GOOSE CREEK
SOLAR PROJECT

FREQUENTLY ASKED QUESTIONS ON GROUND-MOUNTED

SOLAR PHOTOVOLTAIC SYSTEMS

Ag Land Use

How much farmland is utilized by a solar project?

Only a portion of farmland is suitable for solar energy generation. Supplying the entire U.S. with 100% PV solar energy would require about 0.6% of America's total land area. When a project is decommissioned, the land is returned to its original state, and farmers have the opportunity to go back to farming the land if they choose. *(NREL and the U.S. Department of Energy)*

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. Should lack of rain or extreme dust conditions warrant cleaning, a water truck is typically used to wash dirt and natural buildup from the panels.

If it snows, does the snow need to be actively removed from the panels?

Snow can serve as a natural cleaning agent, that wipes away any dirt as it melts and slides away. In most cases, snow removal is not necessary, but there will be operations and maintenance personnel monitoring the solar panel array and can remove snow if necessary.

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 25-35 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.

Massachusetts Department of Energy Resources; Massachusetts Department of Environmental Protection; Massachusetts Clean Energy Center June 2015

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 agricultural or residential land sales. According to the Solar Energy Industries Association (SEIA), large-scale solar arrays often have no measurable impact on adjacent properties' value.

Efficiency

Where does the power go?

Think of solar energy just like the other crops, like corn, 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 energy is no different. While it is impossible to know where exactly the electrons flow once they enter the electrical grid, the benefits from producing that energy, such as tax revenues created, stay local.

Do solar panels still work on a cloudy day?

The project will be able to produce energy throughout the entire year, even on cloudy days. And while the output will be maximized on clear, sunny days, even when there are clouds in the sky, there is still solar radiation hitting the solar panels as the sunshine gets through the clouds. Modern panels feature technology that uses bifacial modules on the front and rear side of the panels so they can absorb radiation to generate electricity. So, the rear side of the modules absorbs sunshine radiation that is reflected from the ground. When there is snow on the ground, it emphasizes the sunshine radiation absorbed from the ground.

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

An important benefit of solar power to customers 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 customers 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.

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'.

Health / Materials

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.

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.

Will a solar farm create stormwater runoff and water drainage issues?

In many situations, during the development phase of a solar project, drainage studies and calculations may be conducted by third-party experts. It is typical to find that a solar project area's post-construction condition will create LESS stormwater runoff than the current pre-construction condition of cultivated ad land. Ecological benefits are expected to accrue over time from the temporary but long-term conversion of agricultural land to native plant communities. Native plant species tend to have deeper and more complex root systems, which allows for improved water absorption and retention than in soil on agricultural land. As a result, erosion and stormwater runoff will be reduced.