

In The News

By DONNA BOYLE SCHWARTZ

LET THE SUN SHINE IN

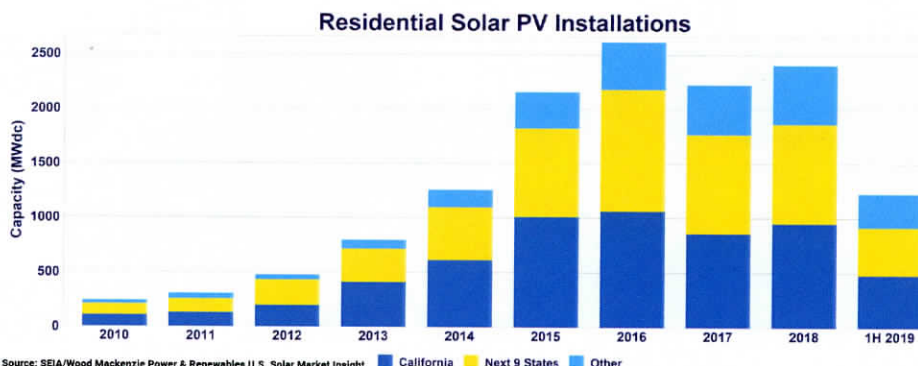
Solar energy booms as demand for cost-effective, eco-friendly power grows

Solar power is a clean, green and endlessly renewable energy source that is becoming increasingly popular in the United States and around the world.

Since 2008, according to the U.S. Department of Energy, U.S. solar power installations have grown 35-fold and now produce an estimated 62.5 gigawatts (GW) of energy, or enough to power the equivalent of 12 million average American homes. And there is a lot more where that came from: the amount of sunlight that strikes the Earth's surface in an hour and a half is enough to handle the entire world's energy consumption for a full year, according to the Energy Department.

Most residential systems use solar photovoltaic (PV) panels, which consist of a network of small silicon-based cells sandwiched between protective material, such as glass or plastic. The panels typically are mounted on the roof, and when exposed to sunlight, the cells generate electricity. An inverter converts the direct current (DC) electricity generated by the solar cells to alternating current (AC), which is the electricity used by home appliances, lighting and other systems. The average cost of solar panels has dropped nearly 50 percent since 2014, according to the Energy Department, making them much more cost-effective for the average homeowner.

The U.S. is now home to more than 2 million solar PV installations, according to a 2019 report by Wood Mackenzie Power & Renewables and the Solar Energy Industries Association (SEIA). Wood Mackenzie forecasts that there will be 3 million installations in 2021 and 4 million in



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SEIA
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2023, continuing the swift rise of solar.

Another factor fueling solar power growth is improved storage technologies, and a retired Marine Corps colonel is in the vanguard. "Americans have long supported the idea of solar, but now it is policy and reality," says Brent Willson, CEO of NeoVolta, a California business that develops and builds affordable solar energy storage systems. Willson founded the company in January 2018 after retiring from a 30-year career with the Marines.

Willson says using solar panels plus new storage technologies can be "a big win for homeowners," and points out that California recently hit a significant milestone, with more than one million rooftop solar installations. Willson says, "In 2020, California will become the first state to require rooftop solar panels on new home construction. With 100,000 single-family homes going up each year, it won't take that long for our state to reach two million installations."

Homeowners considering solar also may be eligible for a federal Solar Investment Tax Credit (ITC) as well as state rebates and coupons, making installation even more affordable. According to the Solar Power Authority, "It takes the average homeowner six to 15 years to pay off their solar panels; those living in sunnier climates or states with good incentive programs can do it



Retired Marine Corps Colonel
Brent Willson

in as little as two years."

Even homeowners who aren't ready to convert totally to solar energy can take advantage of solar technologies to save money around the house. Here are some smaller-scale solar projects that can help the average household save money by using the power of the sun:

Outdoor Lighting

Landscape lights, outdoor spotlights and holiday lights can be powered easily by solar cells, and avoid the hassle of having to install outdoor or underground wiring and outlets.

Swimming Pools

Why waste energy and money heating the water in your backyard pool when you can harness the warmth of the sun? Most pool suppliers offer inexpensive floating solar "blankets" that float on top of the water, absorbing the sun's energy and transferring it to the pool water.

Fans

Attic ventilation fans or outdoor ceiling fans can be solar powered, using a small panel of solar cells connected directly to the fan. Ventilation fans help you save energy by exhausting hot air from the attic or other interior spaces and reducing the need for additional air conditioning. Outdoor ceiling fans can help cool patios, decks, children's playhouses or even doghouses!

