

DOCKETED

Docket Number:	16-NSHP-01
Project Title:	Continuation of the New Solar Homes Partnership Program
TN #:	229815
Document Title:	Staff Report - New Solar Homes Partnership Program 2018 Annual Report
Description:	New Solar Homes Partnership Program Annual Progress Report for January 1 - December 31, 2018
Filer:	Lucio Hernandez
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	9/23/2019 11:39:08 AM
Docketed Date:	9/23/2019

California Energy Commission

STAFF REPORT

New Solar Homes Partnership Program 2018 Annual Report

California Energy Commission

Gavin Newsom, Governor

August 2019 | CEC-300-2019-008



California Energy Commission

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ABSTRACT

The New Solar Homes Partnership (NSHP) program contributes to California's continuing efforts to promote and develop clean, renewable electricity generation. This report provides an update on key NSHP program statistics for 2018. This report is produced as required by California Public Utilities Commission Decision 16-06-006, "Decision Funding Authorizations and Related Measures for Continuation of the New Solar Homes Partnership Program," approved June 9, 2016.

Keywords: New Solar Homes Partnership, NSHP, Energy Commission, California Public Utilities Commission, CPUC

Please use the following citation for this report:

Wong, Kevin. 2019. *New Solar Homes Partnership Program 2018 Annual Report*. California Energy Commission. Publication Number: CEC-300-2019-008.

TABLE OF CONTENTS

	Page
Abstract	i
Table of Contents	iii
List of Figures	iii
List of Tables	iii
Chapter 1: 2018 Program Statistics	4
Reservations	4
Payment Claims	5
Reservation Applications and Payment Claims Submitted and Approved 2018	6
Overall Progress Toward Meeting Program Goals	6
Chapter 2: Funding Reporting	10
Chapter 3: Conclusion and Outlook	11

LIST OF FIGURES

	Page
Figure 1: Progress Toward NSHP Program MW Goal (All Years)	7

LIST OF TABLES

	Page
Table 1: Reservation Applications as of January 25, 2019	5
Table 2: Payment Claims Approved in 2018	5
Table 3: Reservation Applications and Payment Claims Submitted and Approved in 2018	6
Table 4: Cumulative Capacity Installed (All Years)	8
Table 5: Cumulative Incentives Paid (All Years)	9
Table 6: NSHP Program Funding Paid and Encumbered as of December 2018	10

EXECUTIVE SUMMARY

The New Solar Homes Partnership (NSHP) program is part of the statewide solar program called the California Solar Initiative. Senate Bill 1 established three goals for the California Solar Initiative:

1. Install 3,000 megawatts (MW) of solar generating capacity.
2. Establish a self-sufficient solar industry.
3. Install solar energy systems on 50 percent of new California homes by 2020.

To reach these goals the California Solar Initiative established the NSHP.

The NSHP began in January 2007 as a \$400 million program with a goal of installing 360 MW of rooftop photovoltaics (PV), by the end of the program, on new homes built within investor-owned utility (IOU) territories throughout California.

In 2018, the NSHP received 704 reservation applications and 11,359 incentive payment claims. Staff approved 679 reservation applications representing 37,947 systems, 147.45 MW of solar capacity, and incentive payments of nearly \$78 million. Furthermore, staff approved 10,132 payment claims representing more than 31 MW of solar capacity and \$17.8 million in incentives.

The NSHP program continued efforts to reach all Californians by implementing program changes to encourage further participation of affordable housing projects. Of the 679 reservation applications approved in 2018, 108 represented affordable housing projects, with 294 systems, 10.62 megawatts (MW) of capacity, and more than \$16 million in incentive money.

As of December 31, 2018, cumulatively the NSHP has incentivized \$30.75 million in Affordable Housing projects, accounting for 12.87 MW of PV. For Market Rate¹ projects, the NSHP has incentivized \$151.95 million, accounting for 129.26 MW of PV.

¹ Market Rate projects account for all eligible NSHP projects not receiving an Affordable Housing incentive rate.

CHAPTER 1:

2018 Program Statistics

Reservations

Participation in the NSHP program is a two-step process. Applicants reserve funding for a housing development project in advance and receive payment upon completion of the project. Applicants have the reservation period to complete and submit a payment claim package to the California Energy Commission (CEC).

A reservation application may cover a single site or multiple sites, depending on the project. The NSHP program has project types defined in the *NSHP Guidebook, Eleventh Edition* including:

- Large Development—Defined as developments of six or more residential units with solar on 50 percent or more of dwelling units.
- Custom homes—A project consisting of a single residence.
- Affordable housing projects—Projects that include affordable housing residential unit projects and affordable housing common area projects.
- Common area projects—Projects where the solar systems are installed on the nonresidential portions of market-rate residential developments.
- Virtual net-metered² projects—Projects that include affordable housing and market-rate housing projects.
- Solar not as standard—Defined as projects where solar will be installed on fewer than 50 percent of the residential units.
- Small developments—Defined as developments with fewer than six residential units.

Depending on the project type, a reservation application receives either an 18- or 36- month reservation period.

- Projects qualifying for a 36-month reservation includes large development, affordable housing, and virtual-net-metered.

² Virtual net metering allows the electricity produced by a solar energy system installation to be credited to the benefit of multiple tenants in a multifamily building without requiring the solar energy system to be physically connected to each tenant's meter.

- Projects qualifying for an 18-month reservation include custom homes, small developments, solar not as standard, and common areas.

Table 1 provides information on reservation claims approved in 2018 organized by project type.

Table 1: Reservation Applications in 2018

Project Type	# of Systems	Encumbrances	Capacity (kW)
Large Development	37,292	\$58,504,647	131,093.81
Affordable Housing	294	\$16,092,068	10,620.47
Custom Homes	75	\$726,181	1,223.06
Other³	286	\$2,743,097	4,510.86
Totals	37,947	\$78,065,993	147,448.20

Source: California Energy Commission

Payment Claims

For a project with an approved reservation to receive an NSHP program incentive, the solar energy system must be installed, interconnected to the grid and verified by a third party. In addition, the structure must comply with or exceed the energy efficiency specifications proposed in the applicant's reservation.

Table 2 provides information on payment claims approved in 2018.

Table 2: Payment Claims Approved in 2018

Project Type	# of Systems	Incentive Amount	Capacity (kW)
Large Development	9,868	\$14,532,388	28,760.96
Affordable Housing	63	\$2,467,796	1,616.53
Custom Home	97	\$410,482	723.23
Other³	104	\$477,066	881.51
Totals	10,132	\$17,887,732	31,982.23

Source: California Energy Commission

³ "Other" includes common area systems, small housing developments, and solar not as standard projects.

Reservation Applications and Payment Claims Submitted and Approved in 2018

Table 3 shows the total number of reservation applications and payment claims submitted and approved from January 1 through December 31, 2018.

Table 3: Reservation Applications and Payment Claims Submitted and Approved in 2018

	Received	Approved
Reservation Applications ⁴	704	679
Payment Claims ⁵	11,359	10,132

Source: California Energy Commission

Program Processing Time

The NSHP team receipts, documents, processes and approves the incentive payment application for FI\$Cal submission via the accounting office with an average processing time of 4-6 weeks. Once approved, the California Energy Commission- Accounting Office requires an additional 6-8 week processing time. The incentive payment purchase order is then transmitted to the State Controller's Office for final disbursement with a usual disbursement timeline of 2-4 weeks.

Overall Progress Toward Meeting Program Goals

The goal of the NSHP program is to install 360 MW of solar energy capacity on new housing by December 31, 2021. As of December 31, 2018, the NSHP program has supported the installation of about 143 MW and reserved 279 MW. Combined, the NSHP program is on track to install 422 MW of solar energy capacity.

Applicants or builders may opt to change energy efficiency features of proposed construction. Changes in construction may result in adverse or beneficial effects towards the energy efficiency compliance margins. In certain situations, changes to energy efficiency may result in the site no longer meeting the energy efficiency requirements of the NSHP. Under this scenario, the site(s) will no longer be eligible for the NSHP and will be disapproved. Sites disapproved,

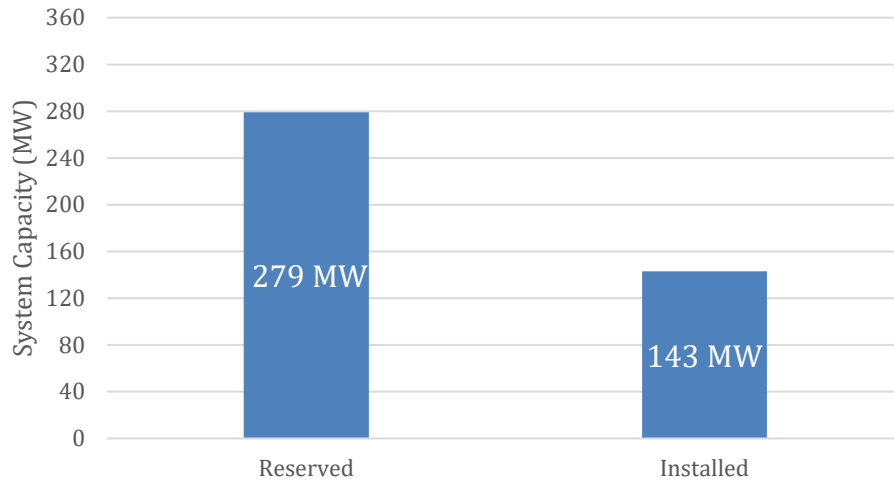
4 A "reservation application" may represent multiple sites or systems.

5 A "payment claim" represents a site or system.

withdrawn, or expired are removed from program metrics and will not count toward achieving program goals.

Figure 1 illustrates the NSHP's progress towards reaching the 360 MW program goal. As of the time of this report, the program has successfully incentivized the installation of about 143 MW of solar PV. Based upon reservations, the program anticipates an additional 279 MW to be installed prior to the program's ending.

Figure 1: Progress Toward NSHP Program MW Goal (All Years)



Source: California Energy Commission

Table 4 illustrates the cumulative capacity installed for market rate⁶ and affordable housing projects receiving NSHP program incentive funds in MW. By the end of 2018, approximately 143 MW of solar PV capacity was installed. Affordable housing projects accounted for 12.87 MW of solar PV capacity of this total capacity.

Table 4: Cumulative Capacity Installed (All Years)

Year	Market Rate (MW)	Affordable Housing (MW)
2008	1.2	0.14
2009	3.36	0.57
2010	3.78	1.42
2011	2.68	0.67
2012	5.74	1.08
2013	9.8	2.16
2014	10.56	1.21
2015	19.57	0.93
2016	18.67	1.64
2017	23.53	1.43
2018	30.37	1.62
Total	129.26	12.87

Source: California Energy Commission

⁶ "Market rate" refers to projects not eligible to receive the affordable housing incentive rate.

Table 5 below illustrates the cumulative of NSHP program incentive funds paid over the program term through the end of 2018. By the end of 2018, roughly \$183 million in incentives were paid. Affordable housing projects accounted for nearly \$31 million.

Table 5: Cumulative Incentives Paid (All Years)

Year	Market Rate (Millions)	Affordable Housing (Millions)
2008	\$3.32	\$0.53
2009	\$9.12	\$1.90
2010	\$10.09	\$4.82
2011	\$6.84	\$2.23
2012	\$14.64	\$3.51
2013	\$22.60	\$6.42
2014	\$20.43	\$2.67
2015	\$28.96	\$1.60
2016	\$18.51	\$2.58
2017	\$2.02	\$2.03
2018	\$15.42	\$2.46
Total	\$151.95	\$30.75

Source: California Energy Commission

CHAPTER 2: Funding Reporting

Established in 2007, the NSHP was allocated \$400 million from the Public Goods Charge (PGC) collected from IOU ratepayers including funding in the Renewable Resources Trust Fund (RRTF). To address a shortfall in program funding the California Public Utilities Commission made available, through Decision 16-06-006, up to \$111.78 million in additional funding to be collected from IOU ratepayers.

Prior to utilizing the additional IOU ratepayer funding, the California Public Utilities Commission requires NSHP to exhaust all program funds available through the RRTF.⁷

During 2018, all RRTF funding was either reserved or paid. This has resulted in a transition to encumbering the additional IOU ratepayer funding. As of December 31, 2018, \$71.47 million of these funds have been encumbered.

Table 6: NSHP Program Funding Paid and Encumbered as of December 2018

	Reserved	Paid
RRTF/ PGC Monies (Millions)	\$86.5	\$198.84
IOU Monies (Millions)	\$71.47	\$0

Source: California Energy Commission

⁷ The utilization of IOU monies may decline as projects transition to utilize available PGC/RRTF funds. Encumbered IOU funds not paid out by December 31, 2021, will be forfeited by incentive applicants and returned to ratepayers.

CHAPTER 3:

Conclusion and Outlook

In 2018, the NSHP program achieved and implemented several milestones including:

- Discontinued acceptance of new project reservations as of April 1, 2018, under the June 1, 2018 encumbrance deadline set in Senate Bill 83 (Committee on Budget and Fiscal Review, Chapter 24, Statutes of 2015). No additional encumbrances can be granted to new or existing projects after this date.
- Various streamlining efforts implemented by the NSHP program staff. These efforts provide an improved and efficient payment application process.
- Changes to the incentive payout process to ensure compliance with the requirements set in Fi\$Cal.⁸
- Review and approval of NSHP reservations for more than \$78 million in incentive funds, representing more than 147 MW of solar energy capacity and 37,947 sites.
- Receipt of 11,359 payment applications.
- Review and approval of 10,132 payment applications, representing \$17.8 million in incentive funds and about 31 MW.
- As of December 31, 2019, the NSHP program has provided incentives for 6,926 sites located within Disadvantaged Communities.⁹ This amounts to 15.3% of total projects incentivized by the NSHP.

The next program milestone is forecasted and proposed as the August 31, 2021, payment claim submittal deadline. This deadline is designed to satisfy the December 31, 2021, payment disbursement deadline provided in Senate Bill 83. In preparation for this payment disbursement deadline, the NSHP is working closely with interagency divisions and program stakeholders on streamlining the payment application review and approval process.

⁸ Fi\$Cal is the financial information system used by California State departments and agencies. Transition to this new financial system has required adjustments to accounting processes previously utilized by the California Energy Commission.

⁹ Disadvantaged Communities are defined by the California Office of Environmental Health Hazard Assessment, CalEnviro Screen 3.0.