

ELKHART COUNTY

SOLAR PROJECT

FREQUENTLY ASKED QUESTIONS ON GROUND-MOUNTED SOLAR PHOTOVOLTAIC SYSTEMS



Why Solar in Elkhart County

Why is this location proposed for a solar project?

Significant demand for clean energy exists in the PJM electrical grid area. This particular location has transmission lines to connect the solar energy to the electrical grid and landowners who were willing to work with Savion to host a solar project.

What benefits could the project provide to me?

In addition to providing a local source of power generation, the project will provide stable tax revenues to Elkhart County, Benton Township, and the Fairfield Community School Corporation. An independent accounting firm estimated that the project will pay nearly \$22 million in local taxes over a 35-year project life. These tax revenues will provide a stable base for county revenues no matter what is happening in other industries or the broader economy. The project will not require new county services like utilities or road construction, so it is contributing to the county budget without drawing resources from it. In addition, the project will make about \$830,000 in payments to the county when it comes online, which are new revenues to the county above its annual budget to foster economic development.

Solar Panel Design / Visual Impacts

How high are the panels off the ground? How tall do the panels stand?

Solar panels sit approximately 4' off the ground, depending on site conditions. Considering a common solar panel size is 36" x 66", the approximate total height of the panels at the highest point is typically 7-8' but not exceeding a height of 10'.

How does the traffic associated with large solar projects impact nearby residential and agricultural property?

During construction, there will be increased traffic associated with the construction activities. However, once the construction is complete and the site is operational, there will only be 1-2 vehicular trips per day to and from the site. The project has negotiated a Road Use Agreement with Elkhart County. Under this agreement, the project will maintain County roads during construction, repair them to their pre-construction condition once construction is complete, and provide independent security to the County to ensure those repairs are made. A building permit for the project will not be issued until this security is posted.

What will the solar array look like?

Large solar projects have similar characteristics to a greenhouse or single-story residence. Elkhart County Solar Project will be enclosed by agricultural fencing, and where an adjacent home is within 500 feet of solar panels, trees will be planted to screen the view per the recent Elkhart County Solar Ordinance. Once the project is operating, areas of the site that were disturbed during construction will be revegetated with a mix of grasses, which will provide additional screening around the fence and solar panels. The screening and vegetation will be maintained throughout the life of the project.

Power Delivery

Where does the power go?

The project will connect to the regional power grid, PJM. Energy on the grid flows to the closest source of demand, and local utilities draw energy from this regional grid to serve local businesses and homes. Indiana imports up to 80% of its power from other states during peak times. Solar power located in Elkhart County can reduce Indiana's reliance on imported power and stabilize the local power grid. When this project is producing electricity, it is very likely that it will be consumed in the homes and businesses in Elkhart County or the surrounding region.

In a separate action, a utility or large energy user will contract to purchase the solar energy produced by the facility. Think of this action as managing water in a river: the solar project pours energy into the regional power grid "river," and the energy buyer withdraws the same amount of energy from a different point along this "river." The energy buyer may not withdraw the energy units poured in by the solar project, but energy is energy.

Where does my power come from now?

Our large power grids in the U.S., like PJM and MISO, allow homes in Indiana to turn on the lights using electricity generated in Michigan, Ohio, or further away. At some times of the day, Indiana imports almost 80% of its power from other states, with large power plants in the region over 50 miles away. That leaves Hoosiers vulnerable to events elsewhere. Elkhart County Solar Project would provide a local source of power that does not have to travel tens or hundreds of miles along transmission lines to reach Elkhart County. Hoosiers can import power from distant power plants when the area around a power plant isn't using as much energy as the power plant produces. The energy produced by the Elkhart County Solar Project is no different – it will flow outside the local area when it is producing more energy than local homes and businesses are using.

AG Land Use

Do solar power facilities in rural areas take farmland out of agricultural production permanently?

No. The use of agricultural land for a solar energy facility is only temporary, and the land can be restored to its original condition after the solar farm is decommissioned. This differs from other forms of development where farmland may be paved over and keeps the solar project consistent with the rural character of the surrounding area.

Solar projects give farmers and landowners an opportunity to utilize their land to harvest another stable cash crop—the sun. Many farmers who host a solar project have not chosen to give up farming completely, but rather have taken some acreage out of agricultural production for renewable energy production. For some landowners, this can be a hedge against shifting commodity prices that can sustain the rest of their agricultural production.

How much farmland is utilized by a solar project?

Elkhart County Solar Project, LLC has worked with participating landowners to secure about 873 acres for the project, with about 488 acres of that area covered with the solar array. According to the USDA National Agricultural Statistics Service, about 146,500 acres of land are involved in agricultural production in Elkhart County. The 873 acres proposed for this project represent about half of one percent of the county's farmland.

End-of-Life Decommissioning

How are solar panels managed after they are no longer in use? Can they be recycled, and do hazardous waste disposal requirements apply?

The average life of solar PV panels can be 20-30 years or longer after initial installation. At the time of decommissioning, panels may be reused, recycled, or disposed of. There are a few different types of solar panels used in ground-mounted PV systems. Solar module manufacturers typically provide a list of materials used in their product, which may be used to determine the proper disposal requirements at the time of decommissioning.

At the end of the project's life, all equipment will be removed and the land returned to substantially the same condition as pre-construction – in this case, agricultural land. The project is committed to this in both its agreements with landowners and a form of Decommissioning Agreement negotiated with Elkhart County. At the time the project applies for a building permit, it will submit a detailed Decommissioning Plan for the project and will post independent financial security for decommissioning before a building permit can be issued. This security will remain in place until decommissioning is complete and gives the county the right to step in and decommission the site using the posted security in the unlikely event that the project does not do this work itself.

Sound

How does the sound of large solar projects impact nearby residential and agricultural property?

Solar projects are effectively silent for project neighbors. The inverters and transformers make a humming sound during the day when the array generates electricity, and tracker motors make a soft click when they adjust the angle of the panels. This equipment is usually located in the project's interior to be centrally located within the solar arrays, so their sound is not typically audible from outside the project fence. The project has commissioned a third-party sound study to estimate the impact to local sound levels at points near the project site. The study estimated a maximum increase of less than one decibel (dBA) over ambient sound during the project's operation. This increase is too small for the human ear to notice.

Cost of Power

Will a solar project in my community lower my utility bills?

An important benefit of solar power to ratepayers is that it provides a long-term hedge against increasing prices because it does not consume any fuel and allows utilities to purchase energy at stable long-term rates. This may help to reduce future increases in electricity prices. This saves money for ratepayers in the long term, and once built, this solar project will be an important contributor to the county's tax base, providing more money for schools and essential government services such as first responders.

What public safety issues arise from accessing areas where solar arrays are installed? Can electrical and other solar-related equipment cause fires?

Large-scale ground-mounted arrays are enclosed by fencing. This prevents children and the general public from coming into contact with the installations, thus preventing unsafe conditions. The National Electric Code has mandatory requirements for the electrical safety of solar PV arrays. It requires that conductors, which are part of solar PV, be installed to not be readily accessible.

In addition, warning signs and sometimes alarm systems are installed to deter unauthorized individuals from entering the solar array area. Only a small portion of materials in the panels are flammable, and those components cannot self-support a significant fire. The flammable components of PV panels include the thin layers of polymer encapsulates surrounding the PV cells, polymer back sheets (framed solar panels), plastic junction boxes, and insulation on wiring. The rest of the panel is composed of non-flammable components, including the layers of protective glass that make up three-quarters of the panel's weight.

The project is developing an Emergency Response Plan that will include input from local emergency responders and information from equipment manufacturers. A key component of this plan will be routine training and coordination with local emergency responders to ensure that first responders are familiar with the site facilities. Other key components of this plan include a site overview and map, facility-specific fire protection and safety protocols, contact information for the facility's operations team, potential hazards during construction and operations, and detailed provisions for site security and access.

How will the solar project impact drainage in the area and stormwater runoff to nearby farms?

Once the solar project is installed, nearly all the land will remain permeable with the exception of the access roads, inverters, and substation. For the solar arrays, the impact to the ground surface will be steel posts embedded between 8-12 feet depth with the electrical cables buried a minimum of three feet below the ground surface. The site will be seeded with native, low-growing vegetation once construction is complete. The project will not impact drainage in the area, and if the drainage system is damaged in construction, the project will repair the damages at its expense. While the project is operational, stormwater runoff will be lower than runoff from active farmland due to the permanent vegetation and lack of soil disturbance.