



New Solar Homes Partnership Program Webinar

December 16, 2015



Housekeeping

- Q&A after presentation
- E-mail questions during presentation to renewable@energy.ca.gov with subject line “NSHP Webinar 12-16-15”
- Mute phone unless you have a question
- Send post-webinar questions to renewable@energy.ca.gov, with subject line “NSHP Webinar 12-16-15” by COB 12-23
- Q&A posted on GoSolarCalifornia website by end of December (www.gosolarcalifornia.org/about/nshp.php)
- Questions on CPUC proceeding should be directed to CPUC
- No part of webinar will be part of the public record for the CSI or any other CPUC proceeding



New Solar Homes Partnership

Brett Arriaga
NSHP Program Lead

NSHP Program Overview
for the CPUC Rulemaking 12-11-005
December 16, 2015



Agenda

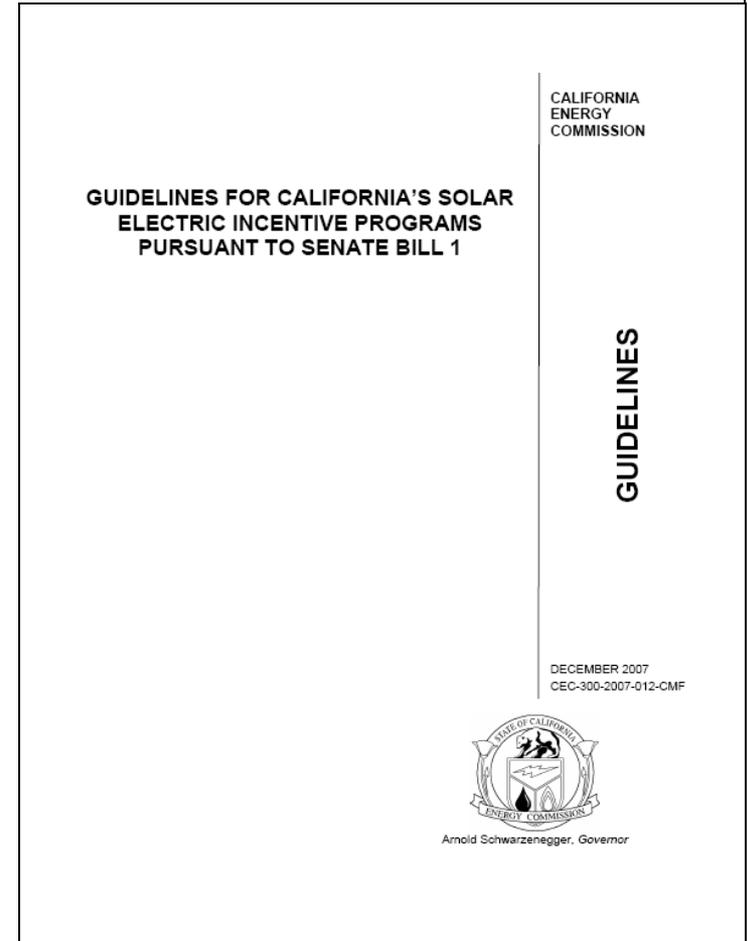
- **Background**
- Program requirements
- NSHP program statistics
- Future outlook
- NSHP funding request to CPUC



Senate Bill 1

Senate Bill 1 (SB 1, Murray, 2006) goals:

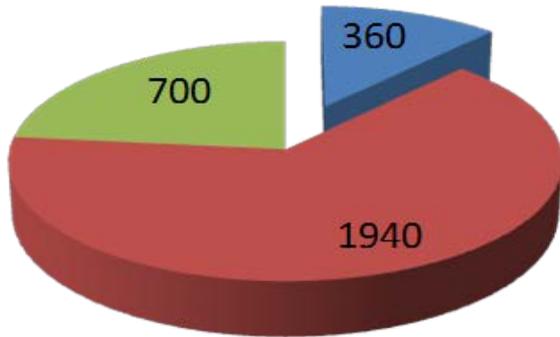
- **By the end of 2016:**
 - 3,000 MW of DG PV
 - Self-sufficient solar industry
 - Solar energy systems as a mainstream option
- **By 2020:**
 - Solar energy systems on 50% of new homes
- **NSHP-specific goals:**
 - 360 MW of installed solar PV capacity
 - High-performing solar systems on highly efficient residential construction



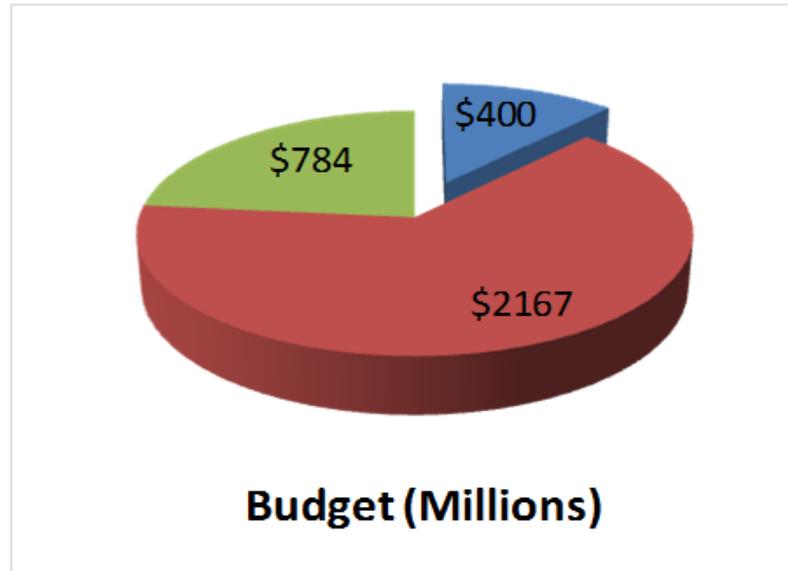


California Solar Initiative

- New Solar Homes Partnership (NSHP)
- CPUC's California Solar Initiative (CSI)
- Publicly Owned Utility Solar Programs



MW Goal



Budget (Millions)



NSHP Program Underfunded

- \$400 million program budget
 - collected as part of the Public Goods Charge (Expired on December 31, 2011)
- Renewable Resource Trust Fund (RRTF) available for the NSHP totals \$282M



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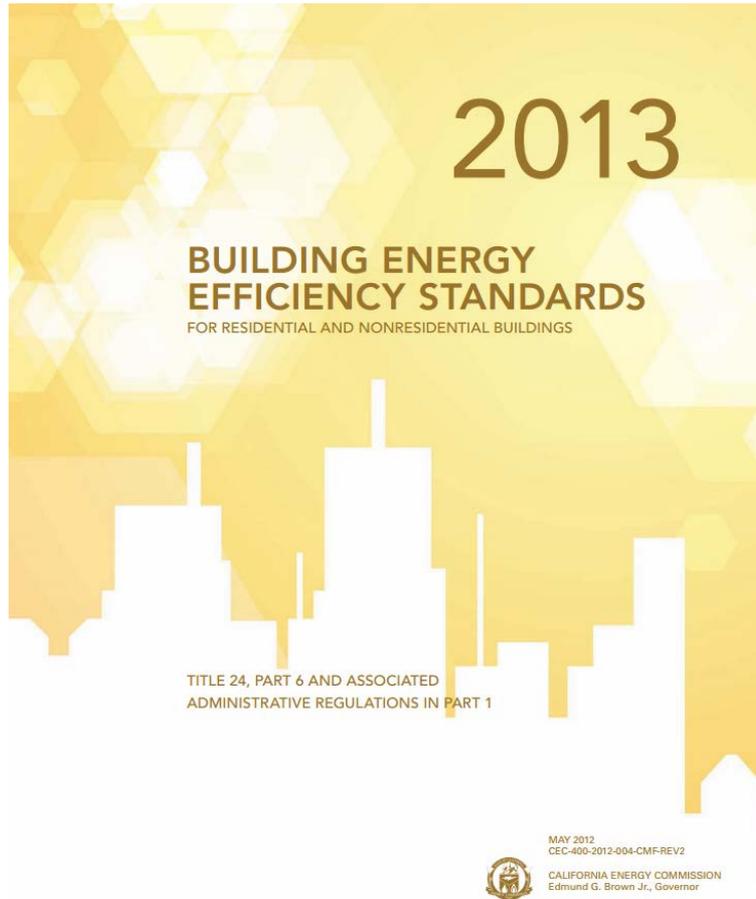


NSHP Eligibility Requirements



- In IOU electric service territory
- Interconnected solar energy systems ≥ 1 kW AC
- Electricity offsets the end-use customer's electric load
- 10-year warranty
- Third-party verified systems and energy efficiency
- Eligible equipment

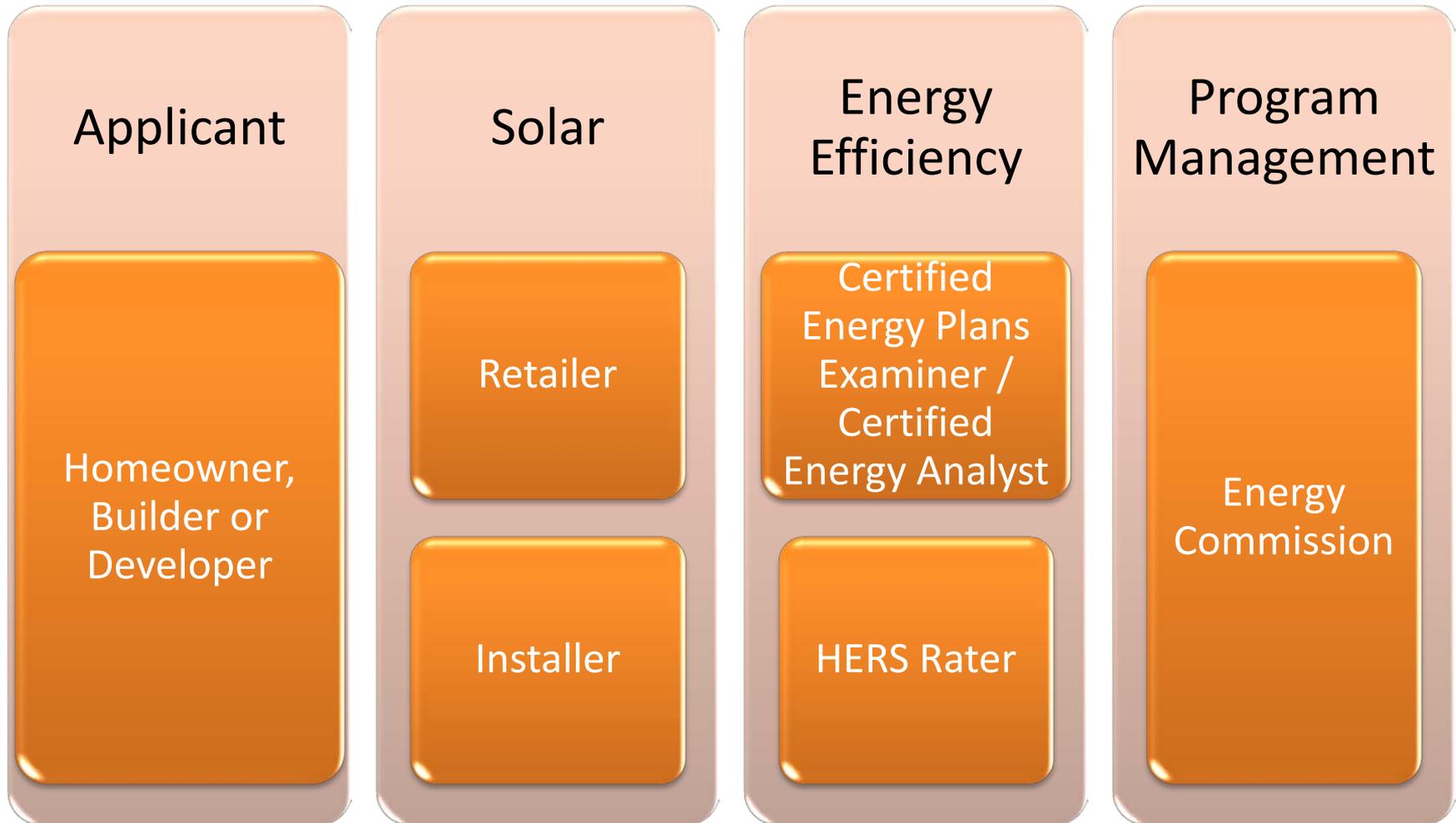
Eligibility Requirements Continued



- New residential construction
 - Considered “new” if the entire building structure is subject to current Title 24 Standards.
 - Solar permit shall be applied for prior to the issuance of the certificate of occupancy, but no later than **60** days after.



Involved Parties





Incentive Structure

- One-time, upfront incentive
- Tiered incentive structure with volumetric targets; incentives decline when megawatt targets achieved
- Expected Performance Based Incentive (EPBI)
- Incentives limited to the first 7.5 kW AC per residential unit AND incentive amount cap
 - Market-rate housing projects cap: 50%
 - Affordable housing residential unit projects cap: 75%



NSHP Energy Efficiency Requirements

Energy Efficiency Tier	2008 Standards	2013 Standards
Code-Compliant (all projects)	Not available	0%
Tier I (low-rise residential)	15%	15%
Tier I (high-rise residential, common area)	15%	10%
Tier II (low-rise residential)	30%/30%	30%/30%
Tier II (high-rise residential, common area)	30%/30%	15%/15%



Incentive Levels: 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
\$1.00	\$1.25	\$1.50/\$1.75	35
\$0.75	\$1.00	\$1.50	50
\$0.50	\$0.75	\$1.25	60
\$0.35	\$0.50	\$1.00	65
\$0.25	\$0.35	\$0.75	72



Incentive Levels: 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
\$1.15	\$1.50		5.0
\$0.80	\$1.25		6.0
\$0.55	\$1.00		6.5
\$0.35	\$0.75		7.2

* Rates only apply to tax-exempt system owners



Reservation Periods: Market Rate

Project Type	Criteria	Reservation Period
Large development	<ul style="list-style-type: none">• Development or phase of six homes or more• 50% or more of homes will have solar installed	36 Months
Small development	<ul style="list-style-type: none">• Development or phase of less than six homes	18 Months
Solar not as standard	<ul style="list-style-type: none">• Development or phase, less than 50% of homes will have solar installed	18 Months
Custom home	<ul style="list-style-type: none">• Single site project	18 Months
Common area in market rate development	<ul style="list-style-type: none">• Nonresidential part of development	18 Months



Reservation Periods: Affordable Housing

Project Type	Criteria	Reservation Period
Affordable housing residential units	<ul style="list-style-type: none">At least 20% of homes/units are restricted to low income tenants/residents	36 Months
Affordable housing common area	<ul style="list-style-type: none">At least 20% of the associated residential areas of the project are restricted to low income tenants/residents	36 Months
Virtual net-metered projects	<ul style="list-style-type: none">Any project qualifying for virtual net-metering	36 Months



The Basic Process



Reservation

- Applicant submits reservation application package via online application tool.
- Energy Commission reviews and approves. Incentive is reserved for applicant.



Installation and Verification

- Applicant installs PV system and energy efficiency measures (as appropriate).
- HERS rater verifies and tests measures installed.
- Building department finalizes solar permit.
- Applicant applies to utility for interconnection.



Payment Claim

- Applicant submits payment claim package via online application tool.
- Energy Commission reviews and approves. Incentive is paid.



Reservation Application Document Overview

General Information

NSHP-1
Reservation
Application
Form

Proof of New Residential Construction

Building Permit

Tentative or
Final
Subdivision
Map

Commitment to Solar

NSHP PV-1
Calculator
Output Form

Labor Contract

Energy Efficiency

Title 24
Documentation

Construction
Plan-Set

Additional Information for Certain Project Types

- Regulatory Agreement (Affordable Housing)
- System Size Justification (Common Areas)



Payment Claim Document Overview

General Information Forms

NSHP-2

STD-204

Warranty Coverage

NSHP-3

HERS Verification Forms

NSHP PV-3

NSHP EE-3

CF-3R

Interconnection

Interconnection Letter

Additional Information for Certain Projects

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



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NSHP Staff Efforts

- **Continuous program streamlining**
 - NSHP Guidebook, Ninth Edition
- **10 Staff**
 - ~ 50 reservations approved/month
 - ~ 550 payments approved/month
- **11 Renewable call center students**
 - ~ 250 calls/month
 - ~ 300 emails/month



NSHP Program Totals as of Dec. 3, 2015

	Number of applications	Number of systems	Dollars (Millions)	MW (AC)
Under Review	146	4,021		
Reserved	889*	23,781	\$90.4	76.9
Installed	2,380*	20,665	\$137.9	64.0
Total	3,415	48,467	\$228.3	140.9

* Payment claims are usually submitted for individual systems, not for an entire project. Projects that have not submitted payment claims for all systems within the project are included in the number of reserved applications. Information posted on Go Solar California website at: <http://www.gosolarcalifornia.org/about/nshp.php>

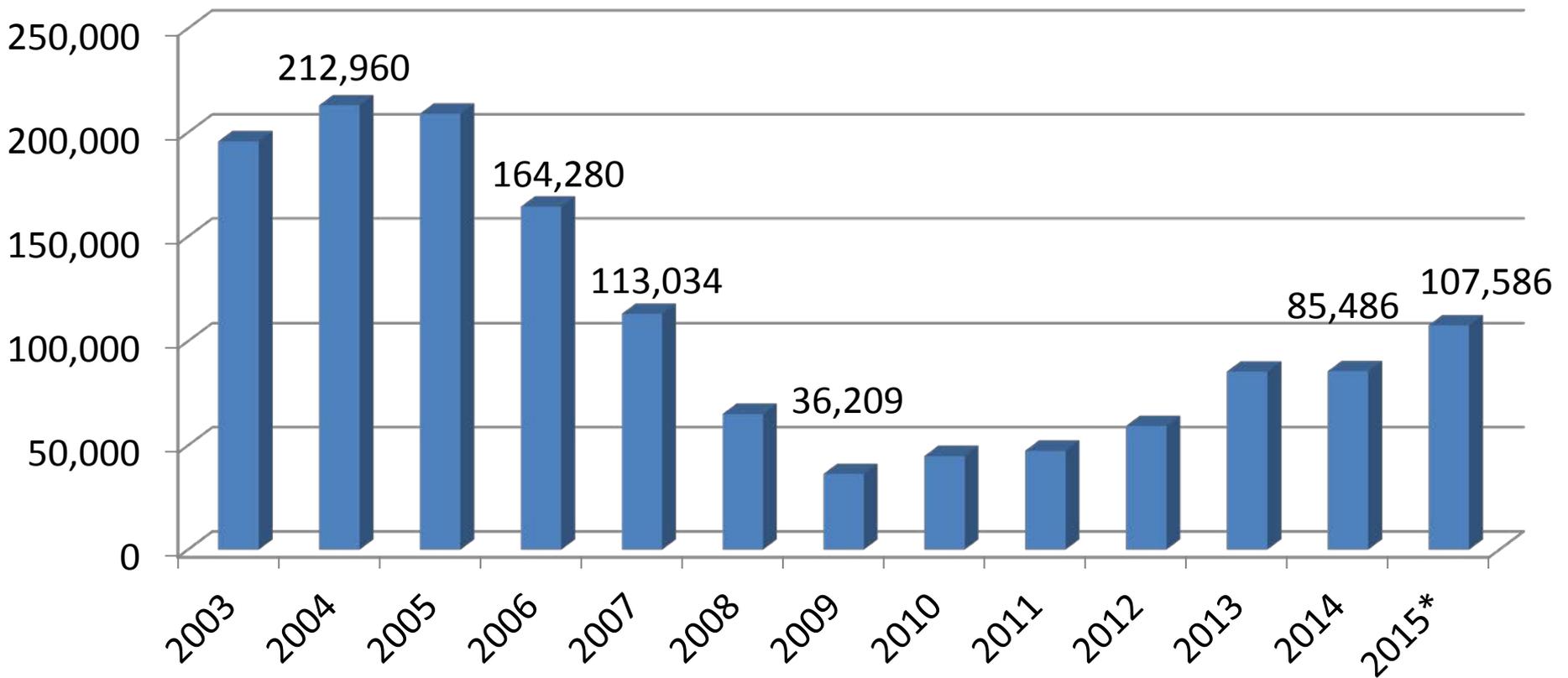


NSHP Funding

- Last updated 12/3/2015
 - Available funding: \$56.8 Million
 - Requested funding: \$12.4 Million
 - Remaining funding: \$44.4 Million
- Modified reservations and expired projects could free up funds for new projects



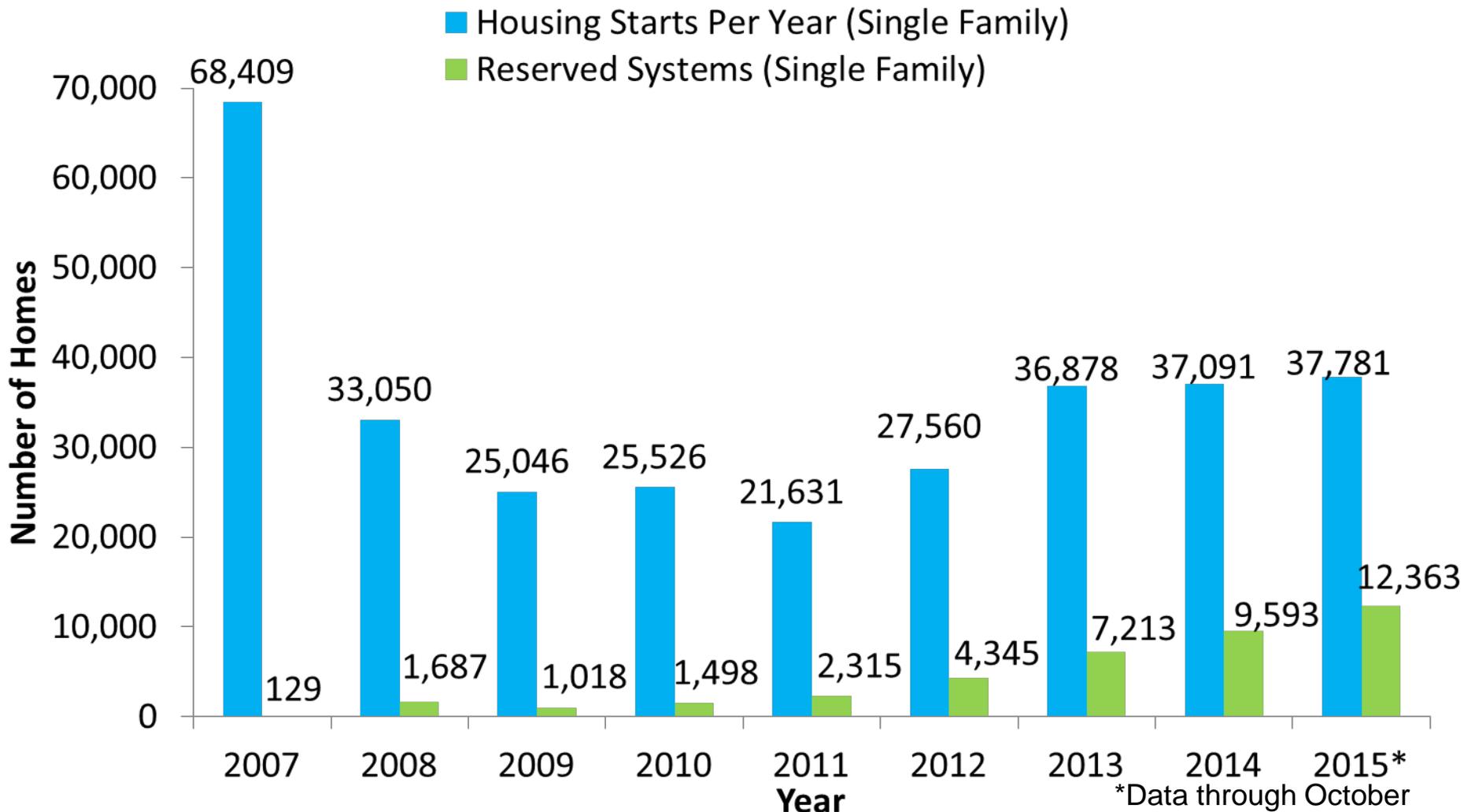
Total California Housing Units 2003-2015



*Projected

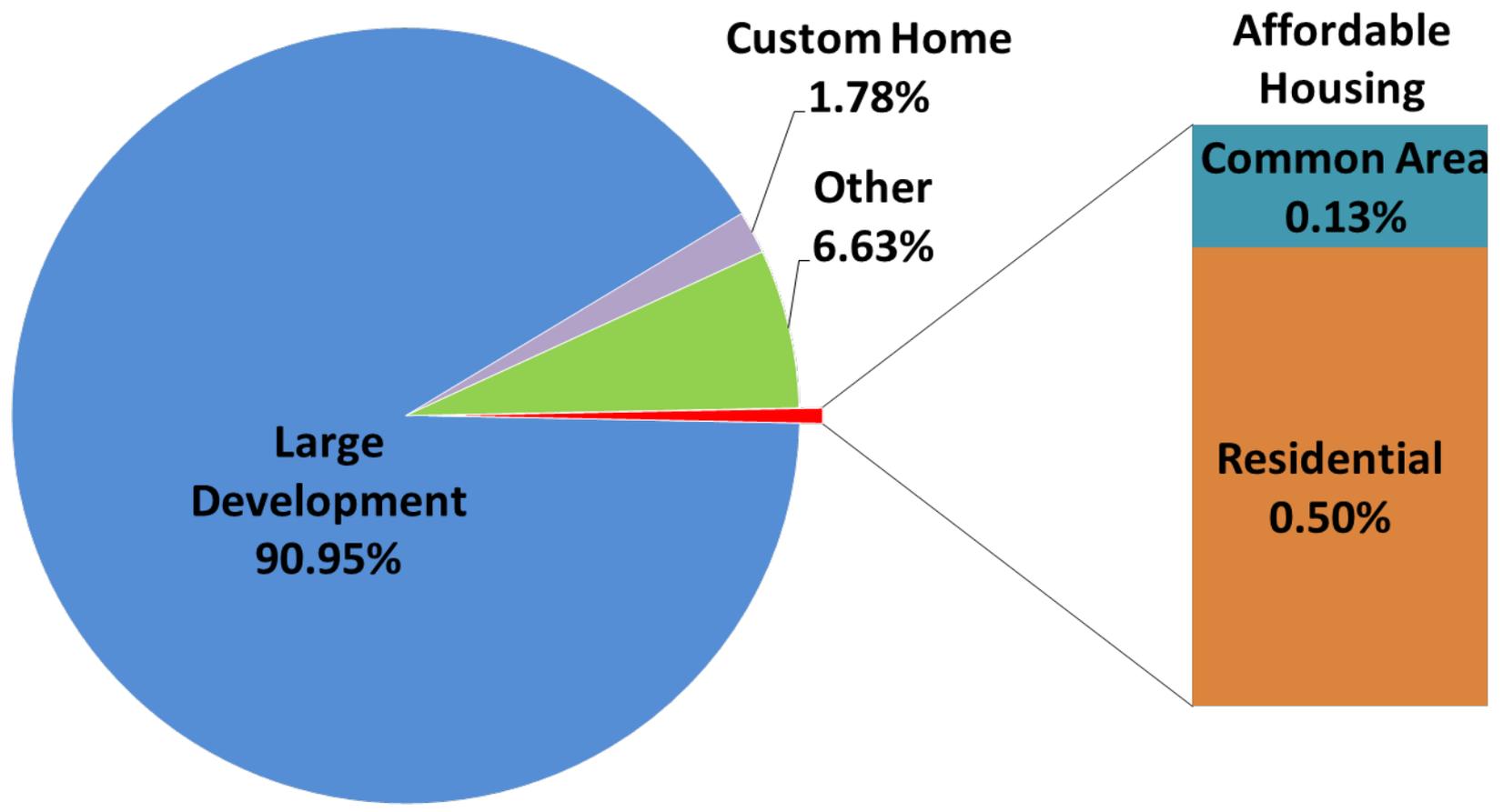


Housing Starts and NSHP Participation



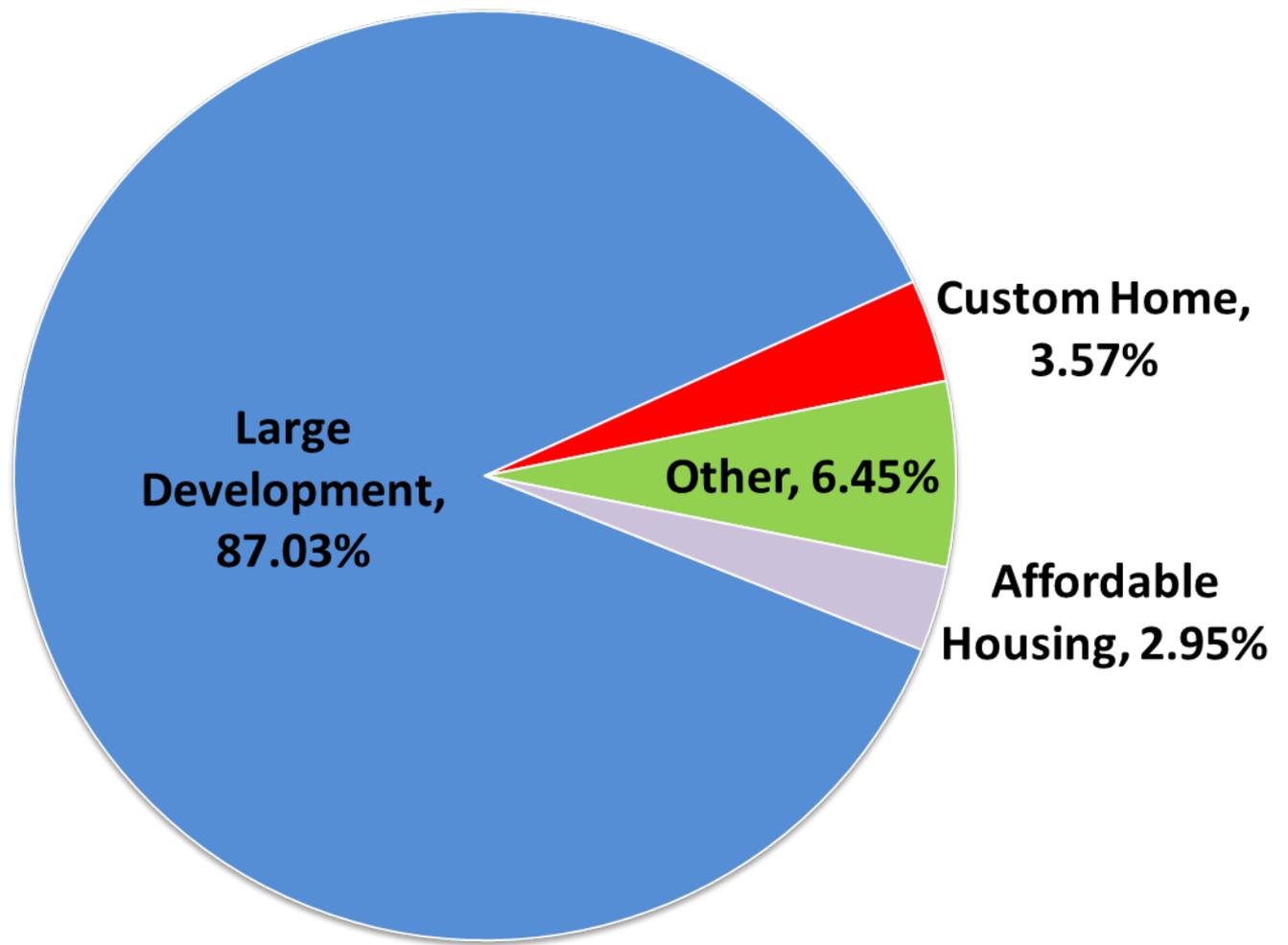


Reserved Systems by Project Type





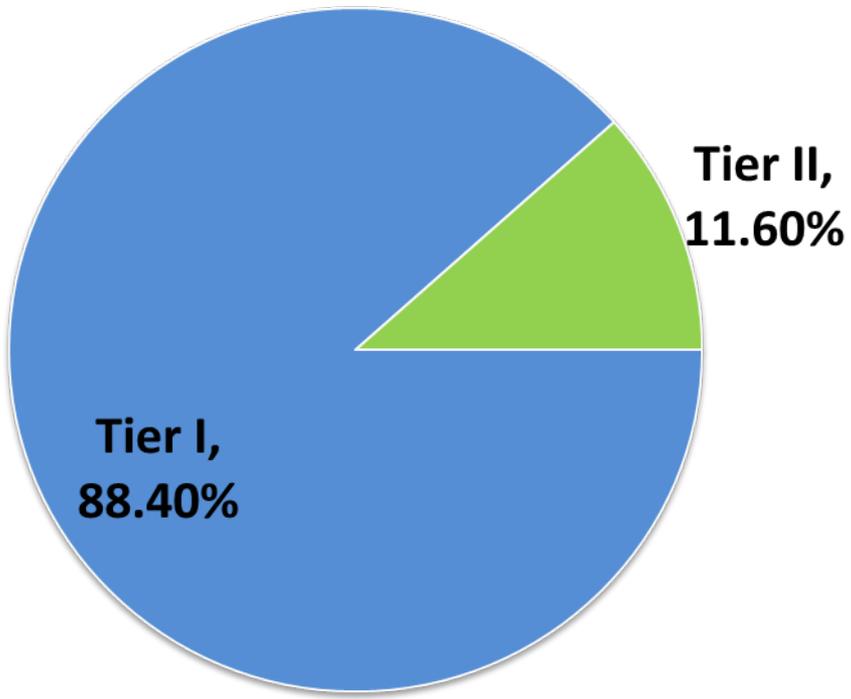
Reserved Capacity by Project Type



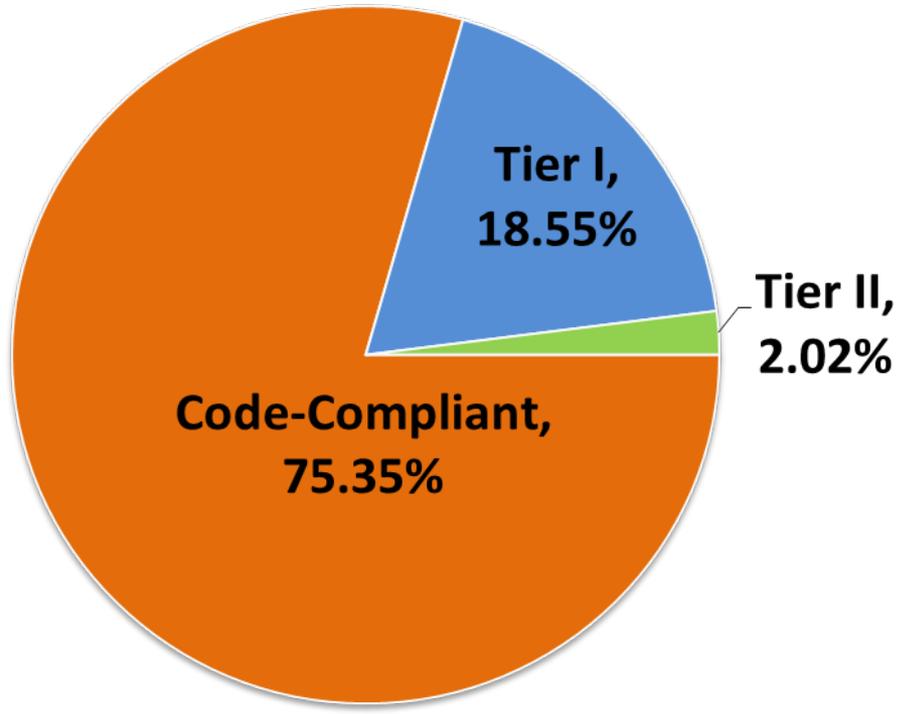


Installed Systems Energy Efficiency Level

2008 Building Standards



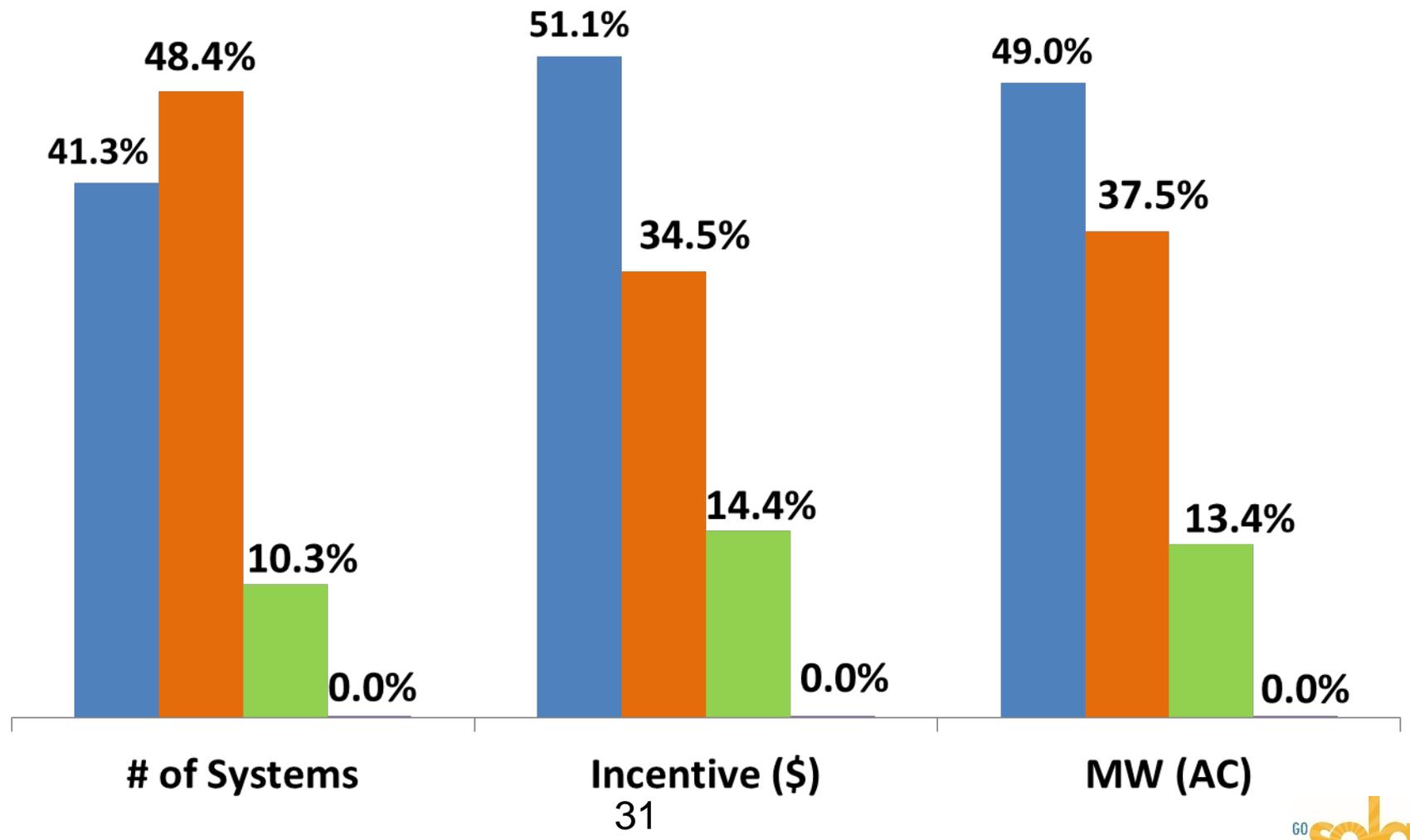
2013 Building Standards





Installed by Utility Service Territory

■ PG&E ■ SCE ■ SDG&E ■ BVES





NSHP Participants



- Over 75 Builders
 - KB Homes
 - Lennar Homes
 - Richmond American Homes
 - Shea Homes
 - Standard Pacific Homes
 - TRI Pointe Homes, Inc.

- Over 30 Retailers and Installers
 - SunPower Corporation
 - SolarCity Corporation
 - SunStreet Energy Group
 - PetersenDean, Inc.





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Addressing Challenges and Market Barriers

- Actively seeking funding
- Demand for solar
- Expiration of the Investment Tax Credit (ITC)



Photo courtesy of Brett Arriaga



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CPUC Letter – NSHP Funding

- Letter requesting continuation of the NSHP program (Nov. 13, 2015)
 - Sent pursuant to PUC §2851(e)(3)
- CEC requesting:
 - \$111.78 million in additional funding
 - CEC serve as administrator for the continuation of the NSHP Program
 - Establish necessary administrative and oversight-related requirements



CEC Administration of NSHP Program

- CEC resumed administration of the NSHP in September 2014
- Observed benefits to CEC Administration
 - Lower administrative costs
 - Streamlined reviews
 - Consistent interpretation of program eligibility requirements
 - Improved processing time



Justification to Continue NSHP Program

- Glide path to ZNE goal for new homes
- Encourages builders to include solar in new developments
- Environmental and Economic Goals
 - California's loading order
 - 2020 - Zero Net Energy Homes
 - Renewables Portfolio Standard
 - AB 32
- Cost of CA residential construction
- Loss of investment tax credit



Request for Expedited Consideration

- Encumbrance delays
- Disruption to new home solar market
- New statutory deadlines per SB 83 (2015)



Contact Information

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California Energy Commission

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Next Steps

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- Q&A posted no later than end of December at: (www.gosolarcalifornia.org/about/nshp.php)
- WebEx recording will also be posted at the same location