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STAFF REPORT

New Solar Homes Partnership Program 2019 Annual Report

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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 2019. This report is produced in accordance with California Public Utilities Commission Decision 16-06-006, "Decision Funding Authorizations and Related Measures for Continuation of the New Solar Homes Partnership Program," dated June 9, 2016.

Keywords: New Solar Homes Partnership, NSHP, Commission, California Public Utilities Commission, CPUC, Decision 16-06-006, market-rate, affordable housing

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TABLE OF CONTENTS

	Page
Abstract	i
Table of Contents	iii
List of Figures	iii
List of Tables	iii
Executive Summary.....	1
CHAPTER 1: 2019 Program Statistics.....	3
Reservations.....	3
Payment Claims and Program Activity by Project Type.....	4
Payment Claims Received and Approved in 2019.....	5
Incentive Payment Claim Processing Time.....	5
Overall Progress Toward Meeting Program Goals.....	5
CHAPTER 2: Funding Reporting.....	8
CHAPTER 3: Conclusion and Outlook.....	9

LIST OF FIGURES

	Page
Figure 1: Progress Toward NSHP Program Goals (All Years).....	5

LIST OF TABLES

	Page
Table 1: Active Reservations as of December 31, 2019.....	4
Table 2: Payment Claims Approved in 2019.....	4
Table 3: Payment Claims Received and Approved in 2019.....	5
Table 4: Cumulative Capacities Installed (All Years).....	6
Table 5: Cumulative Incentives Paid (All Years).....	7
Table 6: NSHP Program Funding Paid and Encumbered as of December 31, 2019.....	8

Executive Summary

The New Solar Homes Partnership (NSHP) program was created as part of a statewide solar program called the California Solar Initiative (CSI). Senate Bill 1 (Murray, Chapter 132, Statutes of 2006) established three goals for the CSI:

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

To reach these goals, the CSI established the NSHP.

Launched in January 2007, the NSHP program is the California Energy Commission's (CEC) component of the CSI and is limited to new home construction in investor-owned utility (IOU) service territories. The program provides financial incentives for homeowners, builders, and developers to include solar energy systems on new, energy-efficient homes. The NSHP program goal under the CSI is to incentivize the installation of 360 MW solar capacity. Based on payments and active reservations to date; NSHP is on track to meet this program goal. Final determination of program accomplishment will be determined after all reservations have been processed.

In 2019, the NSHP received 12,963 incentive payment claims. Staff approved 13,743 incentive payment claims representing 44.74 MW of solar capacity, and \$19.38 million of incentive payments. At the end of 2019, reservations remaining represented 45,928 systems, totaling 182.40 MW of solar capacity, and incentives valued at \$99.35 million.

The NSHP program continued efforts to reach all Californians by implementing program changes to encourage further participation of affordable housing projects. Of the 13,743 incentive payment claims approved in 2019, 73 claims represented affordable housing projects, totaling 2.49 MW of capacity, and incentives valued at \$3.75 million.

As of December 31, 2019, the NSHP has provided \$34.50 million in incentives toward Affordable Housing projects, accounting for 15.36 MW of PV. For Market Rate¹ projects, the NSHP has paid \$182.90 million in incentives, representing 171.69 MW of PV.

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

CHAPTER 1:

2019 Program Statistics

Reservations

Participation in the NSHP program is a two-step process in which applicants reserve funding for a project in advance and receive an incentive payment upon completion of the project. Once the reservation application is approved, applicants have the reservation period to finish building construction, install the solar energy system, interconnect with the utility grid, complete third-party field verifications, and submit a payment claim package to the CEC.

A reservation application may cover a single site or multiple sites depending on the project. The NSHP program has multiple project types² defined in the *NSHP Guidebook, Eleventh Edition* including:

- Large development – developments of six or more residential units with solar on 50 percent or more of dwelling units (also referred to by Solar as Standard).
- 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 metered³ projects – projects that include affordable housing and market-rate housing projects.
- Solar not as standard – projects where solar will be installed on less than 50 percent of the residential units.
- Small developments – 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.
- Projects qualifying for an 18-month reservation include custom homes, small developments, solar not as standard, and common areas.

² The NSHP does not classify project types based upon single or multi-family construction. Either construction types may be used in Large Development, Affordable Housing, or other types as appropriate.

³ *Virtual net energy metering* is a tariff arrangement that allows the electricity produced by a single solar energy system to be credited to multiple units, in which each has an electric meter.

After the April 1, 2018 NSHP program reservation deadline, the CEC stopped accepting reservation applications. This reservation submission deadline was established to satisfy the June 1, 2018 encumbrance deadline, provided for in Senate Bill 83 (Committee on Budget and Fiscal Review, Chapter 24, Statutes of 2015). No additional reservations were granted for new projects or adjustments to existing encumbrances after June 1, 2018.

Table 1 displays the number of active reservations as of December 31, 2019.

Table 1: Active Reservations as of December 31, 2019

Project Type	# of Systems	Encumbrance Value (\$)	Capacity (MW)
Large Development	45,343	\$82,200,738	169.59
Affordable Housing	302	\$15,015,026	9.72
Custom Homes	41	\$155,329	0.33
Other⁴	242	\$1,983,472	2.76
Totals	45,928	\$99,354,565	182.40

Source: California Energy Commission

Payment Claims and Program Activity by Project Type

For a site to receive a payment claim approval, the solar energy system must be installed, grid-connected, third-party verified, and the building must meet or exceed the energy efficiency standards proposed in the applicant’s reservation.

Table 2 displays the number of payment claims approved in 2019.

Table 2: Payment Claims Approved in 2019

Project Type	# of Systems	Amount of Funds Paid (\$)	Capacity (MW)
Large Development	13,553	\$15,097,275	41.22
Affordable Housing	73	\$3,750,549	2.49
Custom Homes	52	\$212,160	0.43
Other⁵	65	\$317,234	0.60
Totals	13,743	\$19,377,218	44.74

Source: California Energy Commission

⁴ Other consists of NSHP project types: Common Area, Virtual Net Metered, Solar Not as Standard, and Small Development.

⁵ Other consists of NSHP project types: Common Area, Virtual Net Metered, Solar Not As Standard, and Smal Development.

Payment Claims Received and Approved in 2019

Table 3 shows the total number of payment claims received and approved in 2019.

Table 3: Payment Claims Received and Approved in 2019

	Received	Approved
Payment Claims⁶	12,963	13,743

Source: California Energy Commission

Incentive Payment Claim Processing Time

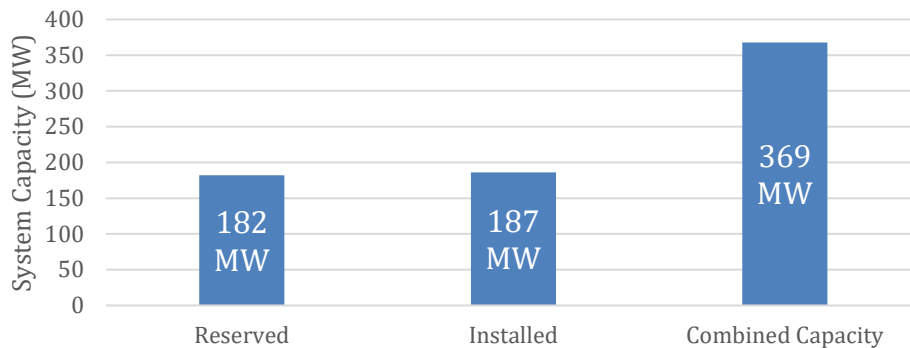
The NSHP team receives, documents, processes and approves the incentive payment claim for FI\$Cal submission with an average processing time of 4-6 weeks. Once approved, the California Energy Commission Accounting Office requires an additional 6-8 week processing time. The incentive payment purchase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

Overall Progress Toward Meeting Program Goals

A 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, 2019, the NSHP program has supported the installation of approximately 187 MW and has approximately 182 MW of reserved system capacity. Therefore the NSHP program is on track to install approximately 369 MW of solar PV by 2021. Figure 1 represents this data.

Due to applicant selected changes in final building construction, not all reserved projects will meet NSHP program requirements. Projects or sites no longer meeting NSHP program requirements are disapproved. Sites disapproved, withdrawn, or expired are removed from program metrics and do not count towards the program goal tracker.

Figure 1: Progress Toward NSHP Program Goals (All Years)



Source: California Energy Commission

⁶ Each Payment Claim represents one site or system.

Program Activity for Affordable Housing Projects

Table 4 illustrates the cumulative capacity installed for market rate⁷ and affordable housing projects receiving NSHP program incentive funds in MW. By the end of 2019, 187.05 MW of solar PV capacity was installed in total. Affordable housing projects accounted for 15.36 MW or 8.21 percent of this total capacity.

Table 4: Cumulative Capacities Installed (All Years)

Year	Market Rate (MW)	Affordable Housing (MW)	Total (MW)
2008	1.20	0.14	1.34
2009	3.36	0.57	3.93
2010	3.78	1.42	5.20
2011	2.68	0.67	3.35
2012	5.74	1.08	6.82
2013	9.80	2.16	11.96
2014	10.56	1.21	11.77
2015	19.61	0.93	20.54
2016	18.72	1.64	20.36
2017	23.63	1.43	25.06
2018	30.36	1.62	31.98
2019	42.25	2.49	44.74
Total	171.69	15.36	187.05

Source: California Energy Commission

⁷ "Market rate" refers to projects not eligible to receive the affordable housing incentive rate.

Table 5 below illustrates cumulative NSHP incentive funds paid over the program term through the end of 2019. By the end of 2019, \$217.40 million in incentives were paid in total. Affordable housing projects accounted for \$34.50 million or 15.87% of this total amount.

Table 5: Cumulative Incentives Paid (All Years)

Year	Market Rate (Millions)	Affordable Housing (Millions)	Total (Millions)
2008	\$3.22	\$0.53	\$3.75
2009	\$9.12	\$1.91	\$11.02
2010	\$10.08	\$4.82	\$14.90
2011	\$6.86	\$2.23	\$9.07
2012	\$14.64	\$3.51	\$18.15
2013	\$22.60	\$6.42	\$29.02
2014	\$20.43	\$2.67	\$23.10
2015	\$28.96	\$1.60	\$30.56
2016	\$18.51	\$2.58	\$21.09
2017	\$17.45	\$2.02	\$19.48
2018	\$15.41	\$2.47	\$17.88
2019	\$15.63	\$3.75	\$19.38
Total	\$182.90	\$34.50	\$217.40

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 Resource Trust Fund (RRTF). To address a shortfall in program funding, the California Public Utilities Commission’s Decision 16-06-006 made available up to \$111.78 million in additional funding. This funding was collected from IOU ratepayers.

Prior to utilizing additional IOU sourced funding, the California Public Utilities Commission requires the NSHP to disburse all funding available through the RRTF.⁸

The accounting of RRTF/PGC and IOU funding through the end of 2019 is represented in Table 6 below.

Table 6: NSHP Program Funding Encumbered and Paid as of December 31, 2019

Funding Source	Encumbered	Paid
RRTF/ PGC Monies (Millions)	\$46.42	\$217.40
IOU Monies (Millions)	\$62.48	\$0

Source: California Energy Commission

⁸ Previously reserved and encumbered but undisbursed RRTF funding may become available due to changes in projects. Funding initially reserved for projects are reassessed during the payment claim. Final project incentives are based upon installed and third-party verified construction. Decreases in project incentives from the reserved amounts create additional funding availability.

CHAPTER 3:

Conclusion and Outlook

In 2019, the NSHP program staff approved 13,743 incentive payment claims representing \$19.38 million in incentive money and 44.74 MW of solar capacity. Based upon the reserved and installed MW capacities, the NSHP program is on track to install approximately 369 MW of solar electric capacity by 2021.

As the NSHP closes out, the CEC will continue its commitment to renewable energy. A goal of the NSHP program was to assist in the adoption of rooftop solar photovoltaic requirements, guiding California's transition to Zero Net Energy. On January 1, 2020, the *2019 Building Energy Efficiency Standards* went into effect, requiring the installation of solar photovoltaic systems on new homes.

The NSHP staff makes every effort to maintain a positive business relationship with incentive applicants. This applicant base consists of affordable housing applicants, custom homeowners, builders, and major program stakeholders. The NSHP staff provides applicants support to effectively navigate the NSHP process. This working relationship promotes the NSHP's commitment to exceptional service.