

BrightNight Solar Projects FAQ

Thanks to exciting renewable energy adoption across the United States, most people are familiar with the benefits of solar power. But how it's developed, constructed, and maintained is complex. The following provides answers to many frequently asked questions.

➤ How are solar projects installed?

Solar panels are placed on racks which are supported by posts driven into the ground. Posts are placed without the use of concrete and can easily be removed at the end of a project's life. Once a project is decommissioned, the project is removed, we recycle the majority of the project's components, and the site is returned to its original condition.

➤ How much electricity is generated by solar panels?

The amount of electricity generated depends on the size of the project. For example, a BrightNight 300-megawatt solar project will generate approximately 745,000,000 kilowatt-hours of electricity each year. That's roughly the same amount of electricity used by 69,530 homes annually. The clean energy produced represents 527,977 metric tons of carbon avoided had the power been generated by traditional sources.

➤ How do developers select the land they want for a solar project?

Selecting a location for a solar project requires significant research and planning. The ideal site includes the following features:

- Land parcel(s) large enough to host the project and with land that is fairly flat and primarily free of environmental concerns, like wetlands or environmentally sensitive plants or animals.
- Transmission infrastructure already in place capable of connecting with our project.
- Near areas where more electricity is needed. In the energy industry, we refer to this as "demand" and it's a result of more electric devices relying on the electricity grid and/or regional growth from people or businesses moving to the area.

Who Is BrightNight?

- BrightNight is a U.S. based, renewable power company working to provide clean power projects for a decarbonized energy future.
- Our experts have a long professional history with more than 10,000 megawatts of projects installed and operated successfully.
- As an independent power producer, we work to become a part of your community so we can support your region's long-term goals over the life of our project.

➤ Why would a landowner choose to let a solar developer lease their land for a solar project?

Land-leases for solar projects offer income consistency and assurances that are not often available to landowners. The lease provides long-term, dependable income and allows the landowner to retain ownership of their land for future generations. The stability of the lease payments guards against the volatility of the agricultural market, which they may be subject to on other parcels they farm, and the lease remains competitive over time with a built-in escalator for the life of the project.

➤ What are the environmental benefits of a renewable power project for the community?

Renewable power projects produce clean power for people, businesses, and utilities across the United States. These projects also provide land lease revenue to site owners, local tax revenues for the communities they call home, and create valuable jobs in a high-demand industry. In some cases, projects can utilize otherwise undevelopable land, such as capped landfills or former mines.

Additionally, renewable power projects attract big job creators who need to site their offices or facilities in areas with available renewable power or areas that support this kind of infrastructure investment. Renewable power projects aren't just good for the environment, they support the long-term economic strength of the communities they call home.

➤ What are the financial benefits of a renewable power project for a community?

Renewable power projects provide numerous financial benefits to a community. These include:

- Long-term tax revenue to the local county, which positively impacts local school systems and other community needs while requiring little to no county services in return.
- Creation of numerous jobs during construction and long-term operations and maintenance jobs.
- Production of low-cost clean power, which is in high demand by utilities and corporations and attracts economic development to the areas where it is available.
- Delivery of clean renewable power to the utility grid to help meet the region's energy needs.
- Attracts big corporate and C&I job creators prioritizing locations with renewable power availability.

➤ Do solar projects create glare?

Solar panels are specifically designed to absorb sunlight, not reflect it. They have an anti-reflective coating that allows them to absorb and utilize as much sunlight as possible to generate electricity. This fact is exemplified in the large number of solar facilities currently installed and operational at airports and military bases across the country. As you drive by a solar project, the panels often appear purple or even black in color.

➤ Are there long-term groundwater or stormwater concerns with utility-scale solar?

Solar projects do not increase water runoff and, in the long-term, can actually improve soil and water quality. Over the life of the project, the native grasses and flora that are planted and maintained under and between each row of panels represent a net reduction in chemical fertilizers, pesticides, fungicides, and herbicides that are often the primary sources of groundwater contamination from other land uses.

Additionally, stormwater management plans are a required part of the solar development process. These plans are prepared by professional engineers to ensure that projects do not contribute to area erosion or flooding, and are reviewed and approved as part of the permit approval process.

➤ Who is responsible for the decommissioning of a solar project?

The owners of solar projects, such as BrightNight, are required by their lease agreements with landowners to decommission the project. In addition, many jurisdictions at either the city, county and/or state level, also require bonding be established to ensure the decommissioning of a solar project once it is no longer generating power.

Neither the county nor the landowners will be responsible for any costs associated with removing the project or restoring the land to its original condition.

➤ Are there any health and safety concerns related to a solar project?

Solar photovoltaic technology has safely operated for more than 50 years. There are no emissions or contamination from solar facilities to the air, water, or soil. Multiple independent studies by industry and leading engineering universities affirm that solar technology and solar energy production are safe for the landowner, the surrounding community, and the environment. For additional information on this topic, please see a study completed by N.C. State University on the "Health & Safety Impacts of Solar Photovoltaics".

Additionally, solar projects do not emit any gasses nor release anything into the environment. Only a few components of solar panels contain toxic materials, but these exist in small quantities and are safely encapsulated within the panel structure, even if the panel becomes damaged. Thus, ensuring they pose no danger to human, animal, or environmental health.

Most materials in a solar project are similar to what you might find in any building construction or even in your car. Poly and mono-crystalline panels do not have any liquid inside of them. If broken there is nothing toxic to escape. The polysilicon wafers used in these panels are very similar to the microchips and computer boards that are inside of the phone in your pocket.

At the end of the system's lifetime, BrightNight will safely remove the solar panels and recycle the majority of the project's components.

➤ Is solar compatible with agriculture?

Solar projects are a low-impact land use that can safely operate next to neighboring agricultural operations. In fact, the natural ground cover under and between the rows of panels allows the soil to rest and rebuild nutrients, just as agricultural conservation programs recommend, making the land more profitable upon return to agricultural use. Sheep grazing can be used for grounds maintenance on the site and plants that attract pollinators (ex. bees) can be added to benefit neighboring farms. In some cases, solar projects can co-exist with certain crops. The space between rows can accommodate crops and even some shade-loving plants can utilize the space below panels. This process is referred to as "agrivoltaics" and it's a new way BrightNight is working with farmers across the United States to maximize the value of their land.

➤ How do solar projects affect surrounding property values?

Experienced solar developers, like BrightNight, are committed to projects that respect the rural character of the surrounding community. Professional appraisers have evaluated the sales of homes next to solar projects and they found that solar facilities do not have a negative impact on neighboring property values. Property values are safe because this infrastructure does not include elements that typically impact property values, including: noise, light pollution, high traffic, odor, and permanent land use impacts. Additionally, their low-profile design can easily be hidden by using setbacks and landscaping - both of which BrightNight designs into every project they construct and operate.