
Department of Energy

College Fights Energy Rate Hikes with 'Grid Positive' Plan

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Butte College's solar panels are helping it make more energy than it uses, providing it financial as well environmental benefits. | Photo courtesy of Butte College |

Like a lot of community colleges in California, [Butte College](#) is dealing with cutbacks in financing from the state. Unlike most of its fellow institutions, however, the college north of Sacramento has a budget-stabilizing special resource: an array of solar panels covering walkways and carports across its campus.

The college is currently installing the last 15,000 panels for their 25,000-panel project—funded in part by federal Clean Renewable Energy Bonds as part of the [American Recovery and Reinvestment Act](#). Butte expects to become "grid-positive", producing more electricity than it consumes. It believes it will be the first such college in the United States.

Following this installation, Butte's solar panels will have a total capacity of 4.55 megawatts, generating an estimated 6,381 megawatt-hours a year. The college estimates that this will prevent 6.9 million pounds of carbon dioxide emissions

annually. As an added bonus, Mike S. Miller, director of Butte's facilities, estimates that the final installation jobs will employ 30-40 people locally. The resulting energy savings have even helped his department prevent layoffs.

"I was able to hire about five additional staff in facilities this year," says Miller. "One thing we can stabilize is our utility costs by doing these projects."

Making Green Profits

In exchange for the up-front costs of the panels, the college will eventually be completely energy independent. In fact, Miller says, the panels that are already in place are helping to stabilize Butte's energy bill, giving his department some welcome relief from energy rate hikes.

In recent years, he says energy rates in California have gone up by an average of four percent a year, and he projects future rate hikes of 10 percent a year. By generating its own energy, Butte College will be unaffected. And thanks to [a recent California law](#), the college can collect a small fee for selling excess energy back to its utility. Right now, that revenue is being applied to pay off the cost of installing the solar panels, but Miller says they could eventually be profit. Over 30 years of 10 percent energy rate hikes, he estimates that the solar panels will save the college a net of \$150 million.

"All our utility dollars compete with instructional need, and of course we're trying to put as much money in faculty and students as we can," says Miller.. "So that was a prime motivator."

Butte's History of Solar

Miller says the college first got involved with solar power around 2003, when the board of trustees asked president Dr. Diana Van Der Ploeg to look into installing solar panels. That eventually became phase one of three, installing one megawatt of electricity-generating capacity. Phase two, in 2008, added 858 kilowatts of capacity. Around that same time, Butte adopted the goals of becoming grid-positive by 2012 and climate-neutral by 2015.

Already, the college expects to exceed its grid-positive goal. Phase three will add 2.7 megawatts of capacity to the main Oroville campus and the college's satellite campus in Chico. That project is currently underway, and is expected to finish in April of 2011.

This phase is funded in part by federal Clean Renewable Energy Bonds, which were authorized as part of the American Recovery and Reinvestment Act. The bonds make up \$12.65 million of the \$17 million phase three project; the remaining \$4.55 million will be contributed directly by Butte College. Miller expects the bonds to be paid off in 2028.

What does this mean for me?

Community college campus will have 25,000 solar panels after latest installation and will generate 6,381 megawatt-hours of solar energy annually.

\$12.65 million in Clean Renewable Energy Bonds helped fund final 15,000 panels.

California law enables the college to collect a small fee for selling excess energy back to its utility.

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