

## Solar Series | Tips on Maintaining a High-Performance Solar Energy System

# SOLAR FOR TODAY AND TOMORROW

Just as it's important to maintain your heating and cooling systems in your home, your solar energy system requires regular maintenance — both to make sure you're generating the optimum amount of electricity and to maximize your return on investment. Below are some tips to help you keep your system running smoothly for years to come.

### Keep Solar Panels Clean

To ensure you are generating the highest amount of electricity, your solar panels require regular cleaning. You can usually maintain solar panels using the same equipment that you use to wash your home or car's windows. The frequency of cleaning depends on your location. For example, locations closer to freeways, industrial facilities or high-wind areas are likely to accumulate dirt more rapidly and should be cleaned more frequently. As a general rule, plan to have them cleaned at least twice a year. To help, here are some easy cleaning steps:

- ✓ Assemble a solar panel cleaning kit that contains liquid soap, a wiper, a small brush and in some cases another brush with a longer handle.
- ✓ Try to clean your solar panels from ground level with a hose.
- ✓ Do not attempt to access your rooftop without the proper safety equipment or training.
- ✓ Don't use any harsh chemical cleansers as they may damage the panels and void their warranty.
- ✓ Don't wash the solar panels during mid-day when the surface is hot, as the thermal shock can damage them.
- ✓ Sometimes, just the occasional rain will be enough to clean your solar panels.

### Consider Hiring a Maintenance Contractor

- Hiring a maintenance provider can be a great way to ensure your solar energy system, including panels, inverters, trackers and other components, operates at its most efficient performance.
- Be sure the contractor is reputable and established as there will be a higher likelihood that they'll be in business for the life of your maintenance agreement.
- If your system is owned by a leasing company or a power purchase provider, maintenance may already be provided in your contract.

### SPOTTING PERFORMANCE PROBLEMS

A significant drop in performance during clear weather may indicate that there is a problem with your solar generating system.



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### Hiring a Performance Monitoring Provider

A performance monitoring and reporting service provider (PMRS) will monitor your system's ongoing performance and can inspect your solar panels and other system components to identify performance problems caused by things like:

- Twigs or leaves on or under the panels
- Loose screws or wires
- Cracked or stained panels
- Panels shaded by new tree growth or other obstructions

Find a certified PMRS provider at [gosolarcalifornia.ca.gov/equipment/perf\\_monitor.php](https://gosolarcalifornia.ca.gov/equipment/perf_monitor.php).



### WHAT TO DO AFTER A POWER OUTAGE

If a power outage occurs, your solar energy system is designed to immediately shut down for safety reasons. A grid-tied solar electric system does not provide power during outages unless it includes a battery storage system. Your power will be reinstated moments after grid power is restored; however, you may need to manually reset your solar system's inverter back to service after your power is reinstated (most auto reset after power is restored.)

### Frequently Asked Questions...Answered

#### How costly is it to maintain solar panels?

In terms of maintenance cost, solar panels are made from semiconductor materials and do not have any moving parts that may breakdown. And most solar panels and inverters have lifetime warranties from the manufacturer.

#### Do you know that dirty solar panels significantly reduce the amount of energy your home can generate?

Dirt on solar panels can come from dust and soot from nearby roads, bird waste and especially from rainy or dry weather conditions. In fact, "soiling" is the single most important performance factor under your direct control.

#### Can my city, homeowners association or neighbor prohibit me from installing solar on my roof?

The California Solar Rights Act, enacted in 1978, limits the ability of covenants, conditions and restrictions (typically enforced by homeowners associations) and local governments to restrict solar installations.

#### What is the average life expectancy of the system?

Maintenance is key to the life expectancy of the system. You will need to review your owner's manual to determine what those maintenance requirements will be or talk to your contractor. If solar systems are properly maintained, most can last 20 to 25 years or longer.

#### What will it cost me if I have to replace my roofing material in a few years?

You want to make sure your roof is in good condition before installing solar. Any time you have to replace or repair your roof, there will be the added cost of removal and replacement of solar panels, which is estimated at \$1,000/kW.

#### What happens in case of a fire or other damage?

You should contact your homeowner's insurance company and have your policy amended. Protecting your system from fires or other damage is important.

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