

SUNPOWER

California Energy Commission
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DOCKET

06-NSHP-01

DATE April 17 2009

RECD. April 17 2009

April 17, 2009

Re: Staff Workshop on the Proposed Changes to the New Solar Homes Partnership Guidebook
(Docket Number 06-NSHP-01)

Dear Staff,

As you are surely aware from the success of the New Solar Homes Partnership (NSHP), in recent years new home builders have been increasingly adopting solar as a standard feature in the homes they build and sell in California. Surely a critical driver of this growth has been the NSHP, which has proven to be effective in both charter and design. When speaking with parties interested in developing incentives for builders to include solar on new homes outside of California, SunPower regularly references the NSHP as an ideal program.

Even more encouraging than the mere inclusion of solar as a standard feature has been the success that builders are reporting they have had in selling solar homes. Last year, SunPower commissioned the Ryness Company to study the sales pace of solar homes relative to comparable non-solar homes. The results of the study were positive, as sales of the solar homes outpaced sales of non-solar homes by a factor close to two-to-one. As a result, many homebuilders are very interested in following on this early success by broadening the availability of solar throughout their communities in California.

However, as has been well publicized in the general media, new home builders have come under intense pressure to lower the price at which they sell their homes, in order to both stimulate demand for new homes and to compete with the falling prices of existing homes. As a result, many builders have reported to us that while being highly interested in making solar available, they are reluctant to raise the price of their homes to cover the cost of the systems.

Therefore, SunPower would encourage the Commission to take steps to modify the NSHP Guidebook to facilitate programs that would enable builders to include solar electric systems on their homes without incurring an upfront capital expenditure. We believe that some builders will seek programs that provide homebuyers with the opportunity to lease a solar system, while others will choose to offer solar as a well-marketed option.

Toward that end, SunPower is formally submitting the following recommendations to change the NSHP Guidebook.

Leases

The Problem

Presently, builders including solar on their homes are increasing the cost of their homes by the purchase price of the solar system (net of the rebate). For example, a builder selling a \$250,000 home might need to increase the cost of the home by \$15,000 (\$20,000 Gross Price - \$5,000 rebate = \$15,000 Net Price). This increased \$15,000 can represent a significant portion of the builder's margin on the sale of that home, especially in this challenging market (\$15,000 = 6% of a \$250,000 sales price).

However, builders are not necessarily able to obtain a higher purchase price for the home to cover the net cost of the solar system, for the following reasons:

- Despite the educational efforts being made by the Commission and the solar industry, at this nascent stage of the industry's development, many homebuyers are still not aware of the full value that a solar system can provide. This can make it difficult for builders to command a price premium for solar homes.
- Homes are not priced based upon the cost of building the home. Given the variety in available amenities and features, it is difficult for buyers to fully account for the value of each feature when assessing the fairness of the asking price from the builder. Therefore, homes are typically priced based upon the prices of surrounding new (and existing) solar and non-solar homes.
- Some appraisers are not experienced in valuing solar systems and are not able to fairly assess the full value of the solar system. As a result, even if a builder has convinced the homebuyer to pay a higher price for a solar home, the lender may not agree to provide a mortgage based upon that sales price.
- In highly competitive market conditions like those faced by the industry today, builders have a general problem selling homes for higher prices than those available for nearby homes, irrespective of the features contained therein. As an extreme example, in some markets appraisers are using older homes in foreclosure as market price comparables when assessing the value of a new solar home.

As a result, over the past two years, builders have become increasingly reluctant to add solar as a standard feature on new homes. And it is because of these difficulties that builders are highly interested in selling homes that include solar systems that are financed by third parties.

The Solution

When a solar system is included on a new home and the homebuyer is offered a lease or a power purchase agreement (PPA) from a third party, the cost of building the home does not increase and therefore the builder is not under pressure to increase the price of the home. **As a result, the builder can confidently add solar as a feature without worrying about losing the percentage of its sales margin represented by the cost of the solar system.**

Further Benefit – Larger System Sizes

It has been SunPower's experience that the size of the solar systems sold in the new homes channel are much smaller than those sold to owners of older homes. There are valid reasons for new homes to have smaller systems (e.g. new homes may be more energy efficient than older homes, homebuyer energy consumption is unknown when a new home is being designed, etc). However, it is SunPower's belief that the primary reason builders choose smaller systems (e.g. a 2.5 kW system instead of 5.0 kW system on a 3,000 ft² home in the Central Valley) is because of the difference in the cost of the system. **By eliminating the requirement that they pay for the solar**

system up front, builders will not be inclined to select systems that are not appropriately sized for the homes being sold.

When a solar system is appropriately sized to the electrical load of the home, a greater portion of the home's electrical consumption is covered by the solar system. **Further, larger solar systems are cheaper on a per kW basis, resulting in a lower levelized cost of electricity (LCOE - cost per kWh) over the life of the system.**

Further Benefit – Potential Ancillary Offerings

It is possible that third party financing offerings will come with ancillary benefits, such as performance guarantees. A performance guarantee would ensure that the solar systems that are being installed are producing the electricity that they promise. This would provide the Commission with more assurance than it has today that its funds are being put to good use.

Specific Comments

Based upon our evaluation of Public Resource Code 25744 and the Emerging Renewables Program Guidebook, we understand Staff may have concerns in the following areas:

- Removal of a system prior to expiry of five years following installation.
 - SunPower would recommend a statement in the Guidebook advising participants that it is the intent of the NSHP that solar systems remain in place for at least five years, rather than limit lessor remedies by prohibiting the recovery of solar systems in the event of a breach of the lease.
 - It is SunPower's belief that lessors will not view the removal of a system as an economically viable outcome of a lease default. However, it is important to note that institutional investors who can deploy significant amounts of capital do not have significant experience leasing residential solar systems, and there is a dearth of data to support investment assumptions. At this nascent stage of the market's development, lessors should be willing to make every effort to avoid the removal of a solar system, but may be inhibited by a limitation on this right, which is typically retained by lessors.
 - Any requirement that prevents lessors from removing systems upon a lease default may drive up the cost of a solar lease for new home buyers, since this restriction would inevitably cause lessors to restructure the lease pricing to account for such a restriction.
 - It is not clear that the Commission would be in a better position than it is today with respect to systems that are owned by homeowners, as there are no existing restrictions on the removal of systems under the current program.
 - The Commission might consider encouraging the lessor to obtain the legal right to keep the system on the roof of a home in the event of a foreclosure, which would allow the lessor to offer the solar system for lease to the party that buys the home out of foreclosure.
- Proof of the lease must consist of a copy of the lease agreement (with required details) and a copy of the purchase of the system by the lessor.
 - In the event the installer of the solar system does not sell the solar system to a third party lessor, the Commission will not have a document to evidence the purchase of the solar system by the Lessor. SunPower recommends that this requirement be waived if the Lessor is registered under

the New Solar Homes Partnership as an eligible installer and represents to the Commission that the system was not sold to a third party lessor.

- Inclusion in the lease of the capital cost and any financing or interest costs.
 - SunPower expects that due to the tax-oriented nature of investments in renewable energy systems, most leases to homebuyers will be 'operating' leases. This is a different type of lease from a 'finance' lease, which is often considered a rough equivalent of a loan to buy the system, where the 'implicit' interest rate (or financing cost) is a relevant fact. SunPower questions whether disclosing this detail is relevant (or possible without making assumptions about unknown facts) in the case of an operating lease.

Solar as a Buyer Selected Option

Another solution that helps solve the issue of builders not being able to add the cost of solar to the home base price is to offer solar as an optional feature in the community. In fact, SB1 will require homebuilders of large subdivisions (50 homes or more) to offer solar as a buyer option, beginning January 1, 2011. Although this change will come roughly 16 months after these changes to the guidebook take place, builders are beginning to prepare for this eventuality now. This period of time provides the commission with some runway for planning, designing and developing a successful solar options within the NSHP. Doing so will greatly improve the success of the solar option mandate and allowing homebuyers the ability to finance solar systems at the time of construction.

We understand the Commission has been considering doing away with solar option provisions within the guidebook. SunPower believes this would be a mistake, not only for the reasons mentioned above, but also because of several other factors:

1. Federal Investment Tax Credit - The recent revisions and extension of the federal ITC greatly improves the economics of solar electric systems, especially in new construction.
2. Mortgage Interest Rates – Mortgage interest rates are at record lows. With interest rates as low as they are, the cost to finance systems is more affordable than it has ever been.
3. Cost to install solar at new construction is less – It costs 20-30% less to install solar electric systems in new construction, owing to a.) Improved rebates over retrofit rebates, b.) Easier installations than retrofits, and c.) Price advantage provided through builder negotiated volume pricing.
4. Utility rate increases – IOU and municipal utility rates have seen significant increases.
5. Awareness – there is a heightened public perception and awareness of the economic and environmental benefits of solar electric technology.

As business models shift to support solar programs under NSHP that respond to the current market conditions, greater success with solar options programs will result. In the past 6-12 months SunPower has seen good success with solar option programs achieving relatively high absorption rates (as high as 70%), a likely outcome of the aforementioned factors, as well as having well trained sales staff and strong sales and marketing tools in the communities.

Our general request is that the Commission not only continues to offer a solar option program as part of NSHP, but work to improve participation and administration requirements of the options program. Specifically, we would have the following recommendations:

- Increase the % of homes to be reserved in the options program to at least 50% of the lots in a community. Builders need at least 18 to 36 months of visibility on rebates and pricing to invest in offering a solar program in their developments.
 - Builders need this kind of time considering the investment they make in engineering homes, administration and contract setup, sales training and marketing.
 - Require quarterly or annual project updates so that lots reserved that did not go solar can be unreserved for other participants. This will also provide the Commission with excellent reporting information on the success of solar option programs in general.
 - Consider providing additional incentives (lump sum) if the builder is able to achieve established penetration rate goals (i.e., 50% annually).
 - This change would also serve to simplify administration and reduce administrative costs.
- Extend reservation period to be the same as standard communities (36 months). This change would also serve to simplify administration and reduce administrative costs.
 - Eliminate the six-month checkpoint process and form requirement (NSHP-1.6 reservation)
- Consider all ways to ease the administration burden of a solar option program since more and more builders will be implementing options programs, as SB1 will require in the future.
- Provide the same rebate amount as standard. A \$0.10/W difference is not a significant enough carrot to have an impact on a builder choosing standard over options. This change would also serve to simplify administration and reduce administrative costs.
- Provide marketing assistance to builders that demonstrate success at selling solar options.

General Program Recommendations

The administrative requirements and processes of the NSHP should be improved. Inefficiencies in administration costs program participants thousands of dollars in unneeded implementation costs on each and every project, and causes long delays in rebate claims and fulfillment. These same inefficiencies also cause program participants to become dissatisfied with the program, which can lead to program attrition. By considering the following suggestions and making improvements, companies like SunPower can lower the cost of delivering solar systems to program participants. As a result, program satisfaction amongst participants will improve and participation rates will likely increase.

Home Energy Rating System (HERS)

- High solar HERS costs are a barrier to solar adoption. In many cases, HERS sampling is prevented by strict CFI criteria, thus driving up the cost of HERS ratings. Recommendation: CEC or IOUs should strongly consider providing random system inspections as part of NSHP (Like SMUD does with their SolarSmart Homes Program, and the CPUC does with CSI retrofit homes).
- System inspections are intended to ensure that what is being claimed is what got built, to verify factors that affect system performance such as shade and orientation, and to verify that the system is operating and performing as expected. Below are some recommendations to alleviate administrative burden and still accurately validate that systems are performing as intended:
 - Reduce the inspection requirement for providers that consistently pass the inspections by requiring a lower inspection rate for those installers.
 - Reduce the inspection requirement for providers that include monitoring services.

- Reduce or eliminate the inspection requirement for providers that meet a certain level of design guidelines, such as a shade analysis tools.
 - CEC perform random system checks using a simplified protocol and eliminate the registry and multiple forms for claims.
- At a minimum, CEC should work directly with solar HERS providers and raters to establish a more streamlined process to ensure HERS registry accuracy and timely data entry into the registries. There are currently many delays in claims due to registry issues.
- We recommend additional training for the IOU NSHP administrators on the HERS registry process to help expedite the resolution of HERS registry issues since they are in charge of triggering registry updates when systems change.
- When issues with the submitted HERS documents arise, the Program Administrators should contact the HERS rater directly to resolve the issue, and not request that the payee resolve.
- We recommend that HERS providers supply rebate payees with access/view into HERS registries to allow verification of uploaded CF-4R and CF-4R-PV information.
- The Payee is often waiting for the CF-4R and CF-4R-PVs to be able to submit the Rebate Claim, as there are no regulations with regard to document turnaround time. Require 30-day turnaround once CF-6R-PV is provided to rater by installer.
- Currently, every lot with a rerun of the PV Calculator requires a HERS inspection, with no sampling allowed. This is causing the solar HERS ratings to be much more costly for the builders. We strongly recommend that Staff clarify the sampling guidelines and allow one in seven solar HERS sampling for the following types of sampling groups:
 - seven lots with PV Calculator reruns (revised CF-1R-PVs due to falling outside of CFI or system changes since reservation),
 - seven lots with different system sizes (kWp) at the same community, and
 - seven lots with a mixture of PV Calculator reruns and different system sizes
 - *One in seven sampling for a group of lots with different systems and PV Calculator reruns would still ensure that systems that are being reported correctly by the installer on the CF-1R-PV and the CF-6R-PV forms, and are being verified by HERS raters.*

Azimuth/Pitch/Calculator Updates

- Allow an azimuth range of 90° to 270° to qualify for California Flexible Installation (currently 150° to 270°).
- Allow a pitch range of 0:12 to 9:12 to qualify for California Flexible Installation (currently 1:12 to 7:12). Many plans are designed with 8:12 and 9:12 pitch in new single family homes, causing many lots to fall outside of CFI. Many multifamily structures require 0:12 installations.
- Allow a 60 day grace period after the new calculator is implemented to submit reservations using the previous calculator. Often times, contract negotiations take longer than 30 days to complete.
 - Any reservations received within the 60 days following the notice will be reserved at the current incentive level, including those without the EE letter.
- Revise the PV calculator to account for the specific IOU territory that serves each city in the rebate amount
 - Example: SDG&E customers in Climate Zone 7 vs. Climate Zone 10
 - CZ 10 rebates are approximately 20% lower than CZ 7 rebates for adjacent cities within SDG&E service territory

- This causes a major inequity for the SDG&E rate payers in CZ 10

Shading

- Emphasize with the HERS raters that the **first step** in the shading analysis is the “minimal shading” 2:1 shading test, which then triggers added tests **only** if it is deemed that the system does not meet the 2:1 test.
- For lots that do not qualify for the “minimal shading” criterion, the Mature Tree Height classifications add complexity to an already complex inspection. Consider a simplified method for inspectors to handle immature trees in shading analyses.
 - If a simplified process is not attainable, we recommend using the *actual* mature height of the tree, *plus a growth factor*.
 - The current height classifications are very wide and many trees fall on the *low end* of the medium category, which results in more predicted shading than will actually occur, thus lowering incentives unnecessarily.
 - Many trees are slow growing and will not reach mature height for many years. Some will not reach maturity until after the EUL of the system is reached. Need to factor in growth and remove rebate penalties for trees with slow growth patterns.

Performance Monitoring

- All solar installers should be required to provide basic Performance Monitoring and Reporting Services (PMRS)
- All systems should be required to be installed with some form of communication capability that will provide meaningful feedback to System Owners and those providing PMRS. The systems should have remote communicating capability whereby performance data can be collected, accessed remotely, and uploaded for processing by a PMRS
- Solar Installers are responsible for providing the necessary equipment for PMRS services.
- Activation and required communication connections are the responsibility of the system owner.

Code Compliance

- In all cases, systems must be installed in conformance with the manufacturers’ specifications and with all applicable electrical and building codes and standards.
- In installations where PV panels constitute part of the building's roof or facade, replacing conventional building materials - such products must be evaluated to comply with International Building code (IBC) and International Residential Code (IRC)

Reservation/Claim Mechanics

- Administrators to pay claim within 10 working days of receipt of complete claim package and to notify payee if information is missing within 5 working days of receipt.
- Provide applicants the option for the payee to sign all required documents
 - Revise NSHP-1 for builder to assign signature authority to payee
 - Builder signs *original* equipment purchase agreement only
 - Eliminate requirement for a signature on CF-1R-PV form
 - Payee signs the NSHP-2
 - Accept an electronic submittal of the NSHP-2 for claim
- The IOUs are taking 2-3 months to approve a community in the EE program, thus delaying NSHP approvals and claims, and potentially pushing communities into lower incentive tiers.

- Lock in NSHP incentive levels when all information except for the EE approval letter is received.
 - Use the date when the Program Administrators send the project to plan check as the date when the incentive is locked
- CEC to work with the CPUC to reduce the timeline for the IOU EE program approval
- Modify the NSHP-1 signed form to include a builder release of IOU information to the Payee to allow solar rebate applicant/payee to obtain information on missing information from EE submittal to facilitate collection of information from builder.
- Drop system size justification for systems between 5 and 10 kWp.
- The 2008 Title-24 will significantly impact builders. Allow a 9-month grace period for builders to adjust their Title24 documentation to exceed code by 15% or 30%.
- The solar community expects many technology advancements in the coming years, resulting in the need for multiple product changes in existing reserved communities. Recommendation: Accept an unsigned revised CF-1R-PV, and allow installer to edit the NSHP-2 equipment information for all communities.

Marketing

The current marketing support guidelines do not reflect the realities of the market today. SunPower is not seeing many 100% solar communities come online. The majority of new deals are options communities. While it seems that the current marketing guidelines were created to incent builders to build 100% solar communities, the value of the marketing support from NSHP is not great enough to drive builders to move from options to standard. As a result, the available funding is not effectively incenting builders to go solar, or to install solar as standard.

Suggestions for future marketing support guidelines:

- Allow builders with option offerings to be allocated more significant support resources
- Use multiple-community option rollout plans as hurdle for receiving increased support
- Ensure marketing support offering is valuable to the builders. The majority of support today is not seen as valuable. Focus needs to be driving traffic to the sales office
- Offer co-op marketing dollars directly to the builders. Often the builder marketing team is in the best position to effectively and efficiently utilize the allocated marketing budget (strict spending guidelines should accompany the funding.)
- Provide support on the issues of appraisal values. There is a general lack of knowledge by the appraisal community on how to value solar electric systems. Due to the market conditions, builders are reluctant to offer solar options because they increase the sales price of the home, and without a fair appraisal, run the risk of their homes not appraising to the price required. The result of which is either a lost sale, or more likely the builder is required to concede on price to keep the sale (a lose-lose situation). This is a major issue that is continually a problem in all solar communities, that is until enough new solar homes in the community exist to serve as market comps. *We would request the Commission dedicate program funds (or stimulus?) to an outreach and education program specifically designed to educate appraisers on the value solar systems add to homes.*

Web Tool

- Allow reservation documents to be bulk uploaded. Currently each document is uploaded separately.
- Eliminate the maximum file upload limit of 1 MB. Many files exceed this limit and must be printed and mailed to the administrator.

- A general clarification of the different statuses used on the web portal to convey reservation progress is needed.
 - Add a status to the reservation of “In Plan Check”. Currently the status used while in plan check is “More Information”, which is the same status that is used when the applicant is required to provide more information.
 - We recommend the following process for Rebate Reservation Application process on online tool:
 1. Applicant creates project and sites, uploads all necessary NSHP-1 documents to tool and clicks “Submit for Review”
 2. Project status becomes “Submitted” until IOU has received and reviewed
 3. IOU accepts project for review and status becomes “Received”.
 4. Application goes to plan check, status becomes “In Plan Check”.
 5. If plan check comments require action by applicant, project status becomes “More Information”, email is sent to applicant with plan check comments
 6. Applicant responds to plan check comments by uploading revised documents and clicks “Resubmit for Review” under project summary.
 7. Status becomes “In Plan Check” again while the project is back in plan check.
 8. When Plan Check is approved, the IOU sends for final approval by the CEC, status to become “Queued for Approval”
 9. If any further revisions/actions are required by applicant, status becomes “More Information” again and same “Resubmittal” process above is followed
 10. When project has final approval, the status becomes “Approved”
 - We recommend a similar type process at the Site level for Payment Claims, with the final status of a paid lot to be “Paid”. (Currently a paid lot shows as “Complete”)
- Enable a bulk download of all NSHP-2 forms for a community through the portal. Currently the applicant must download each NSHP-2 individually from each site within the project.
- Enter expected date of approval on web tool once plan check is complete.
- Enable notifications to applicants when the status of a reservation changes.
- Identify Program Administrator that is assigned to handle each project on web tool.

Additional Program Funding

- Thoroughly review all committed projects to determine community status and builder commitment to NSHP.
- Increase the \$/watt for both standard and option programs. As the rebates stand now, the economics of solar in new construction just barely pencils out. By improving the rebates, a greater number of solar standard communities would be likely, as well as buyer selected options in communities where solar is a well marketed option. We would suggest increasing the rebate by \$1.00/watt. This rebate may be considered as temporary, with a clearly defined sunset date. The rebate could be assigned to either the builder, or the buyer of the system.
- We further recommend that Staff consider increasing the reserved volume of MW-AC within the highest incentive level. This will alleviate many administrative burdens such as re-pricing all contracts, estimating new rebates for all communities, and submitting all of the corresponding paperwork to the CEC.
- An option program that provided rebates to builders that met or exceeded pre specified option sales rates would encourage builders to keep margins low on optional solar systems, which will improve sales agents’

ability to sell more options. Moreover, a rebate would also serve as a motivator to encourage greater emphasis on a successful solar option sales process.

Energy Efficiency

SunPower supports the requirement that homes be more energy efficient than is required by Title 24 to qualify for NSHP. We suggest that more information be provided to builders by climate zone to assist builders in understanding the costs and measures that best apply to the area they are building in. Since builders are far too busy to attend off-site trainings, such information should be made available in easy to use and access formats.

Energy savings resulting from lighting improvements is perhaps some of the lowest hanging fruit in residential new construction. The commission should consider additional compliance or rebates to builders that install energy efficient lighting outside of mandatory measure locations. Perhaps builders that comply with TIER 1 energy efficiency, but also install all hard-wired compact fluorescent or LED fixtures could then qualify for the TIER 2 rebate amount. While rebates for lighting has existed, program design flaws have prevented widespread adoption. SMUD's SolarSmart program serves as a good example of a program design that has worked to greatly improve lighting efficiency.

Consider offering a simplified approach to TIER 1 and TIER 2 compliance by offering prescriptive methods by climate zone. Add energy efficient lighting, even though not covered entirely by Title 24.

Different Solar Offerings Require Different Rebate Mechanics

The following guidebook recommendations require a basic understanding of the different types of solar offerings that we are currently deploying in communities throughout California. Below is some general information on our four main solar offerings to provide some context to the recommendations. Each offering type requires a slightly different program administration treatment.

- Solar Installed on 100% of lots in community
 1. Standard – System size and type is known for each lot at start
 2. Standard Offer with 2-3 Sizes – Size is undetermined for each lot at start, **small** variance in sizes
 3. Standard Offer with Many Sizes - Size is undetermined for each lot at start, **large** variance in sizes
- 4. Options Program - System presence undetermined for each lot at start of community, multiple sizes

Community Type	1	2	3	4
	<i>One Standard Size</i> (most common currently)	Two-Three Different Sizes	Four - 100 Different Sizes	<i>Options</i> Multiple Different Sizes
Type	100% Solar - Installed on every lot			Optional for each lot
Overview	Size known at start.	System size, equipment type unknown for each lot at start.		Presence of system and system size unknown at start.
Potential System Sizes	Single size	Average size difference between plans is small	Average size difference between plans is large	Average size difference between plans could be large

Type 1 – 100% Solar Community, One System Size

- Allow builders to offer larger systems than specified in their approved applications and have assurance that the incremental system size will be paid at the reserved level.

[The following recommendations also apply to Type 2 and 3 offerings]

- Change reservation period from 36-months for every standard community, and take into account the # of lots in the community. Recommendation: 36 months per 100 homes, with a 36-month minimum (for new and existing reservations).
- Change requirement that 50% of all homes in a community must have solar in order to qualify for standard rebate. Some builders initiate solar mid-way through the project. Recommendation: Require that at least 50% of all *incomplete* lots in the community have solar in order to qualify for standard rebate.

Type 2 & 3 – 100% Solar Community, Two/Three System Sizes, OR Four to 100 Sizes

- Eliminate the requirement to send in the equipment type associated with a specific address at reservation time.
 - Require address list with reservation, and pricing schedule for each system configuration (*no listing of equipment assignment to each lot up front*) (**See Appendix A**).
 - **[For TYPE 2 only – 2-3 Sizes]** Require PV Calculator to be run for one configuration only - **the maximum system size that is offered at the subdivision.**
 - **[For TYPE 3 only – many Sizes]** Require PV Calculator to be run for one configuration only - the system size that is **80% of the maximum system size at the subdivision.**
 - CF-1R-PV will list the total # of homes in the community for the selected configuration.
 - CEC will not load any HERS input files for any lots in the HERS registry up front.
 - CEC sends the applicant a Project Approval letter, with a rebate reservation for the selected configuration for *all* lots in the community, that matches the CF-1R-PV submitted with the reservation.
 - NSHP-2 forms are pre-filled for each address, and pre-filled with selected system size rebate and equipment.
 - Applicants can edit the NSHP-2 forms electronically via the web tool if a home is selected with a different configuration than what is on the NSHP-2 to match the actual CF-1R-PV configuration for that home.
- A rerun CF-1R-PV will be provided to the CEC after each install since each system is unique. This CF-1R-PV will be uploaded to the registry.
- HERS rater identifies the equipment type to inspect based on the CF-6R-PV.

Type 4 - Solar as an Option with Multiple System Sizes

- Eliminate the requirement to send in the equipment type associated with a specific address at reservation time.
 - Require address list with reservation, and pricing schedule for each system configuration (*no listing of equipment assignment to each lot up front*).
 - Require PV Calculator to be run for one configuration only - the maximum system size that is offered at the subdivision.
 - CF-1R-PV will list the total # of homes in the community for the selected configuration.
 - CEC will not load any HERS input files for any lots in the HERS registry up front.

- CEC sends the applicant a Project Approval letter, with a rebate reservation for the maximum system size for 50% of the lots in the community
 - Require annual reporting for community on solar option penetration rate. Information can be used to release non-claimable rebate reservations.
- NSHP-2 forms are pre-filled for each address, and pre-filled with maximum system size rebate and equipment.
- Applicants can edit the NSHP-2 forms electronically via the web tool if a home is selected with a different configuration than what is on the NSHP-2 to match one of the CF-1R-PV configurations submitted with the reservation.
- A rerun CF-1R-PV will be provided to the CEC after each install since each system is unique. This CF-1R-PV will be uploaded to the registry.
- HERS rater identifies the equipment type to inspect based on the CF-6R-PV.

Feedback on Other Staff-Proposed Changes to NSHP Guidebook

SunPower strongly supports these CEC staff-proposed changes to the NSHP Guidebook as outlined in the 'Notice of Staff Workshop on Proposed Changes to the New Solar Homes Partnership Guidebook' posted March 25, 2009 in Docket 06-NSHP-1.

- Eliminate hard copies of the Residential New Construction (RNC) program acceptance letter, Certificate of Field Verification and Diagnostic Testing (CF-4R and CF-4R-PV forms), and interconnection letter. Program administrators will check that these forms have been submitted internally and through the Home Energy Rating Systems registries.
- Remove as a requirement the build-out schedule, system size justification letter, final solar permit sign-off, and final paid invoice. Energy Commission staff will conduct random audits on affordable housing applicants, confirming that applicants have copies of the maintenance and monitoring plan. This change will reduce paperwork and streamline the process.
- Provide applicants the option for the payee to sign all required documents.
- The calculator user interface is being streamlined to increase usability and user-friendliness.
- Staff will work to ensure better coordination among HERS providers and raters, especially in situations where two HERS Providers and two HERS raters are working on one project.

Thank you for your consideration.

Sincerely,



Matt Brost
 Director of Sales
 New Homes Division
 SunPower Corporation

Appendix A

Proposed submission of address list and pricing schedule for each system configuration with reservation that provides no listing of equipment assignment to each lot up front.

Sample System and Pricing Summary

System #	CF-IR-PV Submitted	Module Manufacturer	Module Type	Module Quantity	Module Watts DC	CEC Module Watts DC	System Total Watts STC	Inverter	Inverter Nameplate Watts	Inverter CEC Efficiency %	Inverter Watts CEC	System Total Watts CEC	Rebate Amount	System Sale Price Paid by Customer	Total System Price (Incl. Sales Tax)
2		SunPower	PLT-PL-63_	36	63	57	2,268	SPR-2000X	2,800	94	2,632	1,942	\$ 5,206	\$ 14,713	\$ 19,919
3		SunPower	SPR-205-BLK-U	10	205	189	2,050	SPR-3000X	2,800	94	2,632	1,777	\$ 4,825	\$ 10,878	\$ 15,703
4		SunPower	SPR-205-BLK-U	12	205	189	2,460	SPR-3000X	2,800	94	2,632	2,132	\$ 5,771	\$ 11,910	\$ 17,681
5	YES	SunPower	SPR-205-BLK-U	14	205	189	2,870	SPR-4000X	3,800	95	3,600	2,514	\$ 6,200	\$ 11,981	\$ 18,181

Sample Address List

Lot	Address	City State Zip
Lot 001	1021 Harbour Way	Richmond, CA 95401
Lot 002	1022 Harbour Way	Richmond, CA 95402
Lot 003	1021 Harbour Way	Richmond, CA 95403
Lot 004	1023 Harbour Way	Richmond, CA 95404
Lot 005	1021 Harbour Way	Richmond, CA 95405
Lot 006	1024 Harbour Way	Richmond, CA 95406
Lot 007	1021 Harbour Way	Richmond, CA 95407
Lot 008	1025 Harbour Way	Richmond, CA 95408
Lot 009	1021 Harbour Way	Richmond, CA 95409
Lot 0010	1026 Harbour Way	Richmond, CA 95410
Lot 0011	1021 Harbour Way	Richmond, CA 95411
Lot 0012	1027 Harbour Way	Richmond, CA 95412
Lot 0013	1021 Harbour Way	Richmond, CA 95413
Lot 0014	1028 Harbour Way	Richmond, CA 95414
Lot 0015	1021 Harbour Way	Richmond, CA 95415
Lot 0016	1029 Harbour Way	Richmond, CA 95416
Lot 0017	1021 Harbour Way	Richmond, CA 95417
Lot 0018	1030 Harbour Way	Richmond, CA 95418
Lot 0019	1021 Harbour Way	Richmond, CA 95419
Lot 0020	1031 Harbour Way	Richmond, CA 95420
Lot 0021	1021 Harbour Way	Richmond, CA 95421
Lot 0022	1032 Harbour Way	Richmond, CA 95422
Lot 0023	1021 Harbour Way	Richmond, CA 95423
Lot 0024	1033 Harbour Way	Richmond, CA 95424
Lot 0025	1021 Harbour Way	Richmond, CA 95425
Lot 0026	1034 Harbour Way	Richmond, CA 95426
Lot 0027	1021 Harbour Way	Richmond, CA 95427
Lot 0028	1035 Harbour Way	Richmond, CA 95428