BEFORE THE CALIFORNIA ENERGY COMMISSION

In the matter of:	)	Energy Commission
	)	Docket: No. 07-SB-1
Comments on Senate Bill 1 Eligibility	)	
Requirements Staff Report	)	

COMMENTS FROM A MEMBER OF GENERAL PUBLIC WITH ENERGY JUSTICE PERSPECTIVES ON DRAFT "GUIDELINES" STAFF REPORT

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Individual

Introduction/Identification

My name is Pacyinz Lyfoung. I am commenting as an individual member of the general public, with some extensive professional and activist background on social justice issues and presently developing knowledge of renewable energy. Furthermore, I belong to the Hmong American community in Fresno, so am commenting as a member of a traditionally-underserved community and geographic area as well. Finally, I attended a two-weeks intensive hands-on Women's PV training with a well-established solar PV training organization, so have some basic knowledge of solar PV design and installation issues and solar industry workforce diversification perspectives.

I appreciate the opportunity to participate in person in the 8-22-07 SB1 Public Workshop and provide some follow-up comments in writing.

List of the SB1 areas I will address:

1. Transparent guidelines format
2. Data collection and evaluation
3. Training and certification of solar energy systems professionals: local workforce and economic development
4. Appropriate energy efficiency improvements in buildings: siting and transportation energy savings considerations
5. Incentives and financing mechanisms for hardest-to-sell

Comments:

1. Transparent guidelines format

At the 8-22-07, there were several comments expressing concerns about the level of details and the appearance of a prescriptive approach to solar incentives in the California Energy Commission (CEC)'s draft guidelines. From an "energy justice" perspective, the current format works very well:

- to provide well-researched background information to the general public
- to provide well-informed and cost-effective options to all stakeholders
- to proactively well-manage public resources by providing such public service
- to provide technical assistance to public utilities that now won't have to bear the costs of doing that preliminary background work and can use their resources in other ways that would benefit their customers
- to model a transparent process which can maximize exchanges of information and the best results

Many thanks to the CEC's staff for undertaking that tedious but critical piece of the work.

2. Data collection and evaluation

At the end of the California solar energy efforts, there will logically be some very specific answers that the California people and others around the country and the world would like to know, such as:

a) who exactly got the One Million Roofs? (to name a few factors, race, income level, geographic area)

b) How were the $2.3 billion of the California Solar Initiative spent; and what kind of job creation/economic development did it generate and for whom?

Those questions should be anticipated and means to collect that data and monitor it should be established upfront that would allow for those answers to be provided.

More comments on 2a) and 2b):

Comments at the SB1 8-22-07 Workshop demonstrate that California regions and Californians will have very different responses and unless addressed, very different results with solar energy efforts. As a gentleman from the Bay Area mentioned, the phones are ringing off the hooks over there, whereas someone else probably not from the Bay Area mentioned the hard-dollar choices that families have to make between choosing the solar home plus $20,000 in mortgage or the non-solar home minus $20,000 in mortgage across the street.

For people who are not familiar with the Central Valley or the Fresno Area, last week (8-23-07) the Fresno Bee published a story on the "State of Working California, 1979-2006," a report from the California Budget Project, headlining that "Poverty is still rooted in the Valley," with 17% to 21% of people living in poverty in Tulare, Fresno, Kings and Madera Counties (using 2005 US Census figures). In recent weeks, an article reported that 50% of the students in Fresno County did not meet state educational testing standards, and another article reported that 4 cities in the Central Valley are part of the Top 15 Cities experiencing the highest foreclosure rates. There is a severe pollution problem from air quality to chemical toxics. Most days in Fresno this summer are over 100 degrees F, which means that the air is hot and thick: one can break a sweat just standing outside, and it is a physical strain to just move. People on the Southside where I live wait until after dark to take their kids out or take a stroll after being cooped up in housing that they may or may not cool, depending on whether they can afford the energy bill. Even my elderly parents, who might be identified as lower middle-class with a small size house, limit their use of the air conditioning despite the heat, to avoid bills of $350 and up/month on energy. This is a very different place than the Silicon Valley or the Bay Area, both economically and climate-wise.

Given those differences in populations, economics, climate and geography, the California solar efforts can have very different outcomes, depending on criteria and guidelines that are established now. For example, we can have:

- Scenario 1: Solar efforts work great in the Bay Area. Lots of people who can afford to own roofs over there have jumped on the bandwagon and contribute to a large percentage of the new solar roofs. Meanwhile, it took much longer to get people from the Central Valley involved, especially as people with less means in the Central Valley did have to agonize over whether to spend the extra $20,000 on solar or not. As a result, there are less solar roofs in the Central Valley, and those who joined late got less state assistance as per the subsidy phase-out system. In terms of overall energy-efficiency costs, there are more people in the Central Valley (who can least afford it) with huge energy bills who either totally missed the bandwagon or if they caught it, paid more for it as they got later subsidy rates; whereas people in the Bay Area with more means and less energy challenges have more access to solar energy, that they may have gotten earlier with a higher subsidy rate.
- Scenario 2: XTech Company or Y Utility Company built a big megawatts solar farm in the Central Valley where solar energy production is the best location for solar irridiation. X or Y Company hired local people of lesser means/diverse racial backgrounds/single moms and trained them to work at the big solar farm. The Company's local staff members are able to buy homes close to work (they save on transportation energy), as they have salaries that can support buying the homes and there are no worries about pollution around the clean energy solar farm. Those local residents either could now afford to add solar roofs to their homes or they buy cheaper and more reliable solar electricity from the nearby farm that has lower transmission costs. Their family and community members visit them, and see and hear about solar, which accelerates the rate of adoption of solar in the whole community. As a result, there are concrete economic gains in the Central Valley, due to local job creation and economic development that bring greater wealth in the community and greater adoption of solar as local people are more directly connected and impacted by solar energy efforts. In terms of energy-efficiency and savings, people in the Central Valley can better afford to pay their energy bills; have access to hopefully cheaper, more reliable and cleaner energy; and live in more prosperous and cleaner environments.

Those are just some simplified scenarios (and there could be many other scenarios),but they provide some possible projections as to what paths could be taken and what could result depending on different paths taken, with regards to solar energy deployment and popular adoption.

Eligibility criteria and incentives will play an important role in shaping the paths taken and possible results.

Setting up some evaluation outcomes, data collection and evaluation process could help figure out what results are wanted and how to get there.

3. Training and certification of solar energy systems professionals: A) local workforce development and economic development and B) ethics

A) Local Workforce Development and Economic Development

In Washington State, renewable energy development is clearly linked to Economic and Trade Development as part of that State's Climate Change strategy: for example, they are able to project that by 2020 there should be 25,000 clean energy sector jobs up from 8,400 in 2004. Those projected jobs will involve training of people to be ready for those jobs. This will also further their goal of local production of energy, which will keep jobs, economic development and wealth within the State.

With $2.3 billion dollars and 1 million solar roofs in California, there has to be some job creation and economic development happening somewhere. As it turns out, all in terms of best solar irridiation and need for economic development and pollution abatement, the Central Valley could maximize public dollars: there is a workforce that would highly benefit from the jobs in a location best suited to produce strong levels of solar electricity, a clean energy source that would alleviate the existing too-high levels of pollution. The suggestion would be to consider how eligibility criteria and guidelines might encourage those kinds of maximum bang for the buck for solar public dollars.

Although the Central Valley, the Silicon Valley and the Bay Area fall under the same northern region administered by PG&E for energy programs, there are such disparities between the former and the two latter. There seems to be a tendency for Silicon Valley or Bay Area companies to come and work in the Central Valley, which is wonderful in terms of having access to their high-levels of expertise and experience, however, that also tends to mean that salaries and profits go out of the area and do not create real local economic development and wealth. Again, the suggestion would be to consider how eligibility criteria and guidelines might encourage greater economic parity within California regions and subregions, by encouraging real local job creation and economic development vs. just having the local asset (solar irridiation) exploited but its hard-cash profits not staying within the locality.

One of the goals of the California Solar Initiative is to expand the mass adoption of solar energy, which includes expanding and diversifying the solar industry workforce. Therefore, it would seem logical to target outreach and training efforts to traditionally-under-represented and underserved populations and geographic areas.

Finally, requiring 4 years of previous installation experience for solar installation certification does not open the industry to new entrants, who might be better connected to traditionally under-represented and underserved populations and geographic areas, and who could increase local capacity and local economic development. It would seem that good training could shorten the period of actual hands-on experience to less than four

years of practice before being deemed qualified: even medical doctors are only required to do three years of residency before they can practice as professionals. Furthermore, with the current greater push for solar, it would seem that there would be intense activity, so maybe when installers used to only do x projects in a year, now they might be doing 10 times x in a year, which would make time not the best measure of experience.

B) Ethics

There appears to be some clear segmentation between solar installers and energy efficiency professionals, both being distinct industries. There are also concerns related to the reality that it would be difficult and unfair to require that solar installers gain expertise as energy efficiency professionals. Those are complex issues that I don't feel I have enough background knowledge to really comment upon. However, I would just like to share my personal experience that when I went to my PV Design and Installation training, energy efficiency was taught as an integral part of the design process and made perfect sense as an integrated process, both in terms of value to clients and value to the environment/climate change. It was later rather unsettling to find out that other solar installers are opposed to being required to address energy efficiency in their systems. There appear to be definite economic reasons, but it starts opening the door to the puzzling question as to whether solar energy as it becomes popularized and mass-produced will become just some technological issue that does not carry ethical values to clients and the environment. It also begs the question as to who will be teaching solar energy and what will be taught, and is the industry moving towards a more purely technical or economic aspect detached from original value-based motivations, and does it matter? Finally, the economic concerns about energy efficiency requirements for solar installers are probably real hardships for solo and very small firms, and if they could, solar installers who were doing this work before solar was popular are actually committed to clients and the environment, so what would enable them to integrate some basic energy efficiency in their work that would not be over-burdensome? I am raising the questions in the hope that others might have better answers.

4. Appropriate energy efficiency improvements in buildings: siting and transportation energy savings

Just a brief note for the record on this issue: the Energy Information Administration performs national transportation surveys every three years and showed that in 2001, households already consumed about as much energy for household services (heating, cooking, etc) as for personal transport. Therefore, in the greater picture, when assessing energy-efficiency of building construction, there may be a siting factor. For example, does it make sense to save consumers' housing energy costs but increase their transportation costs due to the location of the housing site?

5. Incentives and financing mechanisms for hardest-to-sell

As mentioned by several 8-22-07 workshop participants, the biggest barrier for solar adoption may be hard dollars. Some installers already provide some kind of financing

options, which must still not be a good option for households without certain resources, otherwise there would be more household using those financing options. Innovative financial mechanisms, such as some type of community-revolving loan system or sweat-equity-buy-down, could be explored. That appears to be an area that was not fully addressed by the draft.

Dated 8-29-07 and respectfully submitted by

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CERTIFICATE OF SERVICE

I, Pacyinz Lyfoung, certify that I have, on this date, caused the foregoing **INDIVIDUAL COMMENTS ON THE PROPOSED REVISED INTERIM MARKETING PLANS FOR THE CALIFORNIA SOLAR INITIATIVE** to be served by electronic mail to docket@energy.state.ca.us with one paper copy postmarked today, as per the Notice of Renewable Committee Workshop on Staff Report SB1 instructions.

I declare under penalty of perjury, pursuant to the laws of the State of California, that the foregoing is true and correct.

Executed on August 29, 2007, in Fresno, CA.

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