

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?

At the time of decommissioning, panels may be reused, recycled, or disposed. The project land can be restored to its original condition.

Public Safety

Are there any public safety issues that arise from areas where solar arrays are installed?

Large-scale ground-mounted arrays are enclosed by fencing. This prevents children and the general public from coming into contact with the installations. Warning signs and sometimes alarm systems are installed to deter unauthorized individuals from entering the solar array area.

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 protects public water supplies, wetlands, and other water resource areas.

How do the materials associated with large solar projects impact nearby residential and agricultural property?

PV modules are constructed with the solar cells laminated into polymers and the minute amounts of heavy metals used in some panels cannot mix with water or vaporize into the air. (Solar Energy Industries Association (SEIA), 2019)

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 farm 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.

Ambient Temp (“Heat Island”)

Does the presence of ground-mounted solar arrays cause higher ambient temperatures in the surrounding neighborhood?

All available evidence indicates that there is no solar “heat island” effect caused by the functioning of solar arrays. PV panels are off the ground and surrounded by air, so the heat is dissipated very rapidly. It does not build up and become stored as with rooftops or pavement.

Cleaning Protocol

What is the best way to clean solar panel arrays?

Panels are typically cleaned only with water and no chemicals are used. They are cleaned only a few times a year based on soiling levels. Typically, water is trucked in. However, in the right situation, an arrangement with a participating landowner might be made to use their water supply.

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.

Sound

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.

Efficiency

Where does the power go?

Think of solar energy just like the other crops, like corn, soy beans, wheat, and dairy that are currently harvested in your community. While some of those resources stay local, many are shipped outside your community but provide valuable income and jobs locally.

Solar Panel Design / Visual Impacts

How important is reflectivity and potential visual impacts from solar projects?

Solar panels are designed to absorb solar energy and convert it into electricity. They reflect only about 2% of incoming light, so issues with glare from PV panels are rare.

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?

Solar projects do not attract high volumes of additional traffic after the construction phase is complete.

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.

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)