October 12, 2006

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 06-NSHP-1
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Comments on CEC-Staff Draft Guidebook of October 5, 2006

To the California Energy Commission Renewables Committee:

1) **Incentive level** –

Since the rebates are to be reduced based on orientation, angle and shading, then the $2.50 rebate level is too low. If only the highest performing ("perfect") installation gets the full rebate, then most systems will receive a defacto reduction in the rebate, which will throw off all of our estimates for payback and customer response. This will hurt the program by giving the "average" system a rebate which is significantly less than we had expected.

1) **Volumetric trigger** –

A volumetric trigger without a dated deadline creates a "limbo period" in which nobody knows what the exact rebate amount is. For most of our clients, purchasing a PV system is a significant investment which requires consideration among multiple parties and often through several layers of management. Decision makers do not like to be presented with contracts which contain large unknowns. And lower level managers do not like to present such contracts to their superiors. Therefore, a limbo period can be a death knell for many contracts. This is especially relevant with larger jobs, which can take several months to conclude. Unfortunately, not only will this uncertainty cause the loss of many specific sales, but the resulting reduced likelihood of success also serves to discourage salespeople from even pursuing larger projects, creating a self-reinforcing cycle of lowered expectations followed by declining results. And declining results is exactly the opposite of what this program must achieve.

We favor a rebate schedule that is more predictable and therefore more attractive to both our clients and our sales force. We recommend that when reservations reach 80% of the volumetric trigger, an alert goes out to all registered sellers and installers establishing a deadline date (e.g. two months away) at which time the rebate will drop to the next level. Any over-enrollment at the higher rebate level could be assessed against the rebate amounts available at the next level, assuring that the program never goes out of balance. This way the rebate structure is responsive to the market but does not cause market disruption inherent in a strict volumetric trigger.

The term "market disruption" really does not do justice to the potential loss of livelihood among those of us in the solar industry. Many of us have devoted our life savings, not to mention our life energy, to this industry for years - my company is now celebrating our 30th year in business. A significant "market disruption" could easily spell bankruptcy for a solar installer, or layoffs and

certainly loss of profits. It could also discourage other entrepreneurs from entering the market. In order to attain full market adoption of solar PV, we need sustained growth of 30% per year for the next 10 years. Any setback in that growth could cause the program to underachieve its goals.

2) General Reservation Application –

Questions:

1) From past experience in the ERP, staff is proposing to over-reserve funds at 20% for each MW capacity to safeguard against cancelled applications. Is this percentage too high or too low?

Since the actual drop-out rate has been closer to 40%, it seems a higher over-reserve is in order, especially since it is likely that the drop-out rates will increase rather than decrease, given the very long window proposed for rebate eligibility.

2) Staff requests that a tentative tract map be provided with the general reservation application if the builder is not showing concrete commitment to solar in the general application. What specific document would be considered the best fit to be the tentative tract map?
3) Currently, staff proposes that if solar is an option, builders can only reserve funding up to 50% of the homes in the development whereas if solar is a standard feature, reservations can be made for all homes in the development, or for those homes pre-plotted with solar. Is the standard vs. option for solar reasonable?

Yes.

3) 18-month checkpoint – To safeguard funding against uncommitted builders, staff proposes that builders must show serious commitment to the installation of solar 18 months into the reservation. At this time, staff will request for additional documentation to be submitted. Without this additional documentation, the builder's reservation could be cancelled.

Questions:

1) Should a build-out schedule also be provided at this time?

Yes

Other Comments:

Administrative inconsistencies

Who is the "purchaser"? More importantly, who is intended to receive the benefit of the rebate?
Under the current Emerging Renewables Program, the lack of definition of the term "purchaser" is confusing. Specifically, it is unclear who is intended to receive the rebate? Is the intention for the rebate to go to the "System Owner"? (The System Owner, as defined in the current 2006 SGIP Handbook, is the Owner of the generating equipment at the time the incentive is paid.) Or is the rebate intended for the "Host Customer"? (The Host Customer, as defined in the current 2006 SGIP

Handbook, is utility customer of record at the location where the generating equipment will be located.) This issue was addressed, but not resolved, on page 1 of the NSHP Guidebook under section B. Program Overview: "The NSHP provides builders or ??? with a financial incentive for installing high performance photovoltaic systems on their new residential units." Terms such as this should be defined in a glossary, such as the ones found at the back of the SGIP as well as the draft CSI handbooks.

I would also request some language on submitting copies of all contracts in a direct line from the installer/seller to the purchaser, so that there is no confusion as to who is ultimately paying for the system and who is to receive the monetary benefit (the rebate.) This is to prevent a situation in which a subcontractor contracts an installer/seller to provide and install a solar system, then claims the rebate for themselves while billing the owner for the total system cost.

This definition becomes especially important when dealing with affordable housing projects. Affordable housing projects have a 25% higher rebate amount, but *only* due to eligibility provided by the entities named in the Regulatory Agreement. Who is intended to receive the benefit of affordable housing rebates? I would really like to see this expanded and clearly defined.

Affordable Housing clarification: Under the current Emerging Renewables Program, PV systems that offset the common area load in multi-family affordable housing projects are eligible for the affordable housing rebate with one non-low-income unit set aside for the building manager, as long as this unit is specified in the Regulatory Agreement. The current language of the NSHP Guidebook, page 18, seems not to allow for that circumstance:

"The PV systems may serve common areas in a multi-family project only where all of the project's units are reserved for extremely low, very low, lower or moderate income households."

We request that projects with one non-low-income unit for the building manager and which offset the common load for multi-family housing be eligible for the affordable housing rebate. As an installer for many affordable housing projects, three concurrently in the city of Berkeley alone, almost all of the multi-family affordable housing projects we install are in this exact situation.

Field Verification clarification:
During the Renewables Committee NSHP workshop on 10/05/2006, it was presented that 100% of systems would be field verified by the installer, but only a random sample would be HERS verified. However, throughout the NSHP Guidebook, it is repeated that "Installed systems must be third-party field verified" (p. 7). Please clarify this inconsistency. Nice and succinct

Difference in estimated performance requires brand new application? On page 7, the guidebook states:

> When field verification indicates that the installation will not achieve the estimated performance used for reservations, the installation must be improved to correct identified deficiencies or the estimated performance must be recalculated based on the actual installation and the rebate application must be re-submitted for approval.

Does this mean the project will forfeit its initial rebate reservation and have to submit an entirely new application at the new rebate level? It would seem that the difference between estimated and

installed performance would need to be explained on the NSHP-2 form and the rebate (at initial rebate level) adjusted accordingly. The same question applies to systems that are found to produce more than estimated. Are these projects required to re-submit applications at the new rebate level? Please clarify.

The issue seems to be satisfactorily addressed on page 25 in Appendix 1 - Frequently Asked Questions, section A. Can My Installed System Be Different Than My Reservation?:

> When a modification increases the expected performance of the system, a new incentive amount will be calculated based on the time a modification request, with supporting documentation, is deemed complete. If reservations at that time exceed available funding, the incremental increase in expected performance will earn the rebate amount in effect at the time of the modification.

This paragraph suggests that the total rebate amount would be the initial rebate amount plus the new rebate amount. However, the language quoted above on page 7, suggests that the entire rebate amount would be recalculated at the new rebate level. Please clarify this inconsistency.

Error: On page 27, last paragraph, "The Energy Commission will use the expected system electricity production from EPBI calculation and compare it to the expected energy consumption. In case the expected electricity ~~usage~~ [production] is greater than 100 percent of the estimated annual consumption, the rebate will be based on the estimated annual consumption.

TDV: With TDV, it would seem likely that a SW orientation should receive a higher rebate than due south. However, the examples do not show a SW sample, not are they transparent as to the algorithm used to determine the TDV. We need to review the TDV algorithm. How is it calculated?