

MARTIN COUNTY

SOLAR PROJECT

FREQUENTLY ASKED QUESTIONS ON GROUND-MOUNTED SOLAR PHOTOVOLTAIC SYSTEMS



End-of-Life Decommissioning

How are solar panels managed when they are no longer in use?

The local ordinance requires a decommissioning agreement be executed prior to start of construction. The project land will be restored in accordance with the locally required project decommissioning plan.

Health Risks / Materials

Are there health risks from the electric and magnetic fields (EMF) from solar panels?

Solar energy produces no emissions, waste, odor, or byproducts. The extremely low frequency EMF from PV arrays and transmission lines is the same as the EMF people are exposed to from household electrical appliances and wiring in buildings.

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. (MA Department of Energy Resources, et al.) Rules are in place to ensure that ground-mounted solar arrays are installed in a way that protect public water supplies, wetlands, and other water resource areas.

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 that conductors, which are part of solar PV arrays, be installed so they are not 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.

Cleaning Protocol

What is the best way to clean solar panel arrays?

The most effective way to clean solar panels is with natural weather sources such as rain. In addition, it does not take a large weather event to clean panels sufficiently.

Property Values

Do ground-mounted solar PV arrays negatively impact property values?

In examining property values in states across the U.S., recent studies show that living in proximity to a solar project does not deter the sales of agricultural or residential land. According to the Solar Energy Industries Association (SEIA), large-scale solar arrays often have no measurable impact on the value of adjacent properties. This is likely due to the fact that solar farms are quiet, odorless, and do not add traffic or burden local infrastructure unlike more intensive types of development.

AG Land Use

How much farmland is utilized by a solar project?

Only a portion of farmland is suitable for solar energy generation. According to the National Renewable Laboratory (NREL), if the United States were to meet 100% of its electricity needs with solar energy, it would require about 0.6% of America's total land area. (Solar Energy Industries Association (SEIA), 2019) 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 made the choice to give up farming completely, but rather have taken a small 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. In fact, solar projects allow land to recover by letting the soil rest. In the future, when a solar project is decommissioned, farming can once again resume on that land. This is in stark contrast to other development, which often leaves land unable to easily convert back to agricultural use. (Solar Energy Industries Association (SEIA), 2019)

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'.

What are the visual impacts of the solar array once constructed?

Large solar projects have similar characteristics to a greenhouse or single-story residence. They are often enclosed by fencing and/or landscaping to minimize visual impacts.

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; less than one single family home.

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.

Hunting

How will solar PV arrays impact deer or other hunting?

During construction, it is possible there would be a temporary impact on uses to areas adjacent to the project. Once operational, there is very little activity at a solar project and deer and other wildlife quickly return. It's not a matter of deer staying away, it's more a matter of keeping them out of the solar facility area where they like to graze on the grasses. Hunting outside the project area is not affected, and hunting rights of non-participating landowners are not impacted by the presence of the solar project.