Ogema Solar Project Frequently Asked Questions

Project Details

What are the Megawatts of this project and who will the project serve?
The project will tie into the existing distribution system of Price Electric Cooperative and serve the local members of Price Electric. The proposed project has a total rated capacity of 1.4 Megawatts and is expected to produce ~3.2 million kilowatt hours per year. An average Wisconsin household uses 8200 kilowatt hours per year which is enough for ~400 average Wisconsin households.

When is the planned or anticipated start date?
Pending availability of key equipment and lead times, the project is expected to be constructed in the summer of 2023. The project is expected to take about 3 months to construct.

What is the life expectancy of the project?
The warranties on solar panels are 30 years and the panels are expected to work efficiently beyond that, thus projects are designed to last 30-40 years. These projects are considered a temporary land use as the components of the solar electric facility will be removed at the end of the project. During the project, the land surrounding the projects will be planted with a deep-rooted perennial pollinator mixture or a grazing pasture mix. Once the project is complete, the rested land can return to its original agricultural use.

Please explain why a property is proposed for installation.
We looked for a property owner who is interested in hosting a solar project with a site that is located within 1 mile of a substation with adequate transformer size and load, and adjacent to a 3-phase distribution line. In addition, the land is relatively flat and has favorable characteristics for a solar project (outside of wetlands, floodplains, contains appropriate soil type and subsurface conditions,etc.).

Solar Panels

How long do Solar Panels last?
The solar panels we use are warrantied for 30 years. OneEnergy expects panels to have additional useful life at the end of their 30-year warranty, so we design the remainder of the project to a 40-year lifespan. Our lease has a 30 year initial term with an option to extend for an additional 10 years.

What are the components of the solar panels? What are they made of?
The solar panels are comprised of non-toxic materials. The solar cells, made from silica, comes from sand, which is formed into ingots and then sliced into thin wafers. These solar cells convert sunlight into electricity and are wired together with copper. The solar cells are sandwiched between two layers of tempered glass and enclosed in an anodized aluminum frame. The glass, aluminum, solar cells, and copper wiring, which comprise about 99% of a solar panel by volume, are all recyclable.

What is the procedure if one breaks?
Solar panels themselves are made of non-toxic materials (aluminum frame, tempered glass, copper wiring and silica sand). In product testing, solar panels are ground up to test for any leaching or harmful environmental effects and even under these extreme testing conditions, they present no harm to children, adults, pets and/or farm animals. That said, when panels do break, since they are tempered glass, they fracture but remain enclosed within the frame. Our remote monitoring system detects faults such as these, and we are notified as soon as one panel is not functioning as designed so we can promptly remove and recycle the damaged panel and replace it with a new panel.

Are these panels subject to storm damage and what is the risk of damage to other properties if debris is carried onto a residence?
OneEnergy reviews historical weather conditions for each project location and ensures all project materials are rated to withstand maximum wind speeds and snow loads for the area. All solar panels are designed and tested to withstand extreme weather. For example, during Hurricane Sandy, a large solar installer in New Jersey saw just two loosened panels in a large installation out of the tens of thousands they had installed throughout the region. Our projects throughout the Midwest have withstood Derechos and tornados, and never had panels or other equipment displaced from its racking. That said, OneEnergy carries commercial insurance that would cover any damage to other properties that may occur in a worst-case scenario.

How and with what are panels cleaned if needed? Are chemicals used?
OneEnergy does not anticipate cleaning panels during operations. Cleaning is sometimes required in desert environments that are very dusty and experience very little rain. It rains frequently enough in Wisconsin that we have never had to, nor do we expect to have to ever clean our panels.

Who is responsible for removal and disposal of solar panels?
Our lease agreement obligates the company to remove all of the solar facilities within one year from when the project is no longer producing power.

How are solar panels disposed of and where?
Given the lifespan of solar panels, our projects are all still currently operating. However, OneEnergy Development is a member of the Solar Energy Industry Association (SEIA). SEIA and its members are active in developing effective end of life processes for solar panels. The U.S. and Europe already have collection and recycling programs in place and these programs will grow as the solar industry does. We have worked with recyclers in the past when panels were damaged during shipping and handling, and there are several active in the U.S. despite the relatively small number of panels being recycled.

Safety of Solar Projects

Will there be glare?
Modern solar panels are designed to absorb rather than reflect sunlight and are not considered to produce glare. Further, the panels we use are treated with an anti-reflective coating. The Federal Aviation Administration (FAA), when reviewing proposed solar projects on airports, concluded that solar panels are much less reflective than a lake or snow-covered ground. OneEnergy has successfully permitted and constructed a solar project on airport property immediately adjacent to the runways of the Middleton Municipal Airport in Middleton, Wisconsin, and there are numerous other large-scale solar projects adjacent to airports in Madison, Indianapolis, Denver and elsewhere.

What are other potential problems, issues and/or negative impacts that could occur with the installation of solar panels?
OneEnergy Renewables hires reputable and experienced contractors to install solar panels who adhere to OSHA regulations. Once installed, solar panels operate quietly and do not present harm to people, animals, the environment, or property values.

Neighboring Properties and Property Values

What effect does a solar project have on the valuation of property and surrounding properties?
Studies that have reviewed solar projects' impact on neighboring properties have shown there is no measurable impact (increase or decrease) on home values or agricultural land around solar projects.

Chisago County, MN, is about a 2-hour drive from Town of Green Grove and is host to over a dozen large-scale solar projects. Chisago County has the same similar amount of rural population, and a similar overall population (50,000 people compared with Price County at ~14,054). The County Assessor's office has reviewed the effect these solar projects have had on property values. Daryl Moeller, theCounty Assessor stated, "The results again indicate, for Chisago County, that sales near a solar projectare similar to sales outside the solar area. The median ratio for the sales by a solar project of 88.5%compared to median ratios for the different city or townships near 90%." This data suggests that solar
projects have no impact on property values of adjacent residences and farms.

Land Use

How much land is needed for solar projects?
5-7 acres of land typically can produce 1MW of solar power. Farmers and landowners in Wisconsin are already major energy producers:

- 37% of the state's corn crop goes to ethanol production according to Wisconsin Corn. https://wicorn.org/ethanol/#:~:text=Wisconsin's%20nine%20ethanol%20plants%20produce,of%20the%20state's%20corn%20crop.

- An acre planted to corn in Wisconsin yields an average of 172 bushels of corn. https://www.wpr.org/wisconsin-crop-specialists-say-farmers-seeing-mixed-corn-soybean-yields-thanks-inconsistent-rain#:~:text=The%20latest%20crop%20production%20estimate,bushels%20of%20corn%20per%20acre.

- Each bushel of corn produces 2.8 gallons of ethanol, meaning each acre produces 481.6 gallons of ethanol per year. Assuming 25 miles per gallon, that's enough to drive a singlecar about 12,000 miles per year.

- The project OneEnergy is proposing will take about 13.5 acres out of crop production,which we will plant to a pollinator mix that will rest the soil and build organic matter to enhanceits fertility in the future when the project is removed.

- That 13.5 acres is expected to produce 4,675,000 kilowatt hours of electricity per year,or 346,296 kWh per acre.

- The new electric F150 is expected to get 2.3 miles per kWh. Meaning each acre will produce enough electricity to drive an F150 147,989 miles each year. https://www.caranddriver.com/ford/f-150-lightning

- Put another way, one acre farmed with corn would produce enough energy to run a single car for a year. One acre of solar will produce enough energy to run more than (12) F150's for a year.