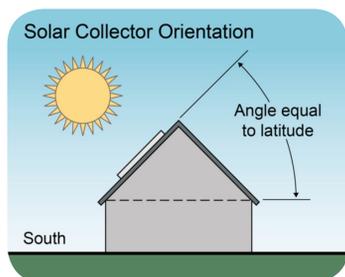


addressed in some states with “solar access” rights. For additional information on solar easements, see the Pre-Installation section of Factsheet 7. If some shade is inevitable, ask the installer about micro inverters. These allow for some panels to continue working while others are shaded, whereas a single shaded module in a string of modules essentially takes the entire string out of production.

4. What is the angle of your roof?



Courtesy of DOE/NREL

Installers typically mount panels directly (flush) on an existing south-facing roof for aesthetics. To maximize electricity generated year-round, mount modules at an angle equal to or close to your

site's latitude (35-36 degrees, or a roof pitch of 8-12 for Tennessee). A tilt of plus or minus 10 degrees from ideal will not significantly reduce the output of your system.

Flat Roofs: Panels on flat roofs often found on commercial, industrial and institutional buildings can be mounted at any angle to maximize energy production and should not be placed flat (horizontal) because of significantly reduced efficiency.

5. Is your roof in good condition?

Most roofs can safely support PV panels and mounting system weight. The rule of thumb is 3 to 5 pounds per square foot depending on the panel type and installation method. For example, a 230-watt crystalline panel (3.5 feet x 5.5 feet) weighs about 50 pounds. An installer should determine if the roof/structure can handle the added weight. Innovative mounting systems can make panel removal easy, but because panels can last 30-plus years, it may be less expensive and labor intensive to make needed roof repairs before installing panels. Never install a PV array over a roof that needs replacement.

Yes! — Move to What's Next?

No — Options: Complete any needed repairs first. If considering a new roof, contact a PV system installer/contractor for roof options/recommendations that might make panel installation easier or less expensive. PV cells can also be incorporated directly into the roof through the use of thin-film solar shingles.

What's Next?

If you answered yes to every question, or can make adjustments where you answered no, your building or site may be a good solar electric system candidate! A system supplier or installer can provide a more detailed assessment. Next, consider how conservation and efficiency measures can result in an efficient and affordable system; then, learn about system options.

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