

SUNPOWER

February 15, 2011

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 06-NSHP-01
1516 Ninth Street
Sacramento, CA 95814-5512
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DOCKET

06-NSHP-1

DATE	FEB 15 2011
RECD.	FEB 15 2011

Re: Comments on Proposed New Solar Homes Partnership Guidebook revisions [Docket Number 06-NSHP-01]

Dear Staff,

Thank you for the opportunity to provide comments on the proposed revisions to the NSHP Guidebook. We appreciate the efforts that have been made to clarify program requirements and streamline the reservation and claim process. SunPower looks forward to working with the CEC to ensure the continued success of the program.

[Energy Efficiency Requirements:](#)

The Commission recommends amending the Guidebook in the following way, as paraphrased from NSHP Workshop Presentation document (Feb 8, 2011 NSHP Workshop):

1. Continue NSHP policy to require homes to exceed EE standards in effect at the time a building permit is pulled
2. Clearly and consistently apply this policy by requiring the submittal of a building permit and supporting documentation to demonstrate compliance with program Tier requirements
3. Allow reservations granted prior to 1/1/10 to have a grace period until January 2012 to be better than 2008 code requirements
4. Update the current Guidebook Reservation Submittal process to grant a Reservation without plan checking, and include building permit submittal and Construction Drawings and T24 calculations per home as each home is permitted. Each home will be plan checked against applicable permit T24 code at that time.

SunPower agrees with recommendation item 1, to continue to require EE standards to be met based on T24 code in effect at time of building permit issue. We disagree with recommendation items 2, 3 & 4 for the following reasons:

Recommendation #2 – Requirement to Submit Building Permit per Home

SunPower understands the CEC's need for clarification regarding the correct T24 code in effect for each home as it relates to required EE measures to be installed and verified. This validation of proper T24 code can be confirmed in the HERS registry, as being verified by the HERS rater on the project who is contracted to inspect and verify the proper EE measures are met following the applicable building code per home.

SunPower Recommends:

SunPower will work closely with the builder, HERS rater, and NSHP PA to ensure verification of applicable T24 code for all homes requesting a rebate. We recommend the HERS providers also revise the current CF4R forms to include the applicable T24 code in effect for that home. We recommend leaving the Guidebook as is with regard to submitting a copy of the building permit per home, which states it is not required.

Recommendation #3 - Proposed Grace Period

SunPower is supportive of granting a short grace period for a period of time after T24 changes. However, the recommendation is unclear as to how the two codes would be managed in the HERS registries. It appears implementation of this process may require a HERS rater to enter test results into the HERS registry twice, once into an NSHP 2005 project and once into a CBC T24 Compliance 2008 project. This would **double the cost** of HERS registration and certificate delivery, increase the time required to manage registry files by the PAs, and likely increase the existing confusion around the registry.

SunPower Recommends:

A short grace period should be allowed the next time the energy code changes, which will allow participants ample time to make decisions about their desired path to energy efficiency. Further, the Commission should ensure that modifications to the program reduce, rather than increase, the cost of participation and the time it takes for participants to get paid.

Recommendation #4 - Proposed Changes to Guidebook Regarding EE Plan Review & Approval

Administration Volumes: Requiring the submittal of all plan check files per home would be overwhelming for both the applicant as well as the NSHP PA to administer, given the volumes of production homes the program is intended to support. In an environment where builders and solar installers are aggressively working to reduce costs, the added NSHP administrative burden would increase the delivered cost of solar, potentially resulting in fewer solar installations. We respectfully request that NSHP staff consider the financial implications and impacts on the market before further complicating the administrative process.

Plan Check and Rebate Risk: Granting Reservation Approval prior to reviewing the construction documents adds rebate risk to the customer. Many builders will sell a home prior to construction start, and this introduces a risk of selling a home without official approval of the design. There is a point of no return after which builders cannot make changes to their plans. We recommend that each project still receive a plan check prior to project start, that way if there are items on the energy calculations identified in plan check which need correction, it can be done before any construction begins. The builder can then make all trade partner contracts and arrangements accordingly. This seems to be the purpose of a preliminary plan check, and allowing for plan check so much later in the project's production seems counterproductive.

HERS Testing: The timing of each plan review submittal would be late in the process, and cause more issue for HERS testing to be completed early enough. We would be required to wait until each home is permitted individually, and then submit our permit, plans and energy calculations for review and approval. It would be nearly impossible to wait until NSHP has reviewed/approved each home before we could install. The builders are on tight construction schedules, and would not want to hold up their build schedule and forthcoming closings if there were ever any type delay in the review/approval of each home's plans. Also, creating a plan review approval and upload to the HERS registry per lot almost completely eliminates the ability for HERS raters to sample results. HERS tests are costly, and many raters and builders have contracts which count on sampling being an option, which would reduce costs.

SunPower Recommends:

Do not change the current reservation review and approval process by requiring the plans and energy calculation review to be done per home as each home is permitted. Continue the current process, which is to complete a full plan check at the start of the project, and upload the project to the registry at one time. Once a project is

approved for reservation, construction commences, install occurs and HERS tests are completed based on applicable Title 24 code requirements. If there is a code change during the life of the project, new Title 24 calculations will be submitted to the NSHP PA for review, approval and upload to the HERS registry. Applicant will provide information to NSHP PA regarding which Title 24 code each home is applicable to.

Military Housing:

Leaving the existing affordable housing funds intact for use on truly affordable projects, as currently defined by the NSHP Guidebook and the State of CA, could promote further participation in NSHP. If there is much stakeholder interest in allowing military housing to be eligible for NSHP, a separate budget and funds should be created for this type of housing.

Transient Housing:

Clearly define Transient Housing eligibility in the NSHP Guidebook. Commission states in Workshop presentation the following definitions of Transient Housing as defined by Title 24, Part 2:

CBC Occupancy Group R1: Residential occupancies containing sleeping units where the occupants are primarily transient in nature, including: Boarding Houses, Hotels, Motels, Efficiency dwelling units, Congregate living facilities*

**Definition of Transient, per Title 24, Part 2, Section 310.2: Occupancy of a dwelling unit or sleeping unit for not more than 30 days.*

Define Transient Housing in Guidebook considering the following variables with regards to eligibility:

- Occupancy terms/duration – 30 days or more
- Treated as residential for Title 24 compliance
- Individually metered by utility, or eligible for Virtual Net Metering
- Permitted as Residential Housing, with independent (private) kitchen & bathroom per unit. This will mean an exclusion of Commercial spaces (e.g. hotels/motels) as well as Congregate living facilities (e.g. Homeless shelter).

Change in Incentive Level Relative to Existing Applications:

Current NSHP Guidebook says after the 30-day public notice of incentive level decline, “applicants can qualify for the then current incentive level as long as a complete NSHP reservation application with consistent and accurate information is submitted within the 30 day noticing period.” The definition of a complete NSHP reservation application needs to be clarified.

SunPower Recommends:

We recommend a complete NSHP application to be all application documents (NSHP1, CF1RPV, Tract Map, Address List, Equipment Purchase Agreement, STD204, web tool project creation) up to an accepted plan check submittal. If plan check has been submitted through NSHP or utility Residential New Construction program, this should be considered a complete application and eligible for the existing incentive level as applied for.

Once the 30-day notice has been issued, we recommend a notification from NSHP after initial review of application which qualifies “Complete” application receipt for every application submitted within that timeframe as verification to applicant of current incentive level eligibility.

Reservation Eligibility with Regards to Mixed Use Buildings:

The Guidebook currently provides program eligibility to mixed use residential/commercial occupancies. Eligibility of commercial space is based upon a measurement of the commercial space (e.g., square footage) relative to the “building space”. The guidebook considers a 10% threshold for the purpose of defining eligibility, which seems to be a reasonable percentage.

SunPower Recommends:

Since mixed-use occupancy NSHP applications are often comprised of multiple buildings, we suggest the guidebook language be modified with respect to commercial space eligibility. We strongly recommend a guidebook modification that measures eligible commercial space as a percentage of the total NSHP application square footage, instead of “the building space”. This seems reasonable, since commercial spaces within mixed use developments are commonly designed to service the requirements of the residential population residing in the entire development, not just residents of a particular building.

The following example helps illustrate our recommendation. In this example, six buildings comprise an NSHP application for a mixed-use development. Several of the buildings in the complex are residential only, while two buildings include commercial space intended to serve the residents of all six buildings. Under the current guidelines, the commercial space in Buildings E and F would not be eligible, as the commercial area represents 24% of each building. However, by considering the total commercial space in the project as a percentage of the total space, the commercial space is now eligible at 8%.

Building Schedule	Total SF	Residential SF	Commercial SF	Commercial %	Occupancy Description
Building A	50,000	50,000	-	-	Three story apartments
Building B	50,000	50,000	-	-	Three story apartments
Building C	50,000	50,000	-	-	Three story apartments
Building D	50,000	50,000	-	-	Three story apartments
Building E	50,000	38,000	12,000	24%	Apartments, plus Retail/Services for residents of all buildings
Building F	50,000	38,000	12,000	24%	Apartments, plus Retail/Services for residents of all buildings
Total	300,000	276,000	24,000		
% of Total		92%	8%		

Virtual Net Metering:

The current guidebook allows for multifamily affordable housing projects using virtual net metering to be eligible for NSHP incentives, which lines up with what the CPUC allows for VNM. The CPUC is currently considering broadening VNM to other customer segments (i.e., market rate multi-family, dorms, etc.).

SunPower Recommends:

Modify the guidebook to provide consistent treatment of VNM with possible future changes to CPUC policy to avoid future conflict between what is published in the NSHP guidebook and potential changes in CPUC regulations.

HERS Providers & Raters:

There are continuous struggles with NSHP compliance with 3rd Party HERS raters and the current HERS providers (CHEERS & CalCERTS). If a HERS certificate is not completed, no incentive will be paid. The process is extremely administratively burdensome and costly. There are many “cooks in the kitchen”, from the customer, the installer, the utility, the HERS rater and the HERS provider. Even the slightest disconnect between processes can cause major delays in claim submission. Any delay in claims increases the cost of participation to the builders, as builders and/or installers such as SunPower must cover the cost of these funds during this period. However, at some points in the process, neither SunPower nor the builder has control of the process even though we are highly motivated to close out the claim process.

The entire process needs to be reviewed and improved significantly.

There is limited support for builders and installers when it comes to HERS Provider and HERS Rater issues. Below are a few issues we have heard from HERS raters as to why they are unable to produce the proper certificates:

- HERS Rater does not have the correct level of access to the specific project/files
- Required/Correct HERS files are not in the registry at the time of inspection
- HERS Provider is not completing and returning certified copies of certs to Rater (CHEERS)
- Changes to HERS Provider registry procedures are not communicated/understood by Rater
- Changes to HERS Verification/Code requirements are not communicated/understood by Rater

SunPower Recommends:

CEC to be a Resource of Support.

When there are any delays or problems getting a project executed in the HERS registry, the installer does not have anywhere to turn for assistance.

As we understand the procedure, the plan checker or the utility is expected to upload the approved project to the registry, and the HERS rater is expected to use those files to execute inspection certs. If there is ever a disconnect between those two steps, there does not seem to be any protocol for correction implementation or to enforce compliance. The only purpose of a CF-4R-PV is for NSHP incentive claim. If there is no enforcement of this requirement with the HERS raters and providers, many times the HERS rater has no incentive to deliver this cert – especially if their inspection invoice has already been paid by the builder.

We request the CEC to provide assistance whenever there are speed bumps or delays in the HERS registry process, helping to make sure NSHP reservations are moving along timely and the program is working as planned. We also request training or a workshop to review specifically how the HERS Providers and Raters are supposed to be processing inspections in the registries, and what expectations can be set to be sure compliance is implemented and issues are worked out in a timely fashion.

Reduce The Number Of Required 3rd Party Inspections.

In order to qualify for a claim payment, the NSHP requires that a HERS rating be performed by the installer and a 3rd party.

- Most systems do not qualify for the sampling protocol, therefore almost every home is being inspected by a 3rd party rater. The cost and time associated with each inspection is a burden for builders, and is a barrier to NSHP participation and solar adoption.

- In order to increase program participation, the CEC should reduce the number of required inspections, and instead perform random system checks using a simplified protocol and eliminate the registry and multiple forms for claims. The inspection requirement should be reduced for providers that consistently pass the inspections.
- The CEC should also provide the random system inspections as benefit of participating in NSHP (Like SMUD does with their SolarSmart New Homes Program, and the CPUC does with CSI retrofit homes).

Changing Reservation Types:

Provide the ability to change an existing reservation from Solar as Standard to Solar as Option, or vice versa, without incurring penalty on homes already paid out.

Builders are changing their sales plans often. If a community appears to be struggling, or they receive strong feedback from buyers regarding mortgage qualification issues or price concerns, they may be forced to eliminate solar as standard and choose to only offer as an option.

Allowing for the retraction of homes/reservations based on slow market conditions would help put builders at ease at the time of contracting and therefore increase participation. There are no guarantees in this market, and it is difficult for builders to forecast their sales through the life of an NSHP reservation (36 months). Signing a contract for Solar as a Standard, with no option to change that in the future, may decrease their willingness to sign the contract.

Program Administration:

The following are recommendations in a continual effort to streamline the current administrative burden of the NSHP program:

- Allow for builder to assign administrative rights to installer for projects approved under prior guidebook.
- Allow for all documents to be submitted electronically, including NSHP-2s.
- Allow for the submission of multiple CF-1R-PVs with different system sizes to be approved with the reservation. This is to accommodate communities that offer various system sizes, where the exact system size for a home is not determined until the time of home sale. This will allow the HERS rater greater flexibility to create sampling groups based on the CF-1R-PV files available in the HERS registry.
- Reduce claim payment time to 30 days and consider making it an obligation provided the claim is accurate. The current statement that the Program Administrators “intend to make payments within 6 to 8 weeks” is placing a large financial burden on applicants.
- Eliminate the requirement for a signature on the CF-1R-PV form. This aligns with CSI.
- Extend the grace period after a new calculator is implemented from 30 to 60 days to submit reservations using the previous calculator.

Web Tool:

Webtool updates are vital to streamline administration. SunPower recommends the following webtool updates as priority:

- Allow for larger file upload than 1MB. Suggest 5MB cap.

- Allow for bulk upload of reservation and claim documents to submit, as it is very time consuming to upload all documents one at a time.
- Correct “Expired” reservation status. Reservations which were granted 1 year extension are beginning to “Expire” on the webtool, which prohibits updates to any site records within that expired community on the webtool.
- Create Solar as Option functionality, with ability to upload all potential solar homes
- Provide viewable Update History, a log of all activity for easier communication
- Provide view of payment data
- Provide access to ALL SunPower projects. Not all projects are in webtool, accessible by SunPower. Some projects reside in the Utility PA accounts, or secondary SunPower accounts that are not used.
- Ability to upload CF1RPV’s and .emf & .her files to each site in the webtool to eliminate confusion where multiple project CF1RPV’s exist, and eliminate email transmittals.
- Enable notifications of key status updates
- Refine project status references (i.e. “Received”, “In Process”, “More Information”). Make them more definitive and standardize. Currently inconsistent.

Solar as Option Process Improvement:

Using the current tools and guidelines, processing Solar as Option subdivisions has been arduous and slightly confusing. The NSHP-1.5 step seems unnecessary when working with subdivisions. Below is our recommendation for the NSHP administrative process flow when applying for Solar as Option reservations.

Reservation Application:

Applicant submits all standard application documents

- NSHP-1
- Address list of potential solar homes
- Equipment Purchase Agreement listing all potential solar homes
- Tract map
- CF1RPV’s for all potential system sizes
- Create project in webtool with all potential solar sites, including addresses. Leave equipment information blank in site records, to be identified later after solar selection.
- Construction Drawings for plan check, or Utility RNC plan check approval – if available

Project is approved, similar to Solar as Standard projects, however only funds for 50% of the total application is reserved. CF-1R-PV files are uploaded to HERS registry for future use, just as the CF-1R files are uploaded to the registry at the beginning of a project in anticipation of what will be built in the future

Solar Home Selected:

When solar option is selected on a home, Applicant completes the following:

- Update Webtool site record with selected equipment information
- Upload associated CF1RPV to site record (unique or blanket)
- Download NSHP-2 Form from site record
- Associate existing blanket CF-1R-PV with address in HERS registry, either in CalCERTS directly, or via notification to HERS rater.

It is important to allow for HERS raters to sample homes with like systems using an existing blanket CF1RPV, even in an option scenario. Just as the Energy Efficiency files are uploaded to the registry per plan type, to be matched up and tied to each address as each home is being built, the PV files should follow suit. The CF1RPV's should be available in the registry and able to be tied to each specific lot as a home is sold/selected, therefore creating some ability for sampling. HERS raters currently have to treat each option selection as an individual unique system, due to the NSHP-1.5 protocol of "CF1RPV submittal per site" at NSHP-1.5 submittal. This can add HERS costs to the builder and/or applicant, which is undesirable.

The NSHP-1.5 submittal step is administratively burdensome, and requires all administrators involved to follow one extra step via email that can be executed electronically in the webtool. The webtool should be capable of effectively processing the communication between Applicant and PA of each solar selection.

Shading Analysis

Please consider revising the small, medium, large tree height classification system to allow installers and HERS raters to use the exact mature height of the specific planted or planned tree. Installers and HERS raters currently identify each tree species, and then determine the exact mature height of the species using the tree guides referenced in the Guidebook.

The medium category for trees that are between 21' to 49' is the most considerable barrier. In some instances, trees that are in the 36' to 49' range pass the shading test because they are counted as 35', but in reality they would shade the array when mature. By allowing installers and raters to report the actual mature height, the program could prevent future shading.

Many of the common ornamental trees used that are used (and sometimes mandated) as street and front yard trees grow in the 21' to 25' mature height range. Since those trees are in the medium category, their mature tree height is counted as 35' for the shading analysis. In reality, many of those trees will never shade the array.

There are far more types of commonly used trees in the lower end of the medium tree height classification, which results in many over-reported shading impacts and reductions in rebate amounts, ultimately reducing program satisfaction and the success of the program. The current tree height classification system significantly complicates the solar and landscaping planning and reduces the selection of trees that builders and landscape architects have to plant and satisfy both the jurisdictions and Minimal Shading Criterion.

Sincerely,



Merideth Griffith
Manager of Project Administration
New Homes Division
SunPower Corporation