

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding Policies,
Procedures and Rules for the California Solar Initiative, the
Self-Generation Incentive Program and Other Distributed
Generation Issues.

RULEMAKING 06-03-004
(Filed March 2, 2006)

**COMMENTS OF CALIFORNIANS FOR RENEWABLE ENERGY, INC. (CARE) ON
CSI STAFF DRAFT PROPOSAL PHASE 1**

I. INTRODUCTION

Pursuant to the California Public Utilities Commission's ("Commission's") April 25, 2006 order in the above captioned proceeding, Californians for Renewable Energy ("CARE") respectfully submits the following comments on the California Solar Initiative ("CSI") Design and Administration 2007-2016 Phase 1 Draft Proposal ("Draft Proposal"). The CPUC Energy Division Staff ("Staff") covered many aspects of the proposed CSI program in both the Draft Proposal and in the May 4, 2006 workshop. CARE's comments relate to: Section 7.3, "Net Energy Metering Considerations;" Section 2, "Bringing Performance Dimension to Incentive Payments;" and Section 5, "Funding Levels."

II. THE CSI PROGRAM SHOULD INCORPORATE CHANGES TO CALIFORNIA'S NET METERING PROGRAM TO PROVIDE SIGNIFICANTLY INCREASED BENEFITS TO CUSTOMER-GENERATORS (Draft Proposal Section 7.3)

The current net energy metering (NEM) program provides two basic means for customer-generators¹ to receive economic benefit from their solar installations. Neither method, however,

¹ As defined in Pub. Util. Code section 2827(b)(2).

adequately compensates customer-generators or sufficiently encourages wide-scale investment in distributed generation (“DG”) solar energy production. A significant increase in the sustained benefit derived from solar investments in the form of decreased utilities’ bills would provide a long-term, market-based incentive that will facilitate the CSI’s attainment of the installation of 3,000 MW by 2016. Additionally, such market-based incentives would continue after the close of the CSI program window to encourage investment in renewable DG energy post-2016.

Under the current NEM program, DG suppliers do not get adequately paid for the benefits they provide to the utilities and to the state’s energy portfolio. Some customer-generators participate in the simple NEM program, in which the customer-generator banks excess generation and then pays for net consumption. The customer-generator’s energy consumption is valued at normal time-of-use retail rates, while on-site energy production is valued at the utilities’ bundled retail rate.² In a second type of arrangement, called net billing, the customer-generator is again charged the normal retail rates for consumption, but is paid the avoided cost or the unbundled generation rate component for energy produced on-site.³ Neither of these NEM systems provides adequate value for energy produced by solar DG customer-generators.

Both the simple NEM and net billing systems undervalue the customer-generator’s production by allowing the utilities to pay less for energy produced by the customer-generator than for energy supplied to that same customer-generator. Similarly, both systems undervalue customer-generated energy in comparison to energy produced by large-scale energy producers. In order to encourage increased investment in solar DG power, CARE proposes that the CPUC

² “Update on Determining the Costs and Benefits of California’s Net Metering Program as Required by Assembly Bill 58,” CPUC Energy Division, March 29, 2005.

³ *Id.*

increase valuation of customer-generated energy by instituting the following changes to the NEM program:

1. All CSI installations be equipped with advanced meters to record time-of-use and time-of-production readings;
2. All customer-generators with advanced meters will be subject to a new NEM rate schedule that would value all electricity produced on-site by reference to a time-of-production price point. Thus, the value allocated to customer-generator production would correlate with peak, partial peak, off peak, and super off peak energy market pricing; and
3. Utilities will not only offset electricity charges for CSI participants, but they will also count excess offset value against distribution and transmission charges and natural gas charges.

CARE's proposal would allow customer-generators to receive more benefit from their solar panels in the form of lower utilities' bills because most of DG solar energy is produced during mid-day peak hours when prices are the highest.

By allowing individual energy producers to take advantage of peak time energy valuation increases, the CSI will encourage investment in solar DG. Most notably, an increase in direct benefit will decrease the time needed to pay off the initial capital investment. The draft proposal aims for a target of ten years to recoup upfront investment in solar through reductions in electricity bills. If savings were increased, through adjustment to the NEM, the window of capital repayment will decrease, making switching to solar more attractive. Where a ten year repayment may still be a risky investment for many potential CSI participants, five to six years would likely appear to be a much more comfortable investment.

The increase in utility bill savings may also ease financing constraints for solar installations because the financial benefits of solar production would become more quickly realizable. Reducing financing constraints would also significantly help CSI attain its overall goal, while allowing a wider range of installers to participate in the program.

Not only would such a modification to the NEM offset rate schedule help increase interest in self-generated solar energy, it would be a step in the right direction toward treating clean, renewable DG equally with large-scale, fossil-fuel-based energy production. Because most solar energy is produced during peak hours of the day, DG suppliers should be compensated for providing important back-up capacity during those high-stress times of the day. Additionally, a time-of-production valuation for clean energy would begin to reward energy production that does not cause global warming and is renewable. At a minimum, DG solar investors should receive an equal benefit for their energy production as do other energy producers.

For the above stated reasons, California's limitations on NEM values should be significantly altered to provide for a long-overdue parity between large-scale energy producers and DG and to spur interest and growth in renewable energy self-generation to further the goals of the CSI program.

CARE also proposes two variations to the above proposal. First, the CSI could institute a higher-than-market offset rate for solar power produced through solar DG. This higher rate would further reduce capital repayment periods and spur even more interest in solar production. Alternatively, a *temporary* higher-than-market offset rate could induce an intense increase in participation in the CSI program at the beginning of the program's ten year period. For example, if the temporary higher-than-market rate was only in place for the first five years of the CSI program window, and subsequently decreased thereafter to the time-of-production market rate, then buyers interested in procuring solar DG would have a large incentive to get into the CSI program early to take advantage of the full five years of maximum utility bill reductions. If, on the other hand, CSI staff is concerned about waning participation in the later half of the CSI

program due to low incentive levels, staff could consider planning a higher-than-market NEM exchange rate between 2011-2016 to bolster end-of-the-program participation.

By increasing the value of DG-produced electricity, the CPUC will increase the desirability of participation in the CSI program. Allowing customer-generators to reap market-based or above-market-based offsets to their utility bills reduces capital repayment periods and increases the benefit of self-generation. An adjustment to the NEM valuation will work hand-in-hand with CSI incentives to help California increase solar electricity generation by 3,000 MW by 2016. CARE encourages the Commission to carefully consider the NEM component of its proposed program.

III. THE CSI INCENTIVE PROGRAM PROPOSAL SHOULD ENCOURAGE PAYMENTS TO CUSTOMER-GENERATORS FOR ELECTRICITY ABOVE AND BEYOND THE NET METERING PROGRAM (Draft Proposal Section 7.3)

According to CPUC President Michael Peevey, the object of the present proceeding is to create a “sustainable solar industry.” CPUC Press Release, January 12, 2006.⁴ To accomplish this lofty goal, the state of California should consider a *complete* revaluation of energy produced by small-scale energy customer-generators. With major adjustments to NEM as a starting point, the CPUC should explore more extensive, market-driven incentives, such as new payment options that would provide remuneration for excess energy produced by the customer-generator.

The present state of the NEM law does not allow for compensation for excess energy production. According to the Public Utilities Code,

At the end of each 12-month period, where the electricity generated by the eligible customer-generator during the 12-month period exceeds the electricity supplied by the electric service provider during that same period, the eligible customer-generator is a net electricity producer and the electric service provider shall retain any excess kilowatthours generated during the prior 12-month period.

⁴ http://www.cpuc.ca.gov/PUBLISHED/NEWS_RELEASE/52745.htm

The eligible customer-generator shall not be owed any compensation for those excess kilowatthours unless the electric service provider enters into a purchase agreement with the eligible customer-generator for those excess kilowatthours.

Pub. Util. Code section 2827(h)(3). CARE acknowledges the state of the current statutory scheme, but encourages the CPUC to request a change in the NEM statute to allow compensation to be paid directly to DG solar customer-generators.

New technologies – hopefully brought about in part by CSI incentives – will make the production of excess energy by small-scale DG customer-generators more feasible and more prevalent in the near future. California should allow self-generators who choose to oversize their solar systems to receive compensation for excess energy produced. A proliferation of small-scale, clean energy producers will cause a much-needed, state-wide diversification of energy production sources and an important reduction of the state’s dependence on fossil fuel. Encouraging efficient, broad-based, renewable and reliable DG will help to ensure that California has adequate power during future energy shortages and that it will do its part to minimize global warming.

The Commission should take this opportunity to encourage long-overdue and much-needed improvements in the production and distribution of electricity in California. The present initiative is not limited to granting incentives that will phase out over ten years. Rather, this proceeding sets for itself the lofty goal of creating a “sustainable solar industry.” With that goal in mind, CARE calls on the Commission to conduct a searching investigation into creative and permanent market-based incentives for DG solar expansion, such as allowing self-generators to receive compensation for their contribution to the state’s ability to produce highly desirable and reliable renewable solar energy.

IV. OVERALL INCENTIVES FOR NON-PROFIT ORGANIZATIONS SHOULD BE EQUALIZED, TO THE EXTENT FEASIBLE, WITH OVERALL INCENTIVE LEVELS FOR TAXIBLE ORGANIZATIONS (Draft Proposal Section 2)

During the May 4, 2006 workshop, CPUC staff discussed, in detail, a chart entitled “Taxable Commercial and Non-Taxable Incentive Examples for a 200 kW System.” The chart demonstrated that, under the proposed incentive schedule, for-profit business entities that are entitled to receive federal tax rebates of 30% will pay much less than non-profit, non-taxable entities and residential CSI participants for the same solar system.⁵ The chart shows that taxable entities will pay \$820,000 for a 200 kW system, while non-profit organizations will pay more than a third more, paying a net total of \$1,150,00 for the same system.

CARE believes that incentive levels should be balanced out, to the extent feasible, to provide an equal opportunity for all California entities. Incentives for organizations that are ineligible for the federal 30% tax subsidies should be increased to provide closer parity between net costs of solar systems for taxable businesses and for non-profit organizations and residential installers. At the same workshop, staff presented another slide, entitled “Effect of Proposed CSI 2007 Incentives & Federal Tax Credits on Effective Net Price of Solar Output,” which showed that an increase in non-taxable entities’ CSI incentives to \$4/watt would bring the net cost per kWh to a level equal to that of taxable entities. CARE proposes that the non-taxable CSI incentive be raised, to the extent feasible, to a level closer to \$4/watt, to allow residential and non-profit organizations to benefit equally from the CSI incentive program.

If such an increase would deplete CSI incentive funding too rapidly, CARE alternatively proposes that the taxable entities’ CSI incentives be reduced to allow non-taxable organizations’

⁵ As explained in the proposal, taxable, non-residential entities are currently eligible for a 30% federal solar tax credit. Residential participants are eligible for an incentive of up to \$2,000. Non-taxable entities (e.g., non-profit organizations, governments) are not eligible for any federal

incentives to be increased. Such an adjustment could hypothetically set taxable businesses' CSI incentives at roughly \$1/watt, while increasing non-taxable organizations' incentives to \$3.50/watt. Under this incentive structure, the net costs for both categories of CSI participants would be roughly 9-10 cents per kWh.⁶

CARE believes that the CSI program should address the creation of a sustainable solar market by presenting equal opportunities to all Californians. The current, proposed CSI incentive structure attempts to soften the dramatic difference in affordability of solar systems between entities eligible for federal tax rebates of 30% and those ineligible for those rebates, but the proposal does not go far enough. As one of the May 4th workshop slides concluded, under the proposed CSI incentive structure “[n]on-taxable entities [are] still disadvantaged by comparison, even at higher incentive.”⁷ Non-taxable entities and residential participants deserve an equal chance to benefit from the CSI program, and therefore the proposed incentive levels should be modified.

V. THE PROPOSAL SHOULD INCLUDE AN ANALYSIS OF TOTAL BUDGET ALLOCATION PROJECTIONS IN COMPARISON TO LIKELY INCREASES IN SOLAR CAPACITY THROUGH THE YEAR 2016 (Draft Proposal Section 5)

As the staff correctly noted at the May 4, 2006 workshop, no one can gaze magically into the solar crystal ball to predict how the present incentive schedule will impact California's solar market. However, the staff's proposal would benefit greatly from a general prediction of funding levels and kilowatt/megawatt increases throughout the ten year incentive period. A chart that showed incentive funding levels for each year and consequent growth in California's solar

solar tax credit. CPUC, CSI Draft Proposal Phase 1, p. 3.

⁶ May 4, 2006 Workshop slide entitled ““Effect of Proposed CSI 2007 Incentives & Federal Tax Credits on Effective Net Price of Solar Output.”

⁷ May 4, 2006 workshop slide 3B., entitled “Different Benefits of Federal Tax Credits Suggest 2 Levels.”

capacity under different incentive and market reaction scenarios is needed to better understand the decisions being made in the present proceeding.

For example, a series of potential predicted outcomes under various likely scenarios would ground discussions of trigger mechanisms and incentive levels in real, long-term numbers. The current proposal is aimed at getting the program off the ground, but does not adequately advance the long-term objectives of the program.

To make a fully informed decision, the CPUC should supply a series of predicted outcomes. In so doing, the CPUC will address the feasibility of the ultimate goal of creating 3,000 MW of new solar systems by 2016 under various incentive structures and market reaction scenarios. Such an analysis will provide decisionmakers and the public with information needed to create a more efficient and productive CSI incentive program.

VI. PROGRAMS FOR LOW INCOME SOLAR PROJECTS AND FOR RESEARCH, DEVELOPMENT AND DEMONSTRATION SHOULD NOT HAVE BEEN DEPRIORITIZED BEHIND OTHER ASPECTS OF THE CSI PROGRAM

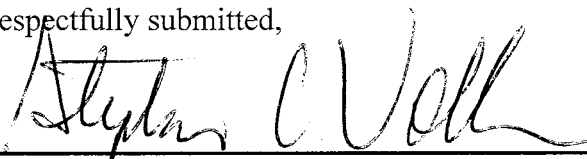
CARE believes that two of the most important components of the CSI program are the provision of solar systems to low-income communities and the development, through state-funded incentive programs, of new, low-cost, high-output solar technologies. CARE is concerned that these two critical components of the CSI program have been relegated to Phase II of the present proceeding. CARE acknowledges, however, that the separation of the CSI proceedings into phases was a scoping decision, and therefore supports a timely resolution of the current Phase I deliberations and the speedy completion of Phase II decisionmaking prior to the beginning of the incentive program in 2007.

VI. CONCLUSION

Development of the CSI program represents a critically important step toward converting the State of California's current fossil-fuel based energy production system into a diversified clean energy production portfolio. The CPUC should not limit its potential impact by concentrating solely on incentives, but should also work toward the establishment of market conditions that will enable the State to fulfill its goal of creating a sustainable solar energy market. The CSI should employ appropriate measures to increase the benefits and decrease the net costs of buying and installing solar systems for all participants. By creating both direct payback incentives and increased monthly benefits for GD solar owners, the CSI will more quickly reach its goal of 3,000 MW of installed solar power.

Dated: May 12, 2006

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Stephan C. Volker", written over a horizontal line.

STEPHAN C. VOLKER

Attorney for

CALIFORNIANS FOR RENEWABLE ENERGY, INC. (CARE)

Certificate of Service

To reduce the burden of service in this proceeding, the Commission will allow the use of electronic service, to the extent possible using the electronic service protocols provided in this proceeding. All individuals on the service list should provide electronic mail addresses. The Commission and other parties will assume a party consents to electronic service unless the party indicates otherwise.

I hereby certify that I have this day served the foregoing document "**COMMENTS OF CALIFORNIANS FOR RENEWABLE ENERGY, INC. (CARE) ON CSI STAFF DRAFT PROPOSAL PHASE 1**" for the proceeding RULEMAKING 06-03-004 along with eight copies upon the Commission docket's office. Each person designated on the official service list, has been served via e-mail, to all persons on the attached service list on May 15, 2006 for the proceeding RULEMAKING 06-03-004.



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