Will sheep be used for vegetation management? Have you used them before? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • Sheep, not goats, have been deployed for vegetation management at other solar projects that First Solar has developed. No risks to the sheep from their exposure to the solar facilities has been identified. No decision has been made about deploying sheep at the Archer Solar Project. • Duke Energy, the intended operator of the facility, indicated that a Request for Proposal (RFP) for vegetation management will be issued by Duke Energy for the Archer Solar Project. Responses to the RFP will be evaluated and selected based on several factors, including cost effectiveness and the ability to meet the required vegetative management needs safely and effectively. Other Duke Energy solar facilities have had participation from sheep farmers; however, most recently, no formal responses to RFPs have been submitted for final consideration. Duke Energy is open to the potential opportunities of utilizing sheep for vegetative management and opportunities surrounding Research and Development projects with sheep and local universities.

Wildlife

<p>How will wildlife be impacted by the facility and fencing?</p>	<ul style="list-style-type: none"> • We will perform field surveys to identify any wildlife habitat on site. If wildlife habitat is identified within the project area, the project will comply with all applicable regulations and laws. • As part of the permitting process, the Archer Solar Project will obtain an ERP (Environmental Resource Program) permit from the Florida Department of Environmental Protection. As part of the permit process, the impact on threatened and endangered species is evaluated and mitigation plans, if needed, are developed. • We have identified the gopher tortoise as a state-listed threatened species at the site. Specific surveys for gopher tortoises will be completed and the project will receive a Gopher Tortoise Relocation permit from the Florida Fish and Wildlife Conservation Commission before construction. • During a survey of the site, a karst geologic feature on the eastern border of the main property was identified and mapped as a constraint. Plans for the project include an additional setback from this area.
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	<ul style="list-style-type: none"> • It is anticipated that the tree canopy preservation areas and the 50-foot natural vegetative perimeter buffer will facilitate wildlife connectivity and habitat.
<p>How will you protect the wildlife? Will the heat generated affect migratory birds or birds in general? Will the reflections affect birds in general? <i>(Updated 7/23/20)</i></p>	<ul style="list-style-type: none"> • Because of the shade provided by solar panels, the land surface underneath solar panels is cooler and wetter than uncovered land. This promotes vegetative productivity which is the basis of the food chain for other species such as birds. In addition, while solar facilities are professionally monitored, operated, and maintained, there are relatively few staff required, resulting in low land disturbance over long periods of time (years to decades). Long-term stable use of land results in a “solar reef” effect in which wildlife can thrive within an operational solar facility (Sinha et al. 2018; https://doi.org/10.1525/cse.2018.001123). As demonstrated in other Florida projects, agriculture can also co-exist with solar facilities, with sheep grazing used for vegetation management and solar panel shading allowing sheep to stay cool during summer months. Birds have also been documented to perch, forage, and nest within solar facilities for the same reasons.

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