

# New Solar Homes Partnership (NSHP) Training

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**February 25, 2014**

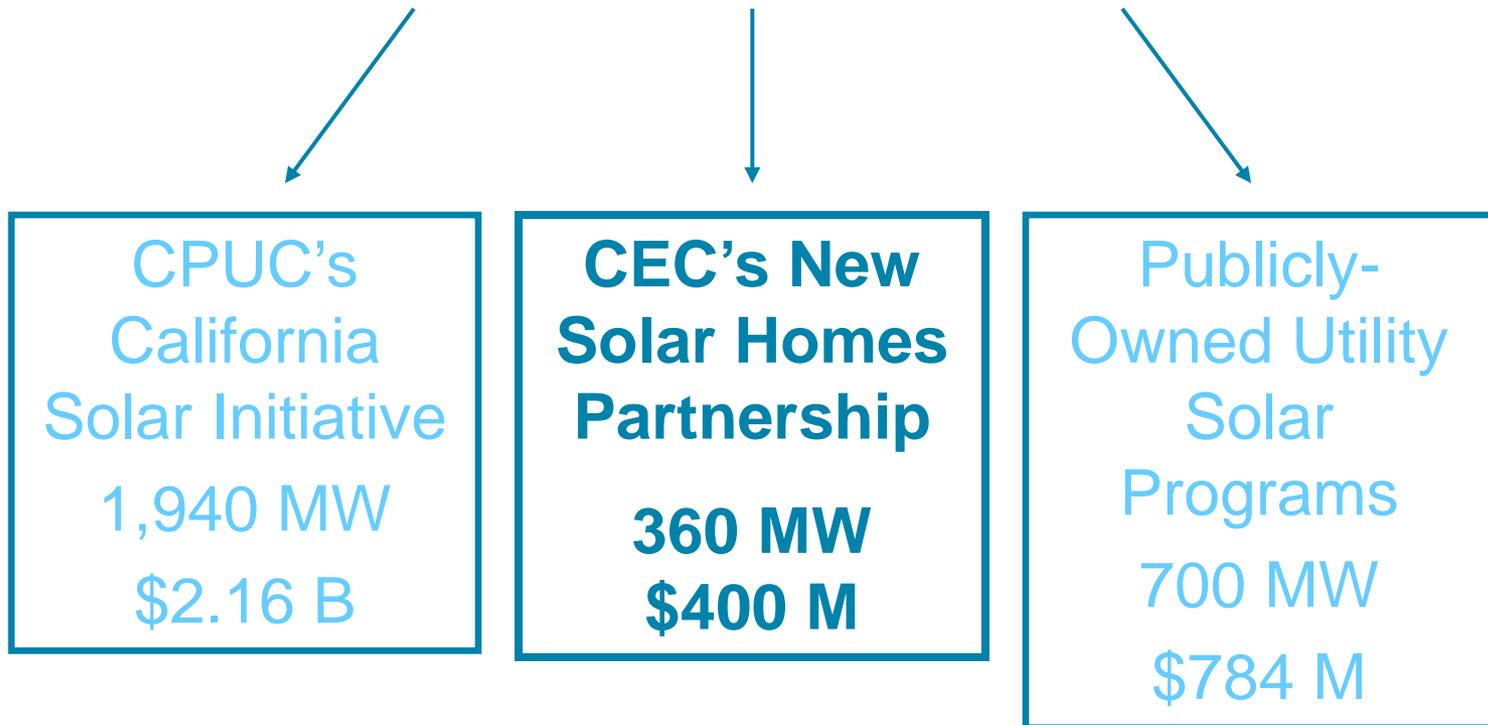




# NSHP Overview

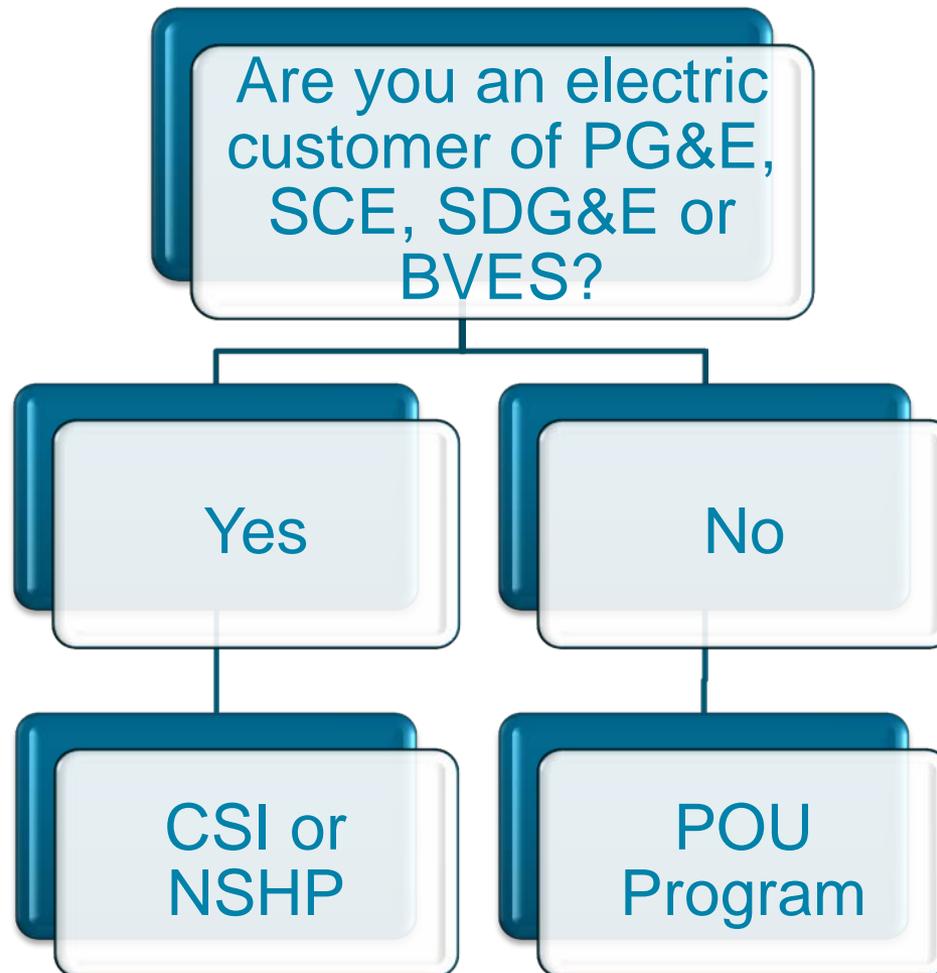


# California Solar Initiative





# Which Program Do I Apply To?





# CSI or NSHP?

What kind of project  
will the solar system be  
installed on?

New Residential  
Construction Projects

NSHP

Existing Homes, Existing and  
New Commercial, Industrial,  
Government, Non-Profit and  
Agricultural Projects

CSI



## **NSHP Program Goals**

**Establish a self-sufficient solar industry where solar energy systems are a mainstream viable option for new homes by 2016.**

**Achieve 360 megawatts of installed solar electric capacity in California by the end of 2016.**

**Place solar energy systems on 50% of new homes by end of program.**



# NSHP Funding

**Waiting List Established November 16, 2011.**

**<http://www.gosolarcalifornia.ca.gov/nshp/waiting/>**

**Last Updated 11/27/13**

- Available Funding: ~\$68.3 Million
- Requested Funding: ~\$12.9 Million

**Potential Additional Funding Sources: Modified Reservations, Expired Projects, loan repayments**



# NSHP Guidebook Changes



# Important Dates

- 12/11/13

Adoption of NSHP Guidebook, 7<sup>th</sup> Edition

- 1/1/14

Effective Date of NSHP Guidebook, 7<sup>th</sup> Edition

- 1/6/14

Updated NSHP Web Tool Available



# Program Changes – Market Rate Housing

| Old (6 <sup>th</sup> Edition) | New (7 <sup>th</sup> Edition)               |
|-------------------------------|---|
| Solar as an Option            | Replaced with Large Developments            |
| Solar as Standard             | Replaced with Large Developments            |
| Build out schedule            | Replaced with reservation decrease schedule |
| Progress report               | Replaced with reservation decrease schedule |



# Program Changes – Energy Efficiency

| Old (6 <sup>th</sup> Edition)   | New (7 <sup>th</sup> Edition)   |
|---|---|
| 2005 and 2008 Building Energy Efficiency Standards  | 2013 Building Energy Efficiency Standards   |
| Tier I and Tier II  | Code compliant, Tier I and Tier II  |
| Plan Check waived for projects participating in their utility's energy efficiency new construction program. | Plan Check also waived for: <ul style="list-style-type: none"><li>•Code-Compliant projects</li><li>•Tier I and Tier II projects that comply with 2013 Standards and provide 2013 compliance documentation signed by a CEA certified for the 2013 Standards.</li></ul> |



# Program Changes – General

|   | Old (6 <sup>th</sup> Edition)  | New (7 <sup>th</sup> Edition)   |
|---|--|---|
| Solar Permit Date                         | May be issued up to 180 days after issue date of certificate of occupancy  | Reduces the amount of time to 60 days   |
| Equipment installation before reservation | No more than 24 months before  | No more than 6 months before  |
| Lease/PPAs                                | If it stated a rebate amount less than requested, only that amount could be paid unless an amendment was submitted | Allows NSHP incentive when claiming payment to exceed the NSHP amount identified in the lease/PPA by up to 10% without an amendment |



# Program Changes – General

|   | Old (6 <sup>th</sup> Edition)   | New (7 <sup>th</sup> Edition)  |
|---|---|--|
| Incentive Rates   | Tier I, Tier II, and Affordable housing   | Added Code-Compliant.  |
| Incentive decline process   | Decline will occur when cumulative MW capacity reaching “plan check ready” equals the MW reserved for that level’s target | Decline will occur when the cumulative MW capacity of reservations submitted equals MW target for that level |
| Energy Commission’s Database of Solar Contractors, Installers and Sellers | All companies that sell and/or install solar system equipment must be registered  | Removed  |



# Program Changes - General

| Old (6 <sup>th</sup> Edition)  | New (7 <sup>th</sup> Edition)   |
|--|---|
| Final Subdivision Map Required   | Tentative subdivision map acceptable  |
| All projects must submit an equipment purchase agreement                                   | Self-installs must provide an equipment purchase agreement  |
| Reservation period for VNEM projects depended on the housing type                          | Reservation period for all virtual net metered projects is 36 months  |
| Revised incentive amount calculated at the time the revised calculator was submitted to PA | Calculate revised incentive amount upon submittal of the complete NSHP-2 and complete documentation supporting the changes to project |
| For projects with multiple sites/systems, funding is tied to each site                     | Funding is tied to the project, not to the sites.   |



# Program Changes – General

| Old (6 <sup>th</sup> Edition)  | New (7 <sup>th</sup> Edition)  |
|--|--|
| No correction period allow for reservations  | Complete reservation applications and payment claim packages found to contain minor errors or discrepancies will be provided with 10 business days to provide clarifications |
| Complete payment claim package must be submitted on or prior to reservation expiration date. | Complete NSHP-2 must be submitted on or prior to reservation expiration date.  |
| No partial payment option  | Partial Payment Allowed  |
| Can not add additional sites to an existing reservation                                      | Applicants may add solar system sites to a project with a valid, unexpired reservation.  |
| Signature required on CF-1R-PV/NSHP PV-1   | Removes signature requirement  |



# Program Changes – New Form Names

| Form Name   | Old (6 <sup>th</sup> Edition) | New (7 <sup>th</sup> Edition) |
|---|-------------------------------|-------------------------------|
| NSHP Certificate of Field Verification/Additional Energy Features Checklist | CF-4R-EE                      | NSHP EE-3                     |
| Certificate of Installation   | CF-6R                         | CF-2R                         |
| Certificate of Field Verification and Diagnostic Testing                    | CF-4R                         | CF-3R                         |
| CECPV Calculator Output form  | CF-1R-PV                      | NSHP PV-1                     |
| Installation Certificate Form/PV Installation Form                          | CF-6R-PV                      | NSHP PV-2                     |
| PV Field Verification and Diagnostic Testing Form                           | CF-4R-PV                      | NSHP PV-3                     |



# Does the new Guidebook Apply to Your Project?

## What if:

- A reservation application has been submitted, but has not received Energy Commission approval
  - Written Notice
- A payment claim has been submitted, but has not received Energy Commission approval
  - Project Bank Account
  - 90 Calendar Days
  - 10 Business Days
  - Code-Compliant
  - Calculating incentive increases
  - Partial Payment Option
  - Retailer/Installer Registration



# Getting Ready to Participate in the NSHP



# Before Applying to NSHP

Please Read the NSHP Guidebook and NSHP Web Tool Handout

**Consider what stage of construction your project is in:**

- Can your project be designed to meet the minimum energy efficiency requirements?
- Is your project eligible for incentives from your utility's energy efficiency new construction program?
- Can everything in your project be verified by a HERS rater?



# Eligibility Requirements

Project located in one of four investor-owned electric service territories (PG&E, SCE, SDG&E, BVES).

Solar energy system will be at least 1 kW AC or larger and interconnected with the utility grid.

The electricity from the system will offset the end-use customer's electric load.

The system will be composed of new certified components from the Energy Commission's Lists of Eligible Equipment and will be covered by a 10-year warranty.

6 MONTHS?



## Eligibility Requirements (Cont'd)

### **New residential construction**

- A residential building is considered “new” if the entire building structure is subject to current Title 24 Standards.
- Solar permit should be pulled prior to the issuance of the certificate of occupancy, but no later than **60** days after.

**Solar energy systems and energy efficiency measures are third-party verified.**



# Energy Efficiency Requirements

- **2013 Building Energy Efficiency Standards**
  - **Code-Compliant:** Meets the 2013 Standards before...
- **2008 and 2013 Building Energy Efficiency Standards**
  - **Tier 1:** minimum 15 percent beyond the Standards for combined space heating, cooling and water heating
  - **Tier 2:** minimum 30 percent beyond the Standards for combined space heating, cooling and water heating and 30 percent for space cooling
  - Non-Residential: Tier 1=10%, Tier 2=15%
  - Energy Star® Appliances

SOLAR COMPLIANCE CREDIT



## Retailers and Installers

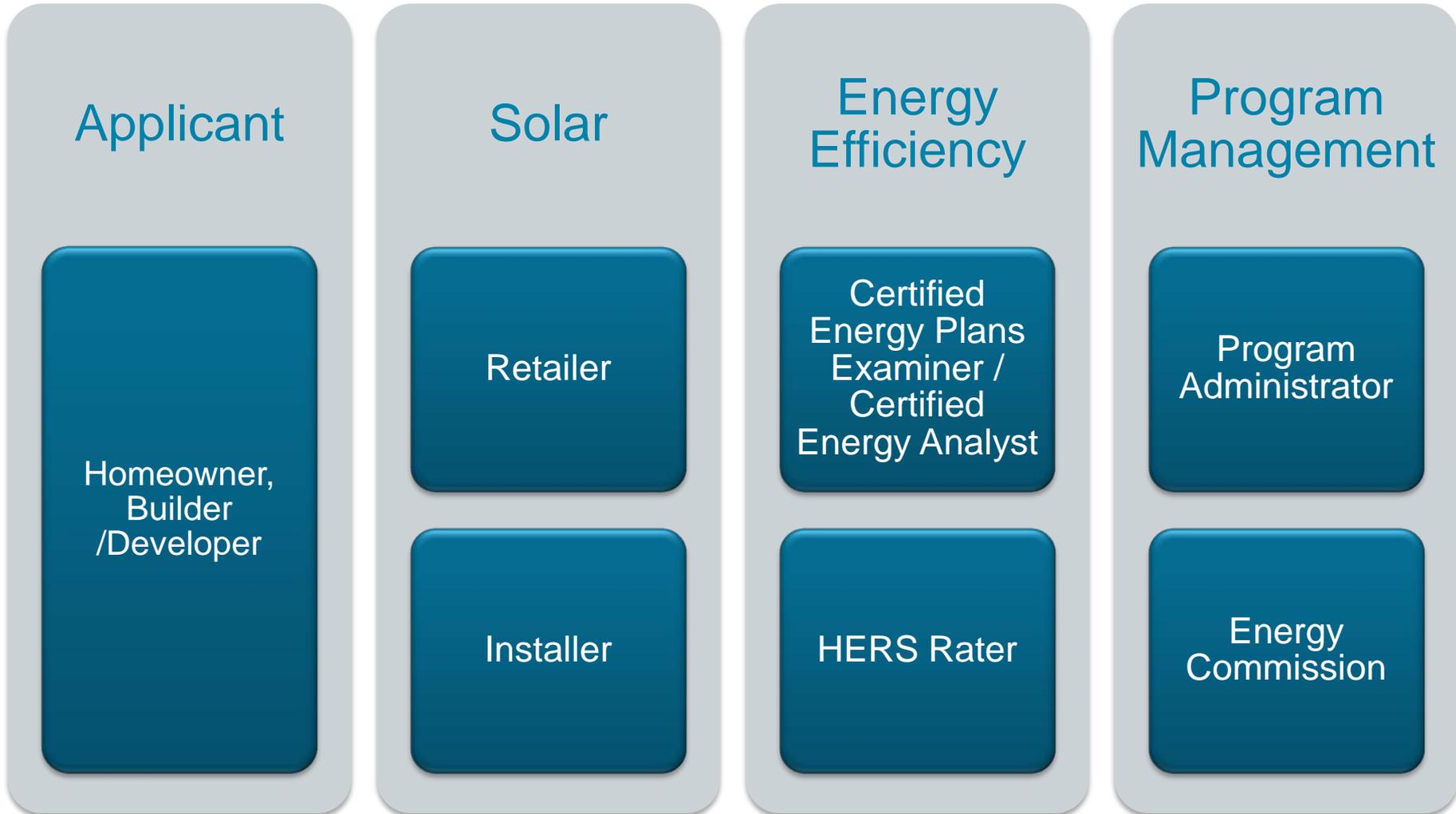
Contractors installing solar systems must have a California State A, B, C-10 or C-46 license. Solar systems may also be self-installed.

Retailers and installers may self-register with the Energy Commission via the Go Solar California website:

<http://www.gosolarcalifornia.ca.gov/database/addcompany.php>



# Involved Parties



FIND A CEPE, CEA, HERS RATER? CODE COMPLIANT PROJECTS?





# Incentive Structure

One-time, upfront incentive

Expected Performance Based Incentive (EPBI)

Incentive amount calculated using the CECPV Calculator

Incentives limited to the first 7.5 kW AC for a residential unit  
AND

Incentive Amount Cap

- Affordable Housing Residential Unit Project: Limited to 75% of the Total System Cost
- Market-Rate Housing Project: Limited to 50% of the Total System Cost

Incentives decline as megawatt targets are achieved

<https://www.newsolarhomes.org/RebateLevels.aspx>



# Market-Rate Housing

| Code-Compliant Incentive (per watt, reference system) | Tier I Incentive (per watt, reference system) | Tier II Incentive (per watt, reference system) | Reserved Volume (MW-AC) |
|---|---|--|-------------------------|
| \$2.25  | \$2.50  | \$2.60   | 55.3                    |
| \$2.00  | \$2.25  | \$2.35   | N/A                     |
| \$1.75  | \$2.00  | \$2.25   | 5                       |
| \$1.50  | \$1.75  | \$2.00   | 10                      |
| \$1.25  | \$1.50  | \$1.75   | 15                      |
| <b>\$1.00</b>   | <b>\$1.25</b>                                 | <b>\$1.50/\$1.75</b>                           | <b>35</b>               |
| \$0.75  | \$1.00  | \$1.25   | 50                      |
| \$0.50  | \$0.75  | \$1.00   | 60                      |
| \$0.35  | \$0.50  | \$0.75   | 65                      |
| \$0.25  | \$0.25  | \$0.50   | 72                      |



# Affordable Housing

| Code-Compliant Incentive (per watt, reference system) | Residential Dwelling Unit Incentive (per watt, reference system) | Common Area Incentive (per watt, reference system) | Reserved Volume (MW-AC) |
|---|--|--|-------------------------|
| \$3.25  | \$3.50   | \$3.30   | 3.3                     |
| \$2.90  | \$3.15   | \$2.97   | N/A                     |
| \$2.55  | \$2.90   |  | 0.25                    |
| \$2.20  | \$2.55   |  | 0.5                     |
| \$1.85  | \$2.20   |  | 0.75                    |
| \$1.50  | \$1.85   |  | 3.5                     |
| <b>\$1.15</b>   | <b>\$1.50</b>  |  | <b>5.0</b>              |
| \$0.80  | \$1.15   |  | 6.0                     |
| \$0.55  | \$0.80   |  | 6.5                     |
| \$0.35  | \$0.45   |  | 7.2                     |



## Current Incentive Rates\*



\* RESIDENTIAL UNITS ONLY

\*\*AFFORDABLE HOUSING: COMMON AREAS, TAX EXEMPT VS. NON-TAX EXEMPT



# Project Types

## Custom Homes

## Large Developments

## Small Developments

Projects/Phases of 6 or more homes  
AND

Solar on at least 50% of those homes

Projects/Phases of less than 6 homes  
AND/OR

Solar on less than 50% of homes.

RESERVATION PERIODS?



# Project Types Continued

## Common Areas

Areas in the development that are reserved for the use of the residents.

Example: Recreation Center, Pool House, etc.

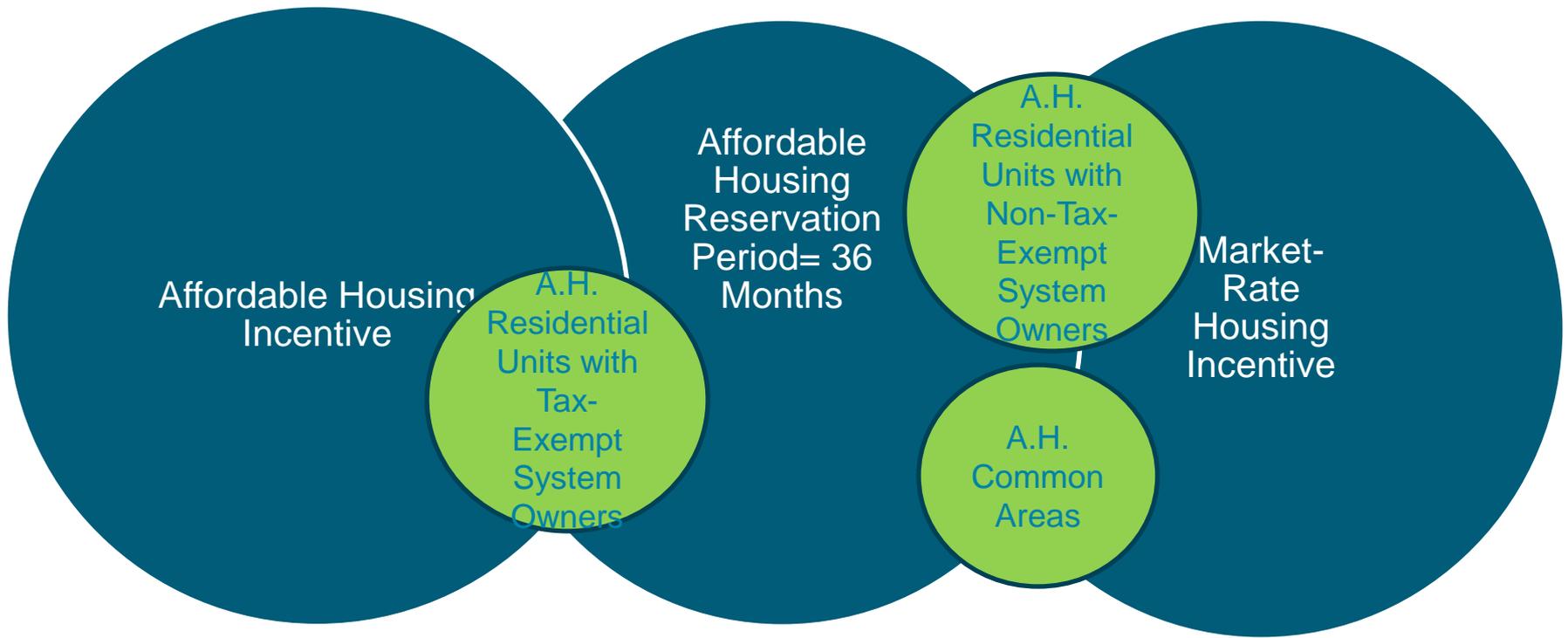
## Affordable Housing

At least 20% of the project units must be reserved for extremely low, very low, lower, or moderate income households for a period of at least 10 years.

RESERVATION PERIODS?



# Affordable Housing Reservation Period vs. Incentive Level



# The Basic Process



## Reservation

- Applicant submits reservation application package.
- Program administrator reviews and approves. Incentive is reserved for applicant.



## Installation and Verification

- Applicant installs PV system and energy efficiency measures.
- HERS rater verifies and tests measures installed.
- Building department finalizes solar permit.
- Applicant applies for interconnection.



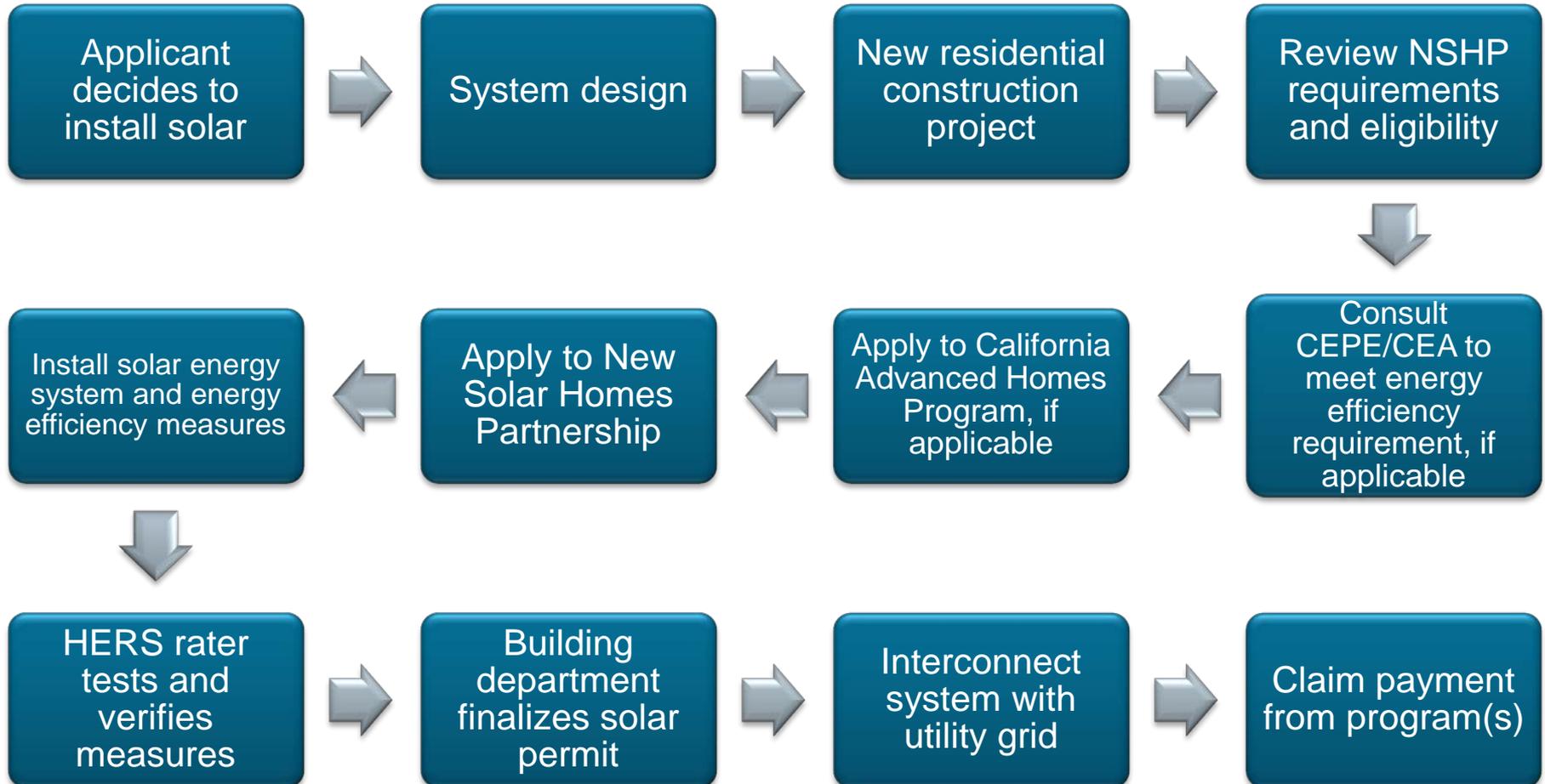
## Payment Claim

- Applicant submits payment claim package to incentive program(s).
- Program administrator reviews and approves. Incentive is paid.





# The Detailed Process





# Complete NSHP Reservation Applications and Payment Claims...

**Meet all NSHP program requirements and administrative expectations.**

- Have consistent names, site addresses, and equipment on all supporting documentation.
- Have all of the required signatures on the documents.

Use the newest versions of documents and calculation tools supplied and/or authorized by the California Energy Commission.

Include all required supporting documentation with the reservation application or payment claim package.

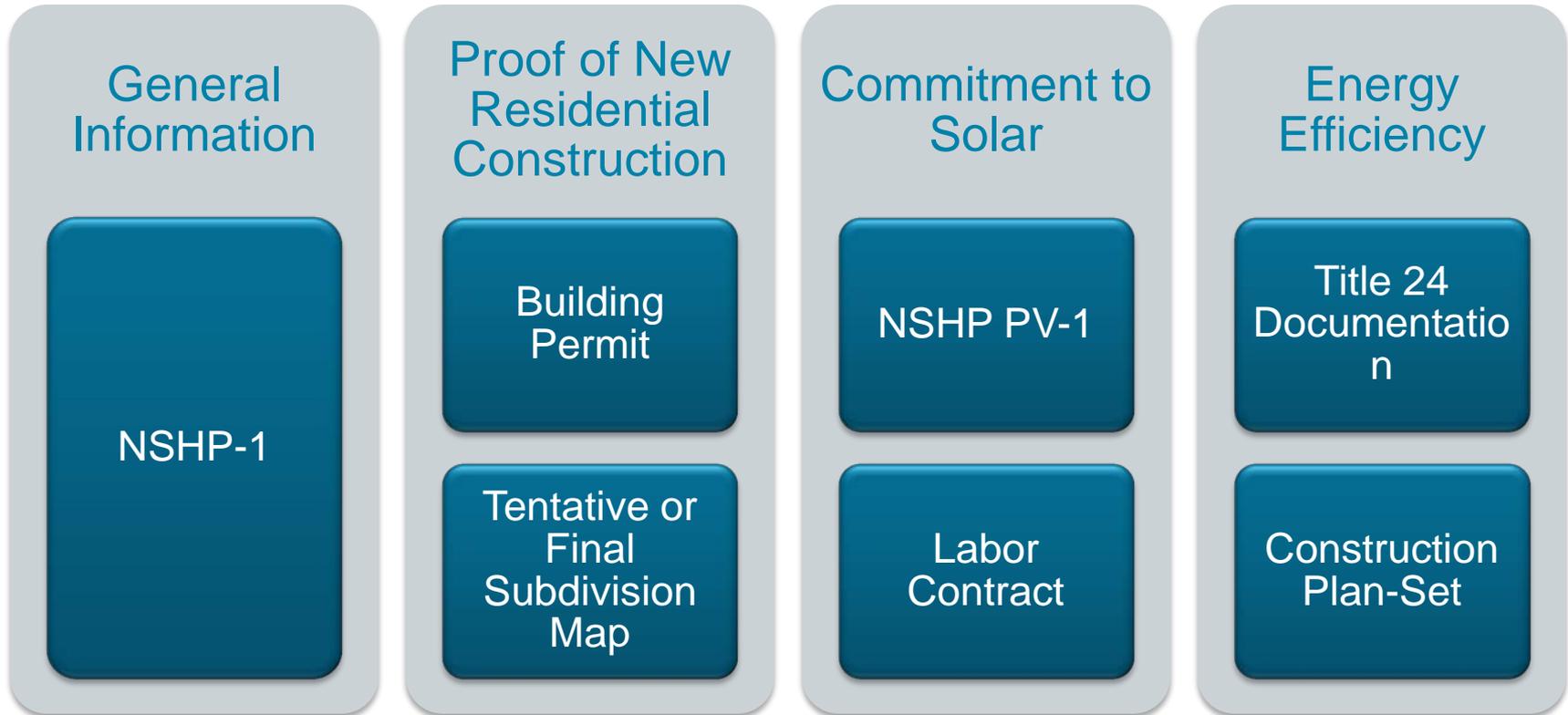
**TIME EXTENSIONS? HOW DOES YOUR PROJECT INFLUENCE OTHER PROJECTS?**



# NSHP Reservation Application



# Reservation Application Document Overview



## Additional Information for Certain Project Types

- Regulatory Agreement (Affordable Housing)
- System Size Justification



# Reservation Application Form (NSHP-1)

## What It Is:

- Provides general information on the project (applicant information, location, housing type, utility, HERS rater information)
- Designation of an authorized representative
  - Signs the NSHP Payment Claim Form (NSHP-2)

## Who Provides It: Applicant

100% COMPLETION?



# New Residential Construction Building Permit OR Subdivision Map

## What It Is:

- Document from the city or county stating that a new home is being constructed on the site where the solar energy system is being installed.
- A document that illustrates where all of the homes participating in the NSHP are located. The document should be recorded with the city or county.

## Who Provides It: Applicant

Is this always required?



# Certificate of Compliance Form (NSHP PV-1)

## What It Is:

- It documents the system specifications and provides an estimated incentive amount.
- Each NSHP PV-1 comes with two digital files, .her and .emf. The .her file must be submitted in addition to the NSHP PV-1.
- **No signature required.**

**Who Provides It: Solar Retailer/Installer**



# Installation Contract

## What It Is:

- The installation contract specifies the work the solar installer will be performing on the project.
- Indicates the specific system components to be installed on the project.
- Identifies estimated NSHP incentive amount.
- Self-installs?

## Who Provides It: Solar Retailer/Installer



# Energy Efficiency Documentation – Title 24 Report (CF-1R/PERF-1)

## What It Is:

- A document that shows the energy efficiency measures being installed on the project. CF-1R is for residential projects. PERF-1 is for non-residential projects. Input file must also be submitted.

**Who Provides It:** This depends on the project's energy efficiency level and the applicable Building Standards.

**Reminder:** A Certified Energy Plans Examiner/ Certified Energy Analyst must be certified for the appropriate residential type and Building Standards that the home is constructed under.

**Under what circumstances is a plan check not required?**



# Energy Efficiency Documentation – Construction Plan-Set

## What It Is:

- A compilation of the plans that shows what will be installed on the home.
- Specifically, the NSHP is looking for the set that includes:

**Architectural, Electrical, Mechanical, and Plumbing**

**A window and door schedule that shows sizes and includes ALL skylights (if not shown on the floor plan)**

**Elevation, wall, roof, floor construction assemblies**

**Floor finish schedule (if CF-1R shows High Mass Design)**

**A site plan with a North arrow**

**Who Provides It: Applicant**

**Is this always required?**



# Regulatory Agreement

## What It Is:

- A document generally between a developer and either the city/county, TCAC or other funding sources that requires the developer to restrict a certain number of units in the project for affordable housing.

## Who Provides It: Applicant

**Reminder:** Affordable Housing Projects Only



# System Size Justification

## What It Is:

- Documentation showing that the solar energy system is sized such that its expected performance is no greater than 100 percent of the building's on-site estimated annual electricity consumption.
- Acceptable documents are the estimated annual electricity consumption of the residential unit based on a detailed energy use calculation, or a letter detailing expected energy consumption.

**Who Provides It:** Certified Energy Plans Examiner (CEPE), Certified Energy Analyst (CEA), architect, engineer, C-10 licensed electrical contractor.

**When to Provide:** For Common Area systems greater than 7.5kW and if requested by Program Administrator



# Submitting your Reservation Application

## Step 1: READ THE NSHP GUIDEBOOK!

Make sure that your project is eligible.

Make sure you're familiar with the program requirements.

## Step 2: Gather the required project documentation.

Use the reservation checklist.

Verify that all documents are complete with consistent information.

## Step 3: Submit the reservation application.

Submittal via the NSHP Web Tool is encouraged.

Keep it simple.

## Step 4: Program Administrator Review

Tracking the Status of the Reservation Application

Plan Check (if applicable)

Qualifying for a Correction Period

## Step 5: CEC Review & Approval



# Other Reservation Application Related Details...

If you have a project with more than one home, then...

The reserved funding is tied to the project, not to the sites.

Think of it like a bank account:

If a site requests less money...

If a site requests more money...

What if you run out of money...

You can add more sites to an existing project, if...

You have funding remaining for your project

AND those additional sites are from the same subdivision as the original project

AND your project has not expired

AND you have not been paid an incentive for all sites within that original project.



# More Reservation Application Related Details...

| Reservation Funding Decrease Schedule |   |
|---------------------------------------|---|
| Interval                              | Funding Decrease  |
| 12 months                             | Requested incentive <15% original amount, funding may be reduced up to 85% of original amount |
| 18 months                             | Requested incentive <35% original amount, funding may be reduced up to 65% of original amount |
| 24 months                             | Requested incentive <55% original amount, funding may be reduced up to 45% of original amount |
| 30 months                             | Requested incentive <75% original amount, funding may be reduced up to 25% of original amount |

## Large Developments Evaluation Criteria

- **Sum of incentive amounts for Submitted Sites vs. Reservation Amount**

What counts as a submitted site?

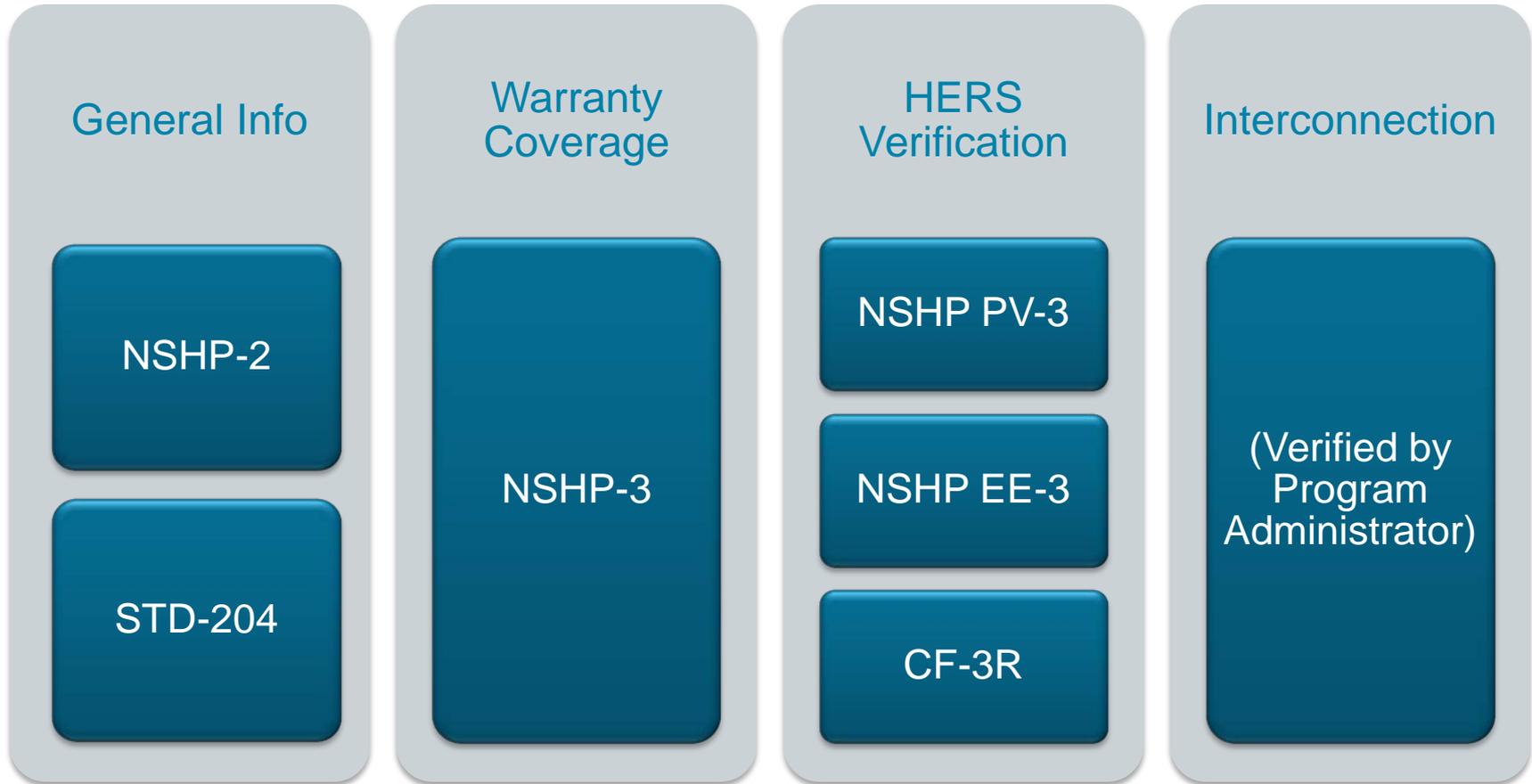




# NSHP Payment Claim



# Payment Claim Document Overview



Additional Information for Certain Projects

- Lease Agreements or Power Purchase Agreements
- Building Permit Sign-Off



# Payment Claim Form (NSHP-2)

## What It Is:

- A document that confirms the incentive amount for the site.
- Requests data on various components of the NSHP process.
- Allows the payment to be reassigned.
- Original, wet signatures required on form.

## Who Provides It: Applicant

100% COMPLETION?



# Payee Data Record (STD-204)

## What It Is:

- A standardized State document that must be completed by any entity that will be receiving funds from the State.
- If requested by the Program Administrator, applicant may also need to submit a W-9 Form.

## Who Provides It: Applicant or Payee



# Ten Year Warranty Form (NSHP-3)

## What It Is:

- This document indicates what is being covered by the ten-year warranty.
- Manufacturer's warranties for modules and inverters also required if only system installation is covered by 10-year warranty.

## Who Provides It: Solar Retailer/Installer

What do we look for in the manufacturer warranty?



# Lease Agreement/PPA

## What It Is:

- Agreements for systems that are not purchased.
- An agreement made with end-use customer (i.e. builder or homebuyer).
- Requirements:
  - Term  $\geq$  10 Years
  - Identify NSHP incentive amount and benefit.
  - Options at end of lease term
  - Repayment

## Who Provides It: Solar Retailer/Installer

# HERS Verification Forms (CF-3R, NSHP EE-3, NSHP PV-3)

## What It Is:

- Forms verifying that the newly constructed home contains all of the energy efficiency features listed during the plan-check.
- Forms verifying that the solar energy system was installed according to the design and shading criteria entered into the PV Calculator.
- Acceptance Tests verify measures from a PERF-1 and require applicants to directly submit to NSHP.

**Who Provides It: Verified in the HERS Registry by the Program Administrator in most cases.**

# Interconnection Letter

## What It Is:

- A letter from the utility providing authorization for the solar energy system to be interconnected to the utility grid.
- VNEM allocations should match the NSHP-1.

**Who Provides It: Verified in the utility interconnection database by the Program Administrator**

# Final Building Permit Signoff

## What It Is:

- Documentation provided by the building department that verifies the **building** meets the required California Building Code
  - Inspection Record with signatures, Certificate of Occupancy

## Who Provides It: Applicant

Required for all projects?

# Final System Cost Documentation

## What It Is:

- Documentation that clearly identifies the final amount paid or legally incurred by the **system owner** for the purchase and installation of the solar energy system.
  - **NO** financing fees, origination fees, processing fees, administrative fees, etc.

## Who Provides It: Solar Retailer/Installer

# Submitting the Payment Claim

## Step 1: READ THE NSHP GUIDEBOOK!

Make sure you're familiar with the program requirements.

Plan ahead to make sure you can meet the program deadlines.

## Step 2: Gather the required project documentation.

Use the payment claim checklist.

Verify that all documents are complete with consistent information.

## Step 3: Submit the payment claim.

Submittal via the NSHP Web Tool is encouraged.

The NSHP-2 with original signatures must be mailed in.

## Step 4: Program Administrator Review

Tracking the Status of the Payment Claim

Qualifying for a Correction Period

## Step 5: CEC Review & Approval

# Other Payment Claim Related Details...

There are NO time extensions or exceptions!

If you turn in your NSHP-2 on or before the reservation expiration date...

You have 90 calendar days to submit the remaining documents for the payment claim package.

You can request a partial payment, if...

Your project is participating in your utility's new construction program.

AND on or before the reservation expiration date, you have submitted all documents in the payment claim package, with the exception of the CF-3R and NSHP EE-3.

You will have up to 90 calendar days after the reservation expiration date to submit the CF-3R and NSHP EE-3, and request the balance of your incentive.

# NSHP Resources

## Go Solar California Website

- <http://www.gosolarcalifornia.ca.gov/index.php>

## NSHP Online Application Tool

- <https://www.newsolarhomes.org>

## NSHP Forms and Documents

- <http://www.gosolarcalifornia.ca.gov/documents/nshp.php>
- <http://www.energy.ca.gov/title24/>

# NSHP Training Seminars

<http://www.gosolarcalifornia.ca.gov/nshp/training/>

## Upcoming Training Seminars

- March 13<sup>th</sup>, 2014 – Irwindale by SCE

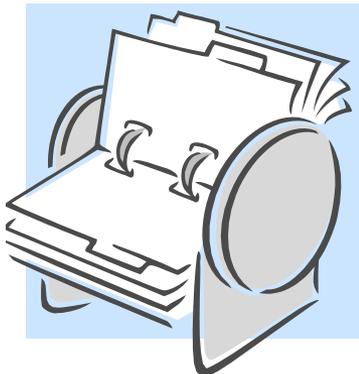
# Contact Information

## NSHP Program Administrators

- <http://www.gosolarcalifornia.ca.gov/contacts/consumers.php>

## PG&E Application Management

- [www.pge.com/nshp](http://www.pge.com/nshp)
- [solar@pge.com](mailto:solar@pge.com), 1-877-743-0113



# Questions?

