

FREQUENTLY ASKED QUESTIONS ON GROUND-MOUNTED
SOLAR PHOTOVOLTAIC SYSTEMS



Cost of Power

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

A benefit of solar power is that it provides a long-term hedge against increasing prices. Solar power does not consume any fuel and allows utilities to purchase energy at stable long-term rates, which may help reduce future electricity price increases. Customers will save money in the long term, and once built, this solar project will be an important contributor to the county's tax base. This will provide more money for schools and essential government services.

End-of-Life Decommissioning / Recycling

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.¹

What happens during the decommissioning phase?

Upon completion of the economic life of a project, or potentially permit expiration, if the project owner determines not to apply for a new permit, the decision to decommission the facility can be made. Decommissioning refers to removal of equipment (panels, racking, wires, and inverters and transformers) as well as other operational structures (foundations and fencing) and restoration of the site. Depending on specific project decommission agreements, during this process, the site may be revegetated to help with erosion and dust control, and access roads may be removed. Unlike some other forms of development, a decommissioned solar site can be repurposed for other uses, such as agriculture production.²

Efficiency

Where does the power go?

Think of solar energy just like the other crops that are currently harvested in your community, perhaps corn, wheat, or dairy. 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 of producing that energy, such as tax revenues, stay local.

How do solar panels perform in extremely high heat?

Solar panels are designed to perform in extreme heat or cold. There are many reputable solar panel manufacturers, but all produce panels with similar operational requirements. For bifacial solar panels, -40 degrees to 185 degrees Fahrenheit module temperature is acceptable.

Health / Materials / Water Issues

What is inside a solar panel?

Solar panels consist of glass, aluminum, copper, and semiconductor materials. Solar cells are made of either connected silicon atoms or thin layers of photovoltaic material that have been placed onto glass or metal and are responsible for converting energy from sunlight into electricity. The thin layer of solar cells is sealed on both sides and covered with glass and an aluminum frame. The primary solar cell technologies used are Crystalline silicon (c-Si) and thin film Cadmium telluride (CdTe). While several different solar cell technologies exist, over 90% of the U.S. solar market uses Crystalline silicon (c-Si) cells.³

Do solar panel components threaten public drinking water systems and/or wetland resources?

Solar PV panels typically consist of glass, polymer, aluminum, copper, and semiconductor materials. To provide decades of corrosion-free operation, PV cells are encapsulated between two layers of plastic. Each plastic layer is protected with tempered glass on top and polymer on bottom – the same materials make up the tempered glass of car windshields and hurricane windows. Just like a cracked car windshield stays intact, so does a broken PV panel.⁴

The silicon-based PV panels used by Savion are classified as non-hazardous waste and can be deposited in landfills because they pass the EPA's Toxicity Characteristic Leaching Procedure (TCLP) test. Silicon-based PV panels account for over 90% of the solar PV panels installed today.

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 does not exceed a height of 10'.

Why was this area selected for a solar project?

The project area is suitable for utility-scale solar facility development due to its proximity to available transmission capacity and significant energy demand within the electrical grid. The project also provides significant local economic benefits and is a form of development that will maintain the rural character of the area.

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 facility is generating 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 typically between 10-12 months.

1 Massachusetts Department of Energy Resources. Clean Energy Results Questions & Answers Ground-Mounted Solar Photovoltaic Systems. Massachusetts Department of Environmental Protection. Massachusetts Clean Energy Center, June 2015, page 7.

2 American Clean Power, "What Happens When a Solar Facility is Decommissioned?," CleanPower.org, December, 2021, <https://cleanpower.org/resources/what-happens-when-a-solar-facility-is-decommissioned/>

3 American Clean Power, "Solar Panels and Your Community," CleanPower.org, August 30, 2022, https://cleanpower.org/wpcontent/uploads/gateway/2022/08/ACP_FactSheet_SolarCommunity_220830.pdf

4 NC State University. Health and Safety Impacts of Solar Photovoltaics. NC Clean Energy Technology Center, March 2026, page 8, 9.