

## Solar Energy Generating Social Change

By Daniel Kammen

U.S. Submarine Service veteran Elmer Rankin, 71, has a failing heart, prostate cancer, and arthritis that keeps him in a wheelchair. Last year, he realized he couldn't stretch his Social Security checks to pay for both the mounting cost of heating his home and powering his therapeutic oxygen tank. But when he turned down the heat, he got so cold that he wound up in the hospital.

Fortunately today, while Rankin's health remains precarious, he's no longer scrambling to pay for his power. On sunny afternoons, he likes to sit in his wheelchair and watch his electricity meter running backward. Thanks to solar panels installed on his roof – and paid for with a California state subsidy -- Rankin's monthly bill has dropped from an average of \$250 to less than \$22. This month he paid just \$1.09.

"Solar power didn't just save me money – it saved my life," he says.

Like clouds temporarily blocking the sun, the continuing partisan debate about Solyndra -- the Fremont, California-based solar power firm that went bankrupt last September despite a \$535 million federal loan guarantee -- has obscured some glaring facts. Clean, renewable solar power is rapidly becoming a mainstream, affordable U.S. energy source -- and a boon to our overall economy. And smart government support deserves much of the credit. I don't see what this adds.

The global solar industry worldwide has been growing by a whopping 50% per year. Here in the United States, solar power, once so expensive that it only made sense for space missions, now costs less than 20 cents per kilowatt hour -- less than many Americans now pay for electricity. Per dollar invested, solar energy is also the highest job-producing component of the country's energy economy. The U.S. solar industry has already produced more than 100,000 jobs – a doubling since 2009, with another 25,000 expected over the next 12 months.

As we bask in this news, let's remember that our federal government created America's solar industry, way back in the 1960s and '70s, by investing in research and development. The effort continues with the Department of Energy's "SunShot" program – a tribute to the Kennedy-era

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“Moon Shot” – aimed at dropping the price of solar by another 50 percent to make it cheaper than fossil fuels.

California’s state government has also been making smart investments -- including the one that Elmer Rankin credits with saving his life.

Through the California Solar Initiative, the state plans on devoting a total of approximately \$2 billion in rate-payer funds between 2007 and 2016 to install 3,000 megawatts of new solar generation capacity. In one of those rare models of bureaucratic efficiency, that plan is moving along right on schedule. So far, more than 1,169 new megawatts have been installed, via more than 112,000 solar projects. Thanks to this kind of strategic planning, California now leads the nation in residential solar energy installations. (And the state is counting on recouping its investment in myriad ways, including reduction in peak energy costs, reduced water demand -- from solar versus gas -- air quality benefits and fewer jobless state residents collecting unemployment payments.)

Indeed, what’s particularly inspiring is how many of California’s new megawatts have been improving the lives of people, like Rankin, who until recently have been left on the sidelines of the global race for green energy. Low-income families in general spend more of their earnings on electricity than the well-to-do, but lack the capital and savvy to cut those costs with efficiency upgrades, such as solar panels.

In a first-of-its-kind solar program, California’s Single-family Affordable Solar Homes (SASH) project provides incentives for homeowners to go solar, while also developing livelihoods for people like Eduardo Huerta, in Sonoma, California, who lost his job as a stucco plasterer due to the recession, and couldn’t find new work for nearly a year. “I’m proud to have a job again, and even more that it’s a job that helps my community,” says Huerta, a father of five.

California’s SASH project is administered by an innovative non-profit called Grid Alternatives, which installs solar electric systems exclusively for low-income families, making green energy easy by designing the systems, obtaining building permits, submitting rebate paperwork and capping it all off with a ten-year labor warranty.

Over the past eight years, Grid Alternatives, based in Oakland, has installed solar power in 1,869 homes, including Elmer Rankin’s house in the serendipitously named town of Sun City, saving residents an estimated \$48 million on their electricity bills, sparing the atmosphere some 163,000 tons of greenhouse gases that the solar panels will help avoid over the next 30 years, and training more than 8,730 volunteers in solar installation.

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With summer on the way, some members of Congress are still talking about the failure of Solyndra as a pretext for cutting U.S. support for solar power. I would urge them to consider Elmer Rankin and Eduardo Huerta and the many thousands of Americans like them whose futures are already brighter because of solar power.

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