BEFORE THE CALIFORNIA ENERGY COMMISSION

Energy Commission New Solar Homes Partnership and Order Instituting Rulemaking Regarding Policies, Procedures and Rules for California Solar Initiative, the Self-Generations Incentive Program and Other Distributed Generation Issues	Docket NO. 06-NSHP-1: California Public Utilities Commission Rulemaking 06-03-04 Workshop on Affordable Housing – June 13, 2006.

June 19, 2006

Comments from Golden Sierra Power on Joint Affordable Housing Workshop held June 13, 2006 at the California Energy Commission.

Everyone's Challenges

During the workshop, it was apparent that the panel members were experiencing the same challenges that we in the Industry have been experiencing for the last several years. A cry for more incentives with bureaucratic heartaches was being communicated throughout the meeting including several requests for free money. This indicated an uneducated, understanding of the industry climate for which they wish to be a part of today. This is typical of those entering and experiencing the reality of the solar industry during a time of development and implementation. These were the first challenges Golden Sierra Power (GSP) experienced. GSP has either overcome these challenges or adjusted price packages to reflect the increase cost that has occurred. As well, the CEC has made efforts that have achieved results in cutting processing time in both applications and payments.

Question of the day?

First, which is more important, Energy Efficiency or installing PV Electric? PV should be the icing on the cake after energy efficiency. But, this will not always apply in the commercial business market. Other factors of consumption and ability to produce power while saving real dollars for business growth, applies when energy efficiency is really not achievable. Within the residential market, energy efficiency should become a priority with the reward being a smaller system, still producing enough energy to reach zero, while receiving a bigger bang for the ratepayers buck.

Market Conditions While Subsidizing High Dollar Disposable Income Items for Low Income/Affordable Housing.

Current retail pricing along with the initial capital investment while utilizing ratepayer subsidies make PV electric a high dollar, disposable income purchase. Manufacturers see the increase cost of today's technologies as an opportunity to bring to market, tomorrows products at higher acceptable costs while still receiving subsidies from ratepayer or taxpayer funds.

In Photon Magazine's dated April 2006, *The Market Price Is Where It Is, Because It's Profitable, And That Means For Everyone*; (p.37) a quote hits the nail on the head in the interview with Daniel Cintolesi, Marketing Director at Q-Cell AG in Thalheim, Germany, producer of cells. Stated Cintolesi, "Of course, we all know: prices have to drop." Photon follows up; *"So, when will it happen? When we've overcome the silicon shortage?"* Cintolesi states, *"Correct and not a minute sooner."* Later within in the article, it is also quoted that this shortage could last at least through 2008. This gap could be long enough to create a sudden separation of the California market or worst; provide an incentive to a few financial elite who can afford the initial capital investment along with the tax consequences and benefits.

This will also encourage manufacturers of next generation products to bring them to market at higher market prices and lower acceptable efficiencies to help shore up demand. This will only re-start the cycle of manufacturers recouping the capital investment needed by continuing to receive higher acceptable prices for next generation products for which they manufacture, while receiving subsidies from ratepayers.

Because of the current "booming" economy and the separation of wealth within society, the CPUC should consider whether PV systems that are retro fitted should be accepted as a subsidized benefit for those who can not financially afford it. Why should California put effort into over subsidizing Low Income/Affordable Housing Projects when the cost of the systems are at a all time high while market conditions over the last 5 years has produced less than 1% of the projects within the California Energy Commission (CEC)? If the goal of the California Solar Initiative (CSI) and/or the CEC is to maximize the funds that are available to achieve a particular capacity figure, this program should be the last type of assistance made available. Bottom-line, it is too soon

Risk, Risk, who takes the Risk?

During the Workshop, it was also apparent that the key issue still is who will take the financial risk in achieving installation for such projects. It is apparent that developers have been unwilling to take any risk. The ones represented, had neither constructed or monitored a PV electric system to experience what the "real issues of design, installation and financing" are, not forgetting the bureaucracies that accompany such programs. Where were the ones that have completed and begun producing electricity?

One challenge discussed was the lack of marketing provided for Affordable Housing Projects. GSP has utilized printed material provided by grants to non-profits who have tried to market this product to developers. Developers can see the struggle and risk as well as the bureaucracy to implement is too much even when taking advantage of the additional 25% added to projects. Again, GSP has worked with Multi Family and Single Family Unit developers as well as Habitat for Humanity and the challenges to implement without the additional funding or donated services and materials become a bad business

proposition and thus, passed on. Although there are small examples of PV implementation, was the cost and ratepayers subsidy spent in the most advantageous ways to create energy efficiency and producers who will take ownership of their systems by having a financial vested interest? Most likely not.

Institutional Financing was also communicated as a challenge by the majority of the panel represented. As stated in the Workshop, Lenders are more than willing to loan money for solar projects as long as the client qualifies and equity is available to encompass the risk. Both Portfolio and Conventional Lenders have communicated that until the production and real savings can be determined, lenders will not adjust qualification ratios to include the value for power produced. What would this mean if Lenders made that adjustment to ratios? Borrowers qualify for higher loan amounts; which is how banks make money. Once the CPUC/CEC has determined a way to project production values that can eliminate the risk perceived by lenders, then programs would flourish within the financial institutions to provide funding with increased loan amounts; enabling borrowers to qualify for higher loan amounts which encompass system cost. Until Lenders are educated and provided certain production guarantees, the risk will remain the same as well as the challenge to receive funds to bridge the gap between incentive and total cost.

EEF?

One example of a financing model providing guaranteed low-interest loans to public entities is already in place within the CEC. The Energy Efficiency Financing Program (EEF) determines loan amounts by the total savings achieved over a ten year period while allowing for a fifteen year pay schedule. As an example, if the CEC were to award an affordable housing project $2.80/watt incentive while qualifying for a guaranteed loan by using the energy savings formula, a loan amount would be granted equaled to $3.22/watt. Based on comments made by Tim Tutt of the California Energy Commission; subtracting $1.90/watt from $8.80/watt, (est. average cost of systems being installed); the projected system cost would be $6.90/watt. Under the EEF loan program along with the incentive, the owner would have to come up with an additional $.88/watt to pay for the additional

cost. It was clearly stated low income benefit recipients do not have funds to purchase disposable income type products and developers do not wish to take the risk in carrying long-term paper. If the pricing of the PV system meets the pricing criteria of $6.02 or less, then a low income project could install solar for affordable housing at a lower than industry cost while receiving the incentive and acceptable payback based on energy savings over a ten year period. Currently, California Legislation allows for the CEC to administer these loans for public entities. Whether or not this type of program could be developed or expanded is unclear but should certainly be explored.

Assistance for low-income/affordable housing should come when the price of systems has dropped to a point where subsidies along with the rebate incentive total the project cost. Although this position would be characterized harsh to those who are in need, decisions on where assistance is provided and who actually receives the benefits are decided daily. Does a Toyota hybrid vehicle receive subsidizes for low income qualified individuals who own resold vehicle manufactured in the late 80's to early 90's that receive poor gas mileage and meets minimum emission standards? No. PV Electric is a disposable income purchase in today's market and should be treated as such as is the new hybrid vehicle technology. Those who can afford to make the purchase while benefiting for the additional tax benefits, are the individuals making these types of purchases

K.I.S.S.

Today's 200 affordable housing projects within the CEC is less than 1% of projects completed in the State of California. With the additional 25% over the current incentive level provided along with the additional time, it is clear that experienced developers have shied away from such projects. The "green carrot" is not present and the additional bureaucracy that comes with affordable housing projects makes developers and installers look for other markets that are more cost affective so higher margins can be obtained. With a large demand, who needs the additional headache in obtaining every tenant's utility bill while having system owners carrying the financially responsibility in covering any shortages while receiving zero in return for excess power produced due to vacancy or

over-usage. If projects were to be able to combine usage to one meter, then would commercial users and for-profit projects be afforded the same ability? The risk becomes excessive in projects when funds are tight in the beginning. GSP agrees with the challenge of not only creating a seamless process, but a simple process that allows for developers to finance projects in time at a little or no risk and reap the rewards of making affordable housing units power producers.

Unless mandates are legislatively implemented that requires all new affordable housing to become PV powered or the "green carrot" can be legitimately and fairly provided without the need of third party ownership complications, additional cost as well as complexity to the process, an assumption from passed participation as well as any unknown factor that will present itself within the projects discussed, it will be a while before factual data is readily available to reduce the risk a developer or investor must take to add PV electric to affordable housing projects. Therefore, GSP would encourage the CEC to focus on developing a future financial program similar to the EEF program currently being administered. This will allow for time to pass while waiting for the market to experience price decreases and bringing this technology to a more affordable and risk free investment.

Mark Johnson
CEO
Golden Sierra Power Inc.
P.O. Box 551432
South Lake Tahoe, CA 96155
530-577-5142
mark@goldensierrapower.com

June 19, 2006