

**BOGALUSA WEST**  
**SOLAR PROJECT**

FREQUENTLY ASKED QUESTIONS ON GROUND-MOUNTED  
**SOLAR PHOTOVOLTAIC SYSTEMS**



Read the Washington Parish solar ordinance at [www.bogalusawestsolarproject.com](http://www.bogalusawestsolarproject.com)

## 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 photovoltaic (PV) panels 30 years or longer after initial installation. At the time of decommissioning, panels may be reused, recycled, or disposed. 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.

Nearly 85% of the materials in PV solar panels are fully recyclable at the end of the project's life. Importantly, 100% of the metals in the solar panels are reusable. The 10% plastic component of the panels is consumed in the recycling process, so less than 6% of the of the total panel materials may actually need to be disposed of at a regulated waste facility.

## Public Safety

### **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 conductors to be inaccessible within the panels.

In addition, warning signs 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 backsheets (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.

## Health / Materials

### **Can chemicals that might be contained in solar PV threaten public drinking water systems and/or wetland resources?**

All solar panels are contained in a solid matrix, are insoluble, and are enclosed. Therefore, releases are not a concern. Rules are in place to ensure that ground-mounted solar arrays are installed in a way that protects public water supplies, wetlands, and other water resource areas.

## Can solar panels be damaged by hail and strong winds?

Solar panels are designed to withstand extreme weather, including hail and thunderstorms. However, just like your car windshield can get damaged, the same can happen to solar panels, although it is very rare. If a solar panel were to become damaged from severe weather or any other reason, it would likely be the glass that has become damaged, and there would be no risk of exposure to the contents. The Savion team has plenty of experience developing solar projects in high wind zones. Our projects have shown to be virtually undamaged by direct hits from CAT 3 storms in the past. But, even if something were to hit the area and damage the solar panels, the solar farm will be well insured with plans to make repairs.

## AG Land Use

### Do solar power facilities in rural areas permanently remove farmland from agricultural use?

- The use of ag 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. Compared to other forms of development where farmland is paved (shopping centers, amusement parks, manufacturing facilities, suburban housing tracts, highways), a de-commissionable solar farm is a far more favorable option.
- The total amount of land used for solar energy is a small fraction of agricultural land permanently converted to residential housing and commercial development.
- In the arrangements where a landowner has agreed to lease property to the solar project, the ongoing annual lease payments will continue to go to the landowner, who will retain ownership of the land both during and after the lease. At the end of the lease and when the project is responsibly decommissioned, the landowner could resume farming the land.
- Solar farms present landowners with an opportunity for a higher value use on their land. This also allows the landowner to diversify their income, better weather economic downturns, and keep the land in the family.
- Farmland has gotten more productive over the years with better farming equipment and techniques resulting in higher yields on the same amount of land. This is also due to improvements in seed varieties, fertilizers, pesticides, machinery, reduced tillage, irrigation, crop rotations, and pest management systems.

## Solar Panel Design / Visual Impacts

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

Typically, solar panels sit approximately 6' 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 the height restrictions of Washington Parish's solar ordinance.

## How important is reflectivity and potential visual impacts from solar projects, especially near airports?

Solar panels are designed to absorb solar energy and convert it into electricity. They reflect only about 2 percent of incoming light, so issues with glare from PV panels are rare. Solar module glass has less reflectivity than water or window glass, and reflected light from solar panels will have a significantly lower intensity than glare from direct sunlight. Many projects throughout the U.S. and the world have been installed near airports with no impact on flight operation. There have been no U.S. aircraft accident cases in which glare caused by a solar energy facility was cited as a factor. Proper siting procedures and FAA screening can ensure panels are placed in a way that minimizes any potential glare to surrounding areas.

## Sound

### Is there sound associated with the solar project?

Solar projects have little to no sound audible outside of the fence line of the project. Inverters and transformers make a humming sound during the day, when the array generates electricity. Any sound will be inaudible at the fence line. Sound impacts can be mitigated through the use of proper siting procedures. Transportation and maintenance equipment, like cars, trucks, lawnmowers, and string trimmers are common sources of sound on solar projects that most people are accustomed to hearing elsewhere. Construction of a solar project is 12-15 months.

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

Solar projects are effectively silent, except for the tracking motors and inverters that might produce an ambient hum. This is typically not audible from outside the project enclosure.