

RWE Solar Frequently Asked Questions

How does a solar farm work?

A solar farm converts sunlight into electricity through the following process:

1. Arrays of photovoltaic (PV) panels absorb sunlight throughout the day.
2. Sunlight causes electrons in the panels' semiconductor material (usually silicon) to become excited and move.
3. This movement of electrons creates a direct current (DC) of electricity.
4. The DC is sent to inverters, which convert it to alternating current (AC) for use in the power grid.
5. The electricity may pass through a transformer to adjust voltage for grid requirements. The AC electricity is then fed into the power grid for distribution to homes and businesses.
6. Advanced systems track performance and adjust for optimal efficiency.

What benefits does a solar farm bring to local communities?

Solar energy projects bring valuable jobs to communities, both in construction and in operations. This work helps boost your local economy by sourcing services and supplies from nearby businesses. Renewable energy can also bring additional tax revenue to communities. This new source of public funding can reduce the tax burden on local residents and be used to support essential services, including schools, roads, fire departments and first responders.

How do solar farms contribute to energy reliability?

Solar farms contribute to grid reliability by providing clean energy during peak daytime demand hours. They offer predictable power generation based on weather forecasts and can be geographically distributed to mitigate localized weather impacts.

Are solar farms safe?

Yes. The technology used in solar farms is well vetted and safe. RWE's projects use crystalline-silicon solar panels, which are made from common, nonhazardous materials. In fact, most solar panels, including the ones RWE uses, are classified by the U.S. Environmental Protection Agency as nonhazardous waste, which means there is no threat of toxicity even if a panel is damaged. There is no radiation, electromagnetic or otherwise, associated with solar power. RWE takes safety seriously, from development through construction through operation and then in decommissioning the project. We use top-quality equipment from leading providers, we regularly perform maintenance and safety checks on all our projects — and we monitor our projects 24/7.

How deep into the ground do solar farms go?

Solar panels sit on racks. The posts that support the racks are called piles. Piles sit in a concrete base that may be several feet below ground to ensure stability. Most of the wiring and cabling for the project is within a few feet of the surface. All this equipment is relatively straightforward to remove, so when a solar project reaches the end of its life, the land can be restored to its original use.

How do solar projects affect property values?

There is no evidence to suggest that solar projects have any measurable impact on home values. A recent study by the Lawrence Berkeley National Laboratory emphasized the importance of responsible siting. When developing a project, RWE conducts studies to assess solar resources, environmental impact and economic viability, and select an optimal, responsible site. RWE engages closely with communities during this process and throughout a project's lifespan.

How big are the solar panels?

Utility-scale solar panels are typically about 6.5 feet long and 3.5 feet wide.

How much land will the project use?

Utility-scale solar projects typically need roughly five to 10 acres per 1 MW of capacity.

Do solar panels create sound?

No. Solar panels don't have many moving parts, aside from the tracking systems that allow them to follow the sun to produce the maximum amount of clean energy. Solar farms make great neighbors, because they are safe and quiet.

Will the solar panels pose a threat to my cattle or livestock?

No. The panels will be fenced off to keep livestock away.

Does RWE offer agrivoltaic project designs?

Agrivoltaics combines solar energy production and agricultural production on the same piece of land in a way that brings added value to both the farmer and the solar provider. RWE has incorporated sheep grazing underneath solar panels at several of our utility-scale and distributed solar sites, and we are currently evaluating other agrivoltaic projects.

What happens at the end of a solar project's lifespan?

RWE is legally bound to remove equipment and restore the land for agriculture or other uses. This commitment includes monetary assurances so that no matter what happens to RWE, funds remain to properly decommission the project so costs don't fall to the landowner or community.

Will I have a point of contact throughout my project?

Yes. Through the entire process, we have a phone number where you can reach someone any time, day or night.

