

Solar Enters the Mainstream

By Bruce Erickson, Co-Owner, Lead Designer & Installer, Mendocino Solar Service

Twenty years ago, when Mendocino Solar Service opened our doors, the world of residential solar energy was quite different. Prices were high, options were few, and solar powered homes were mostly “off grid”.

Today’s homeowners considering converting to solar energy enjoy increased affordability, better equipment options, and more financing opportunities. What are the benefits of this opportunity? The ability to cost-effectively convert an abundant local resource (sunshine) into energy and money, right on your roof! Seamless integration, automatic operation, long life with virtually no maintenance, protection from electric rate increases, and increased property value are some of the benefits of the solar revolution.

A big indication that solar energy is entering the mainstream is the growing popularity of on-grid solar systems. On-grid systems make it possible for a homeowner to turn his or her home in to a mini-power plant, running their electricity meter backwards for retail-price credit, as they feed the excess power produced by their residential system back to the grid.

Another sign of the changing world of solar: as the result of rising demand, increased production, and new technology, solar panel prices have decreased markedly in recent years. Systems can now be installed for as much as 40% below 2011 costs.

Homeowners these days also benefit from expanded solar finance options, including solar leasing, and green loan programs at local banks and credit unions. Property assessed clean energy (PACE) financing programs, such as the Mendocino County PACE program expected to begin in 2015, give homeowners the option of adding the cost of solar conversion to their property tax assessment.

Another interesting new development in solar energy is the availability of on-grid systems with some built-in backup, without needing batteries. When there is a power outage, on-grid systems usually will go offline (not produce power), unless they have been feeding a battery system that is holding excess power in reserve. The SMA TL-22 series inverters, by comparison, will create up to 1500 watts of power without batteries, during the daytime hours if there is a power outage, enough to run the fridge, computer, etc.

In recent years, researchers studying California residential home sales have found that homebuyers do appreciate the increased value that comes with buying homes with modern residential solar energy systems. An investment of \$20,000 dollars installing a modern solar system will bring on average a return of \$24,000 dollars in increased home value. And that’s before the electricity savings begin.

As solar energy enters the mainstream, sixty years after the modern solar cell was first unveiled to a curious public, large scale and commercial solar power production is also becoming increasingly viable.

In 2013, solar power showed up as the second largest source of new electricity generating capacity in the United States: 4,751 megawatts (MW) of solar capacity were installed. That's equivalent to about three Diablo Canyon-sized nuclear plants (although solar doesn't operate 24/7).