

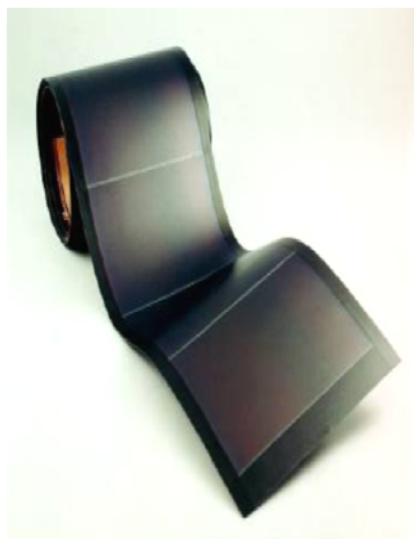
American Solar Roof

Harness the power of the sun.



What are "Photovoltaics"?

Photovoltaic (PV) cells generate electricity from light. When light shines on a PV cell, the electrons are agitated, and this creates an electrical current. PV cells use a semiconductor material to achieve this. A PV "module" refers to a number of cells, connected in series, which generates a certain amount of electricity as a unit. A PV array refers to two or more modules operating in conjunction.



There are three types of PV cells commonly seen today. These are: mono-crystalline, poly-crystalline, and amorphous. Mono- and poly- systems are what is typically used in the "glass panel" systems. These older systems are fragile, heavy, and not well suited to Connecticut's lighting conditions. We use an amorphous silicon system. Amorphous systems are the latest in PV technology. They are flexible, durable, and lightweight- weighing less than 2lbs per square foot. Not only does this eliminate any and all structural concerns, but they are so durable, that we can warranty our systems for 30 years! You can hit our system with a hammer, and it will still function perfectly. Try that with a glass panel!

Another great thing about our systems is that they are able to utilize a broader spectrum of light to generate electricity. Even when our systems are covered with snow, they will generate power. UV rays will pass through the snow, agitating the electrons, and warming the module. This will help melt the snow, and the system will regain its maximum output. Our systems are superior in overcast or low-light conditions, as we find in Connecticut. Annually, on average, our systems will produce more kWh than any comparable glass panel system.*

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*Mono- or polycrystalline glass panels can sometimes produce a higher output rating during "peak" periods; that means during the summer, in direct sunlight, under the best of conditions. When one considers the overall annual output of the system, in a state like Connecticut, our systems will out-perform any other type of system currently available on the market today.