

Is Your Roof Ready for Solar?

If you're considering a rooftop solar installation, chances are you've already done some research about the many benefits of commercial solar power—beyond lower energy costs. But before you can take advantage of any available tax incentives, green credits or net metering options, you need to know if your building can actually support the solar equipment you're considering. To best answer, "Is my roof ready for solar?", it helps to start with the five preliminary questions below.

Keep in mind that a final answer that covers every situation is beyond the scope of this article. No two roofs are exactly the same. However, the following questions will help you gather the information needed to guide your decision.



1. Does your roof have a warranty?

Most commercial buildings have roofing systems guaranteed by the manufacturer and installer against material defects and installation errors. Whether or not you move forward with a solar power system, it's a good idea to have your rooftop inspected every six months. Any leaks or problems can be detected and corrected before they become major disruptions. You've already paid for this protection, so take advantage of it.

Do no harm.

- When putting in a rooftop solar system, special care must be taken to avoid doing anything that could void a roof's warranty. Working with a reputable, established solar company is the best insurance against this possible pitfall. These providers have the experience and connections within the commercial roofing industry necessary to determine what is or is not allowed.

Inspections are key.

- Rooftop solar installations should start with a pre-inspection of the project. Both the manufacturer and the installer of the rooftop system should be part of this review. Any defects or problems should be addressed prior to the start of a solar project. A pre-inspection will also determine whether or not a proposed installation can be supported by the structure. A qualified solar company can be very helpful at this stage by coordinating the process.

Assuming everything is fine following the pre-inspection, you should plan to coordinate another

inspection during the installation. This will verify that proper procedures are being followed to ensure no damage is done to the roofing system.

Finally, a post-installation inspection should be scheduled to confirm that everything was completed as specified and your warranty is still in place.

Get more protection.

- It's possible your best protection is secured when you select your solar equipment provider. Working with an experienced commercial solar professional with a deep understanding of roofing systems can go a long way toward preventing problems before they occur.

Choosing the most qualified professionals (both solar and roofing) is a prudent start, but obtaining more traditional protection is also warranted. Quality solar power systems can last for 30 years or more. Commercial roofing is generally guaranteed to last for at least 20 years—though quality roofs can continue to perform well beyond that. Most major roofing system manufacturers are willing to offer extended warranties provided the solar system was properly installed.

2. How old is your roof?

Warranty or not, if your roof is past the midpoint of its expected lifespan you may want to consider putting on a new one before you go solar. Fixing any leaks a few years down the line could be considerably more complicated (and expensive) if you have to work around an installed solar system.

On the bright side, putting on a new roof and solar installation could qualify you for Property Assessed Clean Energy (PACE) financing. PACE loans can be a great incentive to make energy efficiency upgrades and install renewable energy systems on existing buildings.

Combining the benefits of solar with other incentives (like PACE energy programs) could mean your new roof pays for itself within a few years.

3. What type of roof do you have?

The ideal roof for a commercial solar installation is flat, with southern exposure and enough space free of obstructions to accommodate the desired number of solar panels. This allows for the most flexible and efficient installation. A sloped roof introduces additional installation and maintenance challenges, but can still be a great option.

There are many factors that can make your roof less than ideal. (Things are seldom perfect.) Perhaps the roof is pitched too steeply or it is located in a high wind area. Maybe the space needs to be shared with a ventilation system, limiting your configuration options.

Virtually any solar installation challenge can be overcome. The key is to work with an experienced solar equipment company who can help you find the best installation solution for your unique situation. (They may even suggest an alternate type of commercial solar installation you haven't considered yet.)

4. How should your solar panels be attached?

There are two basic approaches to securing a commercial solar system to a rooftop:

- A ballasted system sits on a structure with minimal ties to the underlying building. Instead, weight is used to hold solar equipment in place.
- A mechanically-attached system secures a solar array to the building using multiple anchor points.

Today, the preferred installation method is a mixture of ballast and attachment mandated by each city.

But wait—won't all of those anchors poke holes in my roof and expose me to more potential leaks in the future? Isn't it safer to simply let the solar array sit on top of my building and not take the risk?

This concern seems logical, but is actually unwarranted. The same person installing the roofing system should also be installing the anchors using a method that reinforces the area under the solar system. This process uses a two-ply membrane to create something akin to a mini roof being built over the existing roof at each anchor point. Done properly, no holes are ever “poked” through the main covering. Far from turning your roof into swiss cheese, a mechanically attached approach can offer more protection from the elements. This is yet another reason to partner with a solar company that has a deep understanding of roofing.

5. What do you need to remember?

We covered a lot here, but the important information boils down to a handful of points:

- Understand the provisions of your roof warranty so that you don't void its coverage and protection. Inspections before, during and after a commercial solar installation are key.
- Determine the condition of your existing roof. It may make sense to have it replaced before moving ahead with solar.
- Understand the pros and cons of your existing roof type to determine the best commercial solar installation option. A qualified solar company can help you make the right choice.
- Work with an experienced solar professionals to determine the best installation approach for your rooftop system. These individuals work directly with roofing system manufacturers and installers to facilitate the most efficient commercial solar installation possible.

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