



Award Category

Innovative Renewable Energy Procurement

Green Features

100% of campus electricity load offset with renewable energy credits

Greenhouse gas emissions reduced

Purchase helps fund new renewable energy facilities

Contract extends low price to all UC and CSU campuses

Scope

100% of campus electricity load covered for four years

Cost

\$3 per student per quarter

\$.00166 per kWh

Completion Date

September 2006

University of California, Santa Cruz Campus Climate Challenge

UC Santa Cruz students passed a fee referendum to purchase enough renewable energy credits to offset 100% of the campus's electricity use. This effort demonstrates the remarkable potential of student activism, and highlights the capacity for student and staff collaboration to achieve positive change.

With major support and funding from its students, UC Santa Cruz became the first UC campus to procure renewable energy credits (RECs) equivalent to its entire electrical load. As the driving force behind this purchase, students provided the time, manpower, and enthusiasm necessary to place a fee referendum on the student ballot. Ultimately, it was the student body that saw value in funding RECs, giving the university the green flag necessary to proceed with the purchase.

Renewable energy credits—also called renewable energy certificates, green tags, or tradable renewable certificates—represent the environmental and social benefits of generating power from renewable sources. Decoupling the environmental benefits from the commodity electricity allows the benefits to be bought and sold separately in the form of RECs. Once a REC is purchased the electricity is no longer tied to its environmental attributes, and enters the grid like all regular commodity electricity.

Purchasing RECs is an effective way to take responsibility for the environmental impacts of electricity use, and does not require a change of utility providers.

The price of a REC represents a premium paid for clean generation. Power generated from renewable sources such as wind, solar, small hydroelectric dams, geothermal and biomass commands a higher price than conventional power for a few reasons. Most electricity in utility generation portfolios comes from non-renewable sources including coal, natural gas, large dams and nuclear facilities. The environmental and human health impacts of these sources are not incorporated into the market price paid by the end user, masking the true cost of electricity and making renewable energy more expensive by comparison. In addition, the renewable energy industry is

much smaller and newer, making its facilities more expensive to build, operate, and maintain than established power plants.

Decoupling electricity from its environmental attributes to form RECs provides consumers with a convenient way to purchase green energy. First, REC buyers do not have to be located near or physically connected to a renewable power plant. Since RECs confer benefits without being linked to electricity, the purchaser can support green power even if there are no nearby renewable facilities, or if their local utility does not offer a green power product. Secondly, RECs can be bought for a fixed quantity of electricity, which eliminates the inconvenience of matching power delivery and fluctuating load profiles. Thirdly, utility customers do not need to change from their current electricity provider and can continue to rely on and interact with their local utility.



Students gathering signatures. Photo: CalPIRG.

Student members of the California Student Public Interest Research Group (CalPIRG) threw their weight behind bringing RECs to the UCSC campus. The students collaborated with staff at the Physical Plant Department to determine the number of RECs needed to cover 50 and 100 percent of the campus's electrical load. They made cost projections for these levels, and forecasted the willingness of the student body to pass a corresponding quarterly fee.

BEST PRACTICES

Additional Awards

EPA College & University
Green Power Challenge:
Association of Division III
Independents

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UCSC Physical Plant
Department

CalPIRG

Sterling Planet

More Information

www.ucsc.edu/news_events/press_releases/text.asp?pid=1212

www.epa.gov/green-power/initiatives/cu_challenge.htm

www.sterlingplanet.com

Based on the campus's electricity use and the price of RECs at the time, staff and students determined that a \$6 quarterly fee would be needed to cover 100 percent of the campus's load. Deciding that this price was too high to gain student support, CalPIRG students compromised and wrote the ballot with a \$3 fee to cover 50 percent of the load.

Students soon found that learning the electoral process and navigating elections bureaucracy was difficult, but absolutely crucial for getting the initiative on the ballot and remaining in compliance with all established procedures. When, at a critical deadline, the group fell just 200 signatures short of the 1300 required to place the measure on the ballot, a CalPIRG student representative went directly to the Student Union Assembly to obtain its endorsement. Winning this endorsement enabled the ballot measure to move forward despite the lack of signatures, opening the door for students to begin campaigning.



Students holding a press conference to discuss the ballot's successful passing and green events on campus. Photo: Green Campus Program.

Raising awareness and support for the renewable energy measure involved extensive flyer-ing, tabling, and cold calling. A solar concert was planned but never carried out, as students

did not anticipate the two quarter advance notice the event required. The campaign faced additional challenges because UCSC's student community is spread out across a large and decentralized campus. To pass the fee, 25 percent of currently enrolled students had to participate in the elections and a simple majority of those voting needed to approve the measure.

When the polls closed, 25.16 percent of students had turned out to vote, and the measure passed with 69 percent voting 'yes'. With the funding approved the Physical Plant Department issued a Request for Proposal for a REC provider. The selected proposal from Sterling Planet charges a rate of \$.00166 per kWh, which is 50 percent lower than the anticipated price. As a result, the \$3 fee covers not 50 percent, but 100 percent of the campus's electrical load. The rate is so low that a surplus of approximately \$16,000 was generated in the first year of purchases, which will be used to offset future REC prices.

The four-year contract with Sterling Planet includes a piggyback clause that allows all UC and CSU campuses to purchase RECs at the UCSC contract price. The university hopes this will enable other campuses to similarly take responsibility for the negative environmental impacts of non-renewable electricity use.

LESSONS LEARNED

Developing cohesive relationships between students and relevant staff members was essential for developing a strong referendum and implementing an effective procurement process. CalPIRG students stress that university staff members are generally supportive of student-led movements and can be a student's greatest ally. The students also recommend structuring ballot initiative timelines with plenty of extra room to navigate university policies and hedge against unforeseen delays and setbacks.

Best Practices is written and produced by the Green Building Research Center, at the University of California, Berkeley.

The Best Practices Competition showcases successful projects on UC and CSU campuses to assist campuses in achieving energy efficiency and sustainability goals. Funding for *Best Practices* is provided by the UC/CSU/IOU Energy Efficiency Partnership.



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