STATE OF CALIFORNIA GAVIN NEWSOM, *Governor*

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE

SAN FRANCISCO, CA 94102-3298

December 11, 2019

Agenda ID # 18017
Quasi-Legislative

TO PARTIES OF RECORD IN RULEMAKING 12-11-005:

This is the proposed decision of Commissioner Clifford Rechtschaffen. Until and unless the Commission hears the item and votes to approve it, the proposed decision has no legal effect. This item may be heard, at the earliest, at the Commission's January 16, 2020 Business Meeting. To confirm when the item will be heard, please see the Business Meeting agenda, which is posted on the Commission's website 10 days before each Business Meeting.

Parties of record may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure.

/s/ ANNE E. SIMON
Anne E. Simon
Chief Administrative Law Judge

AES:avsAttachmentCOM/CR6/avs**PROPOSED DECISIONAgenda ID #18017 (REV. 1)**
Quasi-Legislative
1/16/2020 Item 41

Decision **PROPOSED DECISION OF COMMISSIONER RECHTSCHAFFEN**
(Mailed 12/11/2019)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies, Procedures and	Rulemaking 12-11-005

Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues.

SELF-GENERATION INCENTIVE PROGRAM REVISIONS PURSUANT TO SENATE BILL 700 AND OTHER PROGRAM CHANGES

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SELF-GENERATION INCENTIVE PROGRAM REVISIONS PURSUANTTO SENATE BILL 700 AND OTHER PROGRAM CHANGES

Summary

This decision authorizes ratepayer collections of $166 million annually for the years 2020 to 2024 to fund the Self-Generation Incentive Program (SGIP) consistent with the authorization established by Senate Bill 700 (Wiener, 2018). This decision prioritizes allocation of 2020 to 2024 collections in accordance with Assembly Bill 1144 (Friedman, 2019) and to benefit customers impacted by Public Safety Power Shutoff (PSPS)[1] events or located in areas of extreme or elevated wildfire risk. It allocates 2020 to 2024 incentive funds in the following manner but requires SGIP program administrator to pause acceptance of incentive applications for renewable generation technologies using biogas sources that are already capturing methane until provided further guidance in a decision by this Commission:

- Energy storage technologies – 85 percent;
- Equity resiliency budget — 63 percent;
- Large-scale systems greater than 10 ~~kilowatt hours — 12~~kilowatts — 10 percent;
- Residential systems smaller than or equal to 10 ~~kilowatt hours~~kilowatts– seven percent;
- Residential equity budget – three percent;
- Heat pump water heaters – five percent; and,

[1] As described in Resolution ESRB-8 (July 12, 2018), California Public Utilities Code Sections 451 and 399.2(a) give electric utilities authority to shut off electric power in order to protect public safety, referred to as PSPS events. This authority allows a utility to proactively de-energize electric facilities in locations where weather conditions present extremely high risk of wildfires caused by blowing trees, branches, etc. contacting electric infrastructure. During a PSPS event, customers in the de-energized area have no electricity. Resolution ESRB-8 at 4 requires that a utility initiate a PSPS event only when all other options have been exhausted. http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M218/K186/218186823.PDF.

- Renewable generation technologies – ~~15~~12 percent.

The decision accelerates the effective date for acceptance of applications for small-scale equity resiliency residential projects to no later than March 1, 2020, expands eligibility to include customers subject to two or more discrete PSPS events and defines additional customers as having critical resiliency needs. This decision also accelerates the effective date for implementation of the greenhouse gas emission reduction requirements for new small-scale residential systems, adopted in D.19-08-001, to no later than March 1, 2020.

In addition, this decision:

- Increases the base renewable generation technology incentive to two dollars per watt with no step-down;
- Adopts resiliency incentive adders for general market large-scale energy storage and renewable generation technologies;
- Modifies the duration incentive step-down structure for general market energy storage projects;
- Eliminates the adjustment for the federal investment tax credit for equipment purchased after December 31, 2021;
- Creates two new residential energy storage incentive steps that decrease by five cents per watt-hour ($0.05/Wh);
- Authorizes SGIP program administrators to submit advice letters to transfer funds between energy storage and generation incentive budgets subsequent to December 31, ~~2023~~2022; ~~and~~
- Requires SGIP program administrators to submit an advice letter seeking suspension or modification of the developer cap for a specific incentive step under certain conditions;
- Specifies additional information and permitting requirements for general market energy storage and renewable generation systems intended to support customer resiliency.

This decision approves administrative budgets for Southern California Gas Company and the Center for Sustainable Energy of seven and 10 percent respectively, using 2020 to 2024 funds. It directs Pacific Gas and Electric Company (PG&E) and Southern California Edison Company to utilize accumulated unspent administrative funds remaining for the same purpose.

This decision directs a three-stage advice letter submittal process to support the SGIP program administrators opening the equity resiliency budget for residential customer applications no later than March 1, 2020 and for non-residential customers by April 1, 2020. It requires the SGIP program administrators to submit a Joint Supplement to PG&E advice letter 4191-G/5714-E et al. implementing the program changes to the equity resiliency budget for residential customers adopted in this decision within 12 days of Commission adoption of this decision, a Non-Residential Equity Resiliency Joint Tier 2 advice letter implementing the program changes to the equity resiliency budget for non-residential customers adopted in this decision no later than February 18, 2020, and a Joint Tier 2 Implementation advice letter revising the SGIP handbook to implement all other the program revisions and budgets adopted in this decision no later than 90 days from adoption of this decision.

This proceeding remains open.

1. Background

The California Public Utilities Commission (Commission) established the Self-Generation Incentive Program (SGIP) in 2001 in Decision (D.) 01-03-073 in response to Assembly Bill (AB) 970 (Ducheny, Stats. 2000, Ch. 329). AB 970 directed the Commission to provide incentives for distributed generation

resources to reduce peak energy demand. Since 2001, the Legislature has refined and extended the SGIP several times.[2]

In 2018, Senate Bill (SB) 700 (Wiener, 2018) was adopted by the legislature and signed into law. The resulting Public Utilities Code § 379.6(a)(2) authorizes the Commission to extend annual ratepayer collections for the SGIP from December 31, 2019 to December 31, 2024 by up to $166 million annually and to extend administration of the program from January 1, 2021 to January 1, 2026. [3] SB 700 requires the Commission to return to ratepayers any ~~unreserved incentive~~unallocated funds remaining as of January 1, 2026.

AB 1144 (Friedman, 2019) requires the Commission to allocate at least 10 percent of annual SGIP ratepayer collections for the 2020 calendar year for the installation of energy storage and other distributed energy resources for customers that operate critical facilities or critical infrastructure serving communities in High Fire Threat Districts (HFTDs) to support resiliency during de-energization events. AB 1144 requires the Commission, when allocating these funds, to prioritize projects for eligible customers meeting certain criteria and to evaluate these SGIP projects against these criteria no later than December 31, 2022.[4]

In addition, § 379.6 directs the Commission to undertake the following regarding the SGIP:

1. Increase deployment of distributed generation and energy storage systems to facilitate the integration of those

[2] Notably, AB 1685 (Leno, 2003), AB 2778 (Lieber, 2006) and SB 412 (Kehoe, 2009) collectively shifted SGIP's focus from peak demand reduction towards reducing criteria pollutants and greenhouse gas (GHG) emissions. SB 861 and AB 1478 authorized SGIP collections through 2019 and administration through 2020 and required a number of other changes. AB 1637 (Low, 2016) authorized the Commission to double annual collections through 2019 as compared to calendar year 2008.

[3] Hereafter, all code section references are to the Public Utilities Code unless otherwise noted.

[4] Section 379.9(b). Section 6.4 of this decision discusses these criteria.

resources into the electrical grid, improve efficiency and reliability of the distribution and transmission system, and reduce emissions of greenhouse gases, peak demand, and ratepayer costs (§ 379.6(a)(1));

2. Ensure an equitable distribution of the costs and benefits of the program (§ 379.6(a)(1));
3. Ensure that SGIP ~~program~~ costs are not collected from customers participating in the California Alternate Rates for Energy program (§ 379.6(k));
4. Ensure that distributed generation resources are made available in the program for all ratepayers (§ 379.6(i));
5. Consider the relative amount and cost of GHG emission reductions, peak demand reductions, system reliability benefits, and other measurable factors when allocating program funds between eligible technologies (§ 379.6(h)(2));
6. Evaluate the success of the SGIP based on the amount of GHG emission and criteria pollutant reductions, the amount of energy reductions measured in energy value, the amount of customer peak demand reductions, the capacity factor,[5] and the value to the electrical transmission and distribution system measured in avoided costs of transmission and distribution upgrades and replacement (§ 379.6(l)); and
7. Limit eligibility to SGIP generation technology incentives as of January 1, 2020 to only technologies using 100 percent renewable fuels (§ 379.6(m)).

An April 15, 2019 *Assigned Commissioner's Ruling Seeking Comment on Implementation of Senate Bill 700 and Other Program Modifications* (April Ruling) requested party feedback on questions to guide implementation of SB 700 and to consider other program modifications.[6] The April Ruling solicited party input on

[5] Defined in § 379.6(l) as the ratio of the electricity generated by the distributed energy resource generation projects receiving incentives from the program to the electricity capable of being produced by these projects.

[6] *Assigned Commissioner's Ruling Seeking Comment on Implementation of Senate Bill 700 and Other Program Modifications,* April 15, 2019.

the future direction of the SGIP in a wide range of areas. A number of parties filed opening and reply comments.[7]

Decision (D.) 19-08-001 *Approving Greenhouse Gas Emission Reduction Requirements for The Self Generation Incentive Program Storage Budget* (GHG Decision) addresses the requirements of SB 700 that energy storage systems receiving SGIP incentives reduce GHG emissions. D.19-09-027 *Establishing A Self-Generation Incentive Program Equity Resiliency Budget, Modifying Existing Equity Budget Incentives, Approving Carry-Over Of Accumulated Unspent Funds, And Approving $10 Million To Support The San Joaquin Valley Disadvantaged Community Pilot Projects* (Equity Resiliency Decision) addresses issues identified in the April Ruling pertaining to the SGIP equity budget and implementing components of AB 1144. The Equity Resiliency Decision modifies equity budget program requirements and establishes a $100 million equity resiliency budget targeting vulnerable customers and customers operating critical facilities or critical infrastructure that are located in Tier 3 and Tier 2 HFTDs.

This decision addresses the remaining requirements of SB 700 and AB 1144 and adopts additional program modifications to improve the ability of the SGIP to meet its goals.

[7] On May 30, 2019, 18 parties filed comments in response to the ruling, including San Jose Clean Energy Authority, Sonoma Clean Power Authority, Peninsula Clean Energy Authority and Silicon Valley Clean Energy Authority, (collectively, Joint Community Choice Aggregators, or Joint CCAs), California Solar and Storage Association (CALSSA), the Center for Sustainable Energy (CSE), the California Clean Distributed Generation Coalition (CCDC), GRID Alternatives and California Housing Partnership Corporation (GRID/CHPC), Southern California Edison Company (SCE), California Energy Storage Alliance (CESA), Sunrun Inc. (Sunrun), Sierra Club and Natural Resources Defense Council (SC/NRDC), Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SoCalGas), the California Public Advocates' Office (Cal Advocates), and the National Fuel Cell Research Center (NFCRC), Bloom Energy, Doosan Fuel Cell America (Doosan) and FuelCell Energy (collectively Joint Fuel Cell Parties or JFCP). On July 12, 2019, SC/NRDC, the CCDC, PG&E, CSE, San Diego Gas & Electric Company (SDG&E), Tesla, GRID, SCE, CESA, CALSSA, A.O. Smith, SoCalGas, Sunrun and the JFCP filed reply comments. Marin Clean Energy filed reply comments on June 14, 2019. D

2. Issues Before the Commission

The issues to be determined in this decision are the following:

1. The amount of ratepayer collections for the SGIP for the years 2020 to 2024;
2. The allocation of newly collected funds across eligible SGIP technologies and customer sectors;
3. Program and incentive modifications to improve the ability of SGIP to meet its goals and to provide resiliency services to customers impacted by Public Safety Power Shutoff (PSPS) or other outage events; and,
4. Modifications to administrative budget allocations and requirements.

3. 2020 to 2024 Ratepayer Collections

D.17-04-017 authorized new SGIP ratepayer collections of $166 million annually for the years 2017 through 2019. The April Ruling requested party comment on the following questions:

- What criteria should the Commission use to determine ratepayer collection levels for years 2020-2024?
- Based on your proposed criteria, should the Commission authorize further collections for SGIP? If so, at what level, and in which years?
- Should the Commission authorize the carry-over of accumulated SGIP funds at the end of 2019 for subsequent years? If so, should the Commission reduce the annual collection in 2020 by the amount carried over?

The central criteria to determine new ratepayer collections for the years 2020 through 2024 are the achievements of the SGIP against adopted goals and whether the Commission finds that the SGIP ~~program~~ can continue to usefully advance these goals. This decision also prioritizes allocation of incentive funds to customers most impacted by PSPS events or located in areas of extreme or elevated wildfire risk.

D.16-06-055 adopts three co-equal SGIP ~~program~~ goals and two principles for program design, consistent with statute. These are:

1. Environmental benefits: the reduction of GHG emissions and criteria pollutants and the limitation of other environmental impacts, such as water usage;
2. Grid support: the reduction or shift of peak demand, improved efficiency and reliability of the transmission and distribution system, lowered grid infrastructure costs, the provision of ancillary services, and ensuring the reliability of customer distributed energy resources;
3. Market transformation: supporting technologies with the potential to thrive in future years without rebates;
4. Maximizing ratepayer value; and
5. Providing for equitable distribution of benefits among customer classes.

In comments, parties representing the energy storage industry, environmental organizations, and CSE support extending the current level of annual collections by authorizing $166 million in annual collections for the 2020 to 2024 period. These parties suggest that further investment is needed to continue to develop the energy storage market, particularly energy storage installation businesses that must invest significant resources to develop the technical expertise necessary to thrive in this industry. Parties also cite the important role of storage in integrating solar energy into the grid, and the fact that energy storage resources support increased resiliency to de-energization events during times of increased wildfire risk.

Parties opposing the full $166 million in annual collections for the 2020 to 2024 period authorized in SB 700 include Cal Advocates, PG&E, SoCalGas and SDG&E. These parties argue that SGIP's GHG emissions reduction performance remains unproven and that program administrators (PAs) have significant accumulated unused funds. Cal Advocates argues that authorizing the collection of additional funds for storage technologies is not warranted at this time because SGIP storage technologies have not yet been shown to reduce GHG emissions. SCE recommends the Commission reconsider the collections authorized in SB 700 in two years.

We direct PG&E, SCE, SoCalGas and SDG&E to annually collect $166 million from their customers from 2020 through 2024 for the SGIP. As we affirmed in D.17-04-017, the Commission continues to see value in SGIP and expects this value to continue through 2025.[8] Energy storage offers customers the resiliency benefits of delivering electricity during PSPS events.[9] SGIP equity resiliency and equity budget incentives allow low-income and vulnerable customers and disadvantaged communities the opportunity to access benefits that would otherwise be unavailable to them due to the relatively high cost of the installed technology. In addition, energy storage systems receiving SGIP incentives support integration of renewable energy into the grid.

[8] SB 700 extends administration of incentive applications through January 1, 2026.

[9] By resiliency benefits, we mean here the opportunity for customers to have some amount of electricity when the grid shuts down.

SGIP also plays a central role in nurturing developer and installer networks for on-site behind-the-meter energy storage. These networks will support continued growth in California's energy storage market when the SGIP ends. As observed by CSE, "SGIP incentives provide…support so that manufacturers, developers and system operators of distributed resources can gain crucial experience without undertaking insurmountable risk."[10]

Authorizing new annual ratepayer collections of $166 million between 2020 and 2024 allows the Commission to prioritize allocation of new SGIP funds to customers most impacted by PSPS events, supports market transformation, maximizes ratepayer value, ensures the continued provision of grid services and provides for the equitable distribution of benefits.

We disagree with Cal Advocates and the investor-owned utilities (IOUs) that either no or only limited ratepayer collections should be authorized at this time. Although this would reduce ratepayer impacts in the short term, SB 700 requires the return of ~~unreserved~~unallocated SGIP ~~incentive~~ funds to ratepayers as of January 1, 2026. This mitigates the risk of over-collecting. In addition, waiting two to three years to authorize additional collections as suggested by SCE creates unnecessary uncertainty regarding the stability of SGIP funding, which is particularly important for large-scale projects that have longer planning horizons.

We also do not agree with Cal Advocates that continuing existing levels of ratepayer collections are not justified because of SGIP technologies' GHG emissions performance. After an extensive technical working group process, the Commission in the GHG Decision revised SGIP energy storage guidelines to meet the statutory requirement that SGIP storage systems reduce GHG

[10] CSE, Comments on April Ruling, May 30, 2019 at 2.

emissions. The rules will soon go into effect, so it is premature to reach the conclusion put forth by Cal Advocates. As provided for in the GHG Decision, if subsequent impact evaluations show that SGIP GHG emission reductions goals have not been met, the Commission will revisit our adopted GHG requirements.

D.17-04-017 continues the methodology used in D.14-12-033 to divide annual SGIP collections amongst PG&E, SCE, SDG&E and SoCalGas based on the proportionate share of energy efficiency funding adopted by the Commission in D.06-12-033 and D.06-01-024. We find no need to change the existing process, which works well. Accordingly, annual SGIP collections for the years 2020 to 2024 shall be allocated as follows:[11]

Table 1: Authorized Annual SGIP Ratepayer Collections, 2020-2024

Program Administrator	Percent[12]	Annual Collection (in $ millions)	Total Collection (in $ millions)
PG&E	44	$~~73.04~~72	$~~365.2~~360
SCE	34	$~~56.44~~56	$~~282.2~~280
SDG&E	13	$~~21.58~~22	$~~107.9~~110
SoCalGas	9	$~~14.94~~16	$~~74.7~~80
Total	100	$166	$830

The Equity Resiliency Decision authorizes the carry-over of approximately $471 million in accumulated unspent SGIP funds at the end of 2019 for subsequent years, with approximately $70 million of this for administrative budgets. In line with our reasoning above, we do not reduce annual collections between 2020 and 2024 by the amount of funds carried over. However, Section 3 considers accumulated unused funds in the context of allocating funds across eligible SGIP technology and administrative budgets for the 2020 to 2024 period.

[11] Note that Table 1 reflects the total funding authorized 2020-2024, including administrative budget allocations using 2020 – 2024 collections.

[12] D.06-01-024 at 7 (Table 2) first adopted these PA contribution ratios for the California Solar Initiative; D.06-12-003 at 32-33 adopted them for the SGIP.

3.1. Cost Allocation Across Customer Classes

D.16-06-055 directs PG&E, SCE, SoCalGas and SDG&E to file Tier 3 advice letters to implement § 379.6(a)(1), which requires the Commission to ensure an equitable distribution of the costs and benefits of SGIP.[13] Resolution E-4926, adopted April 26, 2018, directs PG&E, SCE, SoCalGas and SDG&E to allocate SGIP costs on the basis of the actual benefits resulting from the disbursement of SGIP incentives over the previous three years in PA service territories and to update this allocation annually, on a rolling basis, to account for changes in eligibility and market factors until the program sunsets and unless extended.[14] As mentioned earlier, § 379.6(a)(2) requires the return to ratepayers of any ~~unreserved~~unallocated SGIP ~~incentive~~ funds remaining as of January 1, 2026.

The customer cost allocation method directed in Resolution E-4926 has worked well to ensure the equitable distribution of the costs and benefits of the SGIP as required in § 379.6(a)(1) and we see no reason to modify this approach. SGIP PAs are also correctly implementing § 379.6(k) via the Public Purpose Program charge.

We direct PG&E, SCE, SoCalGas and SDG&E to each submit a Tier 1 Budget advice letter summarizing the 2020 to 2024 ratepayer collections approved here no later than 90 days after Commission adoption of this decision. PG&E, SCE, SoCalGas and SDG&E shall include in their Budget advice letters an updated cost allocation across customer classes, based on the actual benefits resulting from the disbursement of SGIP incentives over the previous three years in its service territories. PG&E, SCE, SoCalGas and SDG&E shall continue to allocate costs on a rolling basis annually to account for changes in eligibility and

[13] D.16-06-055, Ordering Paragraph 4.
[14] *See* Resolution E-4926 at http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M213/K658/213658920.PDF.

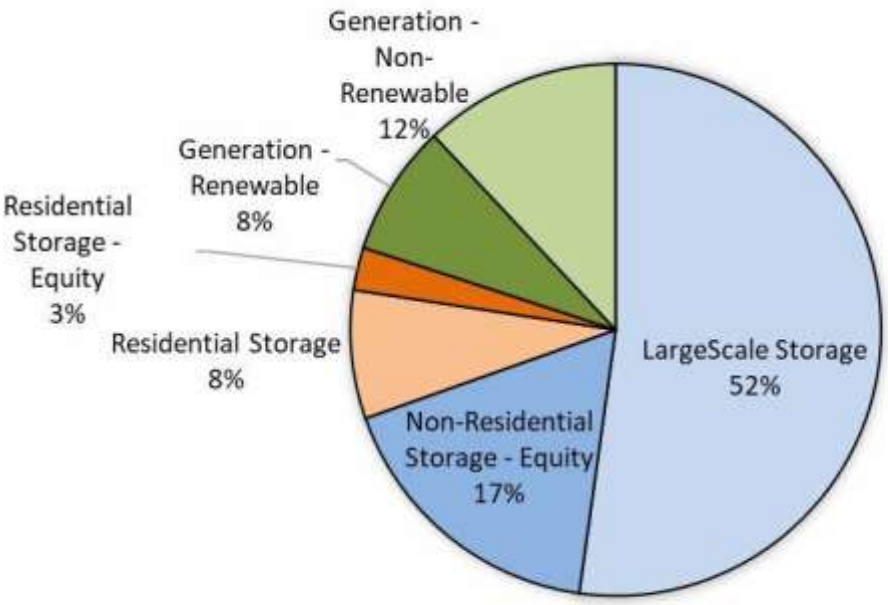
market factors, until the program sunsets. In addition, PG&E, SCE, SoCalGas and SDG&E shall indicate in their Budget advice letters, and their next available rate proceedings, their commitment to return to ratepayers all ~~unreserved~~unallocated SGIP ~~incentive~~ funds remaining as of January 1, 2026.

4. Distribution of SB 700 Funding

D.16-06-055, D.17-04-017 and D.17-10-004 established SGIP funding allocations across eligible technologies and customer sectors. D.16-06-055 and D.17-04-017 collectively allocated 80 percent of the total 2017-2019 SGIP budget for storage technologies and 20 percent for generation technologies. D.17-04-017 allocated 10 percent of the 2017 - 2019 storage budget to residential projects equal to or smaller than 10 kilowatts (kW) and D.17-10-004 reserved funds for equity budget customers within the residential and large-scale storage budgets. Figure 1 summarizes the current allocation of SGIP funds.[15]

[15] *See* also April Ruling.

Figure 1: Current SGIP Funding Allocations



The April Ruling requested party comment on whether the Commission should modify the budget allocation between storage and generation projects and between residential and non-residential storage projects for funds collected in 2020-2024.

Section 379.6(h)(2) requires the Commission to consider the following when allocating program funds between eligible technologies:

- The relative amount and cost of GHG emission reductions;
- Peak demand reductions;
- System reliability benefits; and
- Other measurable factors.

Based on statutory requirements, the Commission's adopted SGIP goals, and party comments, our primary considerations to determine SGIP budget allocations for the 2020 – 2024 period are: (1) the performance of eligible technologies in advancing SGIP goals to date and their anticipated future

performance; (2) anticipated future need and demand for eligible technologies; and, (3) maximizing ratepayer value to provide community benefits.

4.1. Renewable Generation Technologies

In comments, parties were split on whether allocations to generation technologies should decrease or increase. SC/NRDC state that directed biogas projects do not produce incremental renewable energy benefits and represent a windfall for gas companies. These parties recommend the Commission eliminate directed biogas projects as an eligible SGIP technology and allocate just three percent of new collections to renewable generation projects that use on-site biofuels. Sunrun and CESA oppose further budget allocations to generation technologies based on lack of demand. These parties observe that generation technologies comprised less than one percent of total SGIP reservations in 2018.

CSE, CCDC and JFCP recommend increasing the budget allocation for generation technologies and reducing the allocation for energy storage technologies. These parties' rationale is that biofuel projects need larger incentives to encourage developers to bring new projects online and to transform the market so that all fuel cell and combined heat and power (CHP) technologies become 100 percent renewable in the future. They state that the primary driver of low participation in the generation budget in recent years has been the high cost and limited availability of renewable fuels. We discuss this issue more in Section 4.2. SCE and CALSSA recommend retaining the current energy storage and generation budget allocations.

The *2016-2017 SGIP Incentive Program Impact Evaluation* (2016-2017 Report) found that generation technologies reduced GHG emissions during 2016-2017. It found that on-site biogas projects reduced GHG emissions the most and found similar results for reduction of criteria pollutants. ~~In addition, the~~The 2016-2017

Report found that SGIP on-site biogas projects using methane venting as the baseline produced over ten times as many GHG emission reductions per megawatt hour (MWh) of energy generated as did SGIP biogas projects using "flaring" (hereafter referred to as "collect/use/destroy") as the baseline.[16] It further found that "directed biogas in 2017 resulted in a small increase in GHG impacts due to biogas contracts expiring."[17] To date, all SGIP projects using v ented methane as the baseline have been located on dairy farms.[18]

The 2016-2017 Report attributes nearly half of all peak demand reduction from SGIP projects to electric-only fuel cells, while energy storage technologies achieved just one-tenth of that amount.[~~16~~19] The 2016-2017 SGIP Report did not assess system reliability benefits. Section 10 discusses additional conclusions from the 2016-2017 Report on renewable generation projects in detail in response to comments on the proposed decision from SC/NRDC.

The 2017 *SGIP Advanced Energy Storage Impact Evaluation* (2017 Storage Report) found that large-scale and residential energy storage SGIP projects increased GHG emissions.[~~17~~20] However, the recent GHG Decision extensively modified SGIP GHG emission reduction requirements to address this problem.

~~On balance~~Upon a careful review of the issues, we find that, on balance, a ~~15~~12 percent allocation of 2020 to 2024 collections to renewable generation

[16] 2016-2017 SGIP Report at 6-13; CARB's Landfill Methane Regulation standards apply to landfills over a certain size and quality of gas and apply to the large majority of landfills in California. Landfills to which the regulations apply must have a gas collection system that either collect the gas for beneficial use or destroy it in an enclosed combustion system. The SGIP 2016-2017 Report and the 2018 SGIP Renewable Fuel Use Report refer to any project w here gas is required to be collected for beneficial use or destroyed as "flaring." For greater a ccuracy, this decision hereafter refers to "flaring" as "collect/use/destroy." h ttps://ww3.arb.ca.gov/regact/2009/landfills09/landfillfinalfro.pdf.

[17] 2016-2017 SGIP Report at 6-14.

[18] SGIP Renewable Fuel Use Report, No. 27 (2018), Appendix A, available here: https://www.cpuc.ca.gov/General.aspx?id=7890

[~~16~~19] 2016-2017 SGIP Report at ES-4, Figure 6-10 at 6-12 and Figure 6-6 at 6-7.

[~~17~~20] GHG Decision at 5.

projects is reasonable. A 15 at this time. However, we direct SGIP PAs to pause acceptance of incentive applications for renewable generation technologies that use collect/use/destroy as a baseline until such time as this Commission provides additional guidance on SGIP generation technology program requirements in a decision. We intend to open a new SGIP rulemaking in early 2020, and this issue will be a priority. Section 10 provides a detailed discussion of party comments on the proposed decision that inform the approach taken here.

A 12 percent allocation balances the slow uptake of generation incentives in recent years with a relatively strong GHG performance by thesesome generation technologies and future promise of growth. In addition, thesefuels. Renewable generation technologies may be able to provide resiliency benefits in areas most affected by PSPS events. A 1512 percent allocation results in nearly $129$104 million in renewable generation technology incentive funds over the coming five-year period, should stimulate developer interest, and should allow for a significant number of projects. Section 5.2 increases renewable generation technology incentive levels with the same aim.

4.2. Energy Storage Technologies

The Equity Resiliency Decision reallocated accumulated unspent generation incentive funds to establish a $100 million equity resiliency budget but did not establish allocations for either the equity resiliency or the equity budget using 2020 to 2024 ratepayer collections.

The 2019 SGIP Energy Storage Market Assessment and Cost Effectiveness Report (2019 Report) released December 9, 2019 provides information on current market conditions and key drivers of the cost-effectiveness of energy storage over time. However, the findings in the 2019 report lend themselves to multiple

interpretations about the likely future cost-effectiveness and market transformation potential of residential and large-scale storage systems. While the 2019 Report provides insight into the current and potential future state of energy storage, we find here that the key factors in determining the 2020 to 2024 storage budget allocations are anticipated customer need, demand, and community benefits. The greatest immediate need is for the SGIP to support the ability of customers with critical resiliency needs to install on-site storage or renewable generation and, in this way, to provide community benefits.

For purposes of the equity resiliency budget, the Equity Resiliency Decision defines residential customers with critical resiliency needs as customers residing in a Tier 3 or Tier 2 HFTD and one of the following: (1) eligible for the equity budget; (2) eligible for the medical baseline program, as defined in D.86087, 80 CPUC 182: or, (3) a customer that has notified their utility of serious illness or condition that could become life-threatening if electricity is disconnected, as defined in D.12-03-054.[18][21] The Equity Resiliency Decision defines non-residential customers with critical resiliency needs as those located in a Tier 3 or Tier 2 HFTD that that provide critical facilities to a community located in a Tier 3 or Tier 2 HFTD and eligible for the equity budget. The Equity Resiliency Decision also defines customers living in Tier 3 or Tier 2 HFTDs that have reached an "incentives reserved" stage in one of two ratepayer-funded low-income solar programs as eligible for the equity resiliency budget.[19][22]

We allocate 63 percent of 2020 to 2024 ratepayer collections for SGIP incentives to the equity resiliency budget. A 63 percent allocation to the equity

[18][21] Equity Resiliency Decision (D.19-09-027) at A1.

[19][22] Equity Resiliency Decision (D.19-09-027) at A2. For purposes of SGIP equity resiliency budget eligibility, the Equity Resiliency Decision defines the eligible ratepayer-funded low-income solar programs as the Single Family Affordable Solar Homes (SASH) and SASH for disadvantaged communities (DAC-SASH) programs.

resiliency budget prioritizes customers with the greatest immediate need for on-site storage and advances the Commission's SGIP goals. An equity resiliency budget allocation of 63 percent will help establish developer networks that can continue to serve such communities when the SGIP program sunsets. As explained later, this decision also expands eligibility for the equity resiliency budget by adding customers whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives (*see* Section 6.2.1).

We also allocate three percent of 2020 to 2024 collections to the "regular" equity budget, a level sufficient to maintain funding for this budget category at approximately three percent of the total 2019-2024 SGIP budget. This allocation will ensure that the opportunity for SGIP participation by low income residential customers is maintained over time.

We do not authorize any funding from 2020 to 2024 collections for the large-scale storage equity budget at this time. Although the Equity Resiliency Decision significantly increased incentives levels to eligible equity budget customers, we do not yet have data indicating how much demand will increase as a result. In the event of increased customer demand for large-scale storage equity budget, section 8 authorizes additional fund shifting authority for SGIP PAs to respond to observed market demand.

WeIn response to party comments on the proposed decision, we reduce funding allocations to general market large-scale storage systems to 1210 percent of 2020 to 2024 collections allocated to incentives, down from the current 52 percent. Combined with the approximately $217 million and $53 million in accumulated, unspent large-scale storage general market and equity budget funds, large-scale energy storage projects have access to approximately $368351

million in project incentives through 2025. This significant amount of funding is sufficient to encourage developer investment and is consistent with party comments summarized in section 10 regarding the total SGIP budget allocations to achieve program goals.

We decrease the existing residential storage budget allocation of eight percent only slightly to seven percent. As discussed in Section 5.1.2, this decision adopts a new incentive level for Step 6 small residential storage projects of 20 cents per watt-hour ($0.20/Wh). At this incentive rate, a median 13.2 kilowatt hour (kWh), two-hour residential storage system would receive a $2,640 incentive or about 20 percent of the median $13,500 cost of a residential system.
Our adopted 2020 to 2024 residential storage budget allocation provides for a total budget of approximately $60 million for the 2020 to 2025 period and incentive funds for approximately ~~30,000~~26,000 new residential systems across Step 6 and Step 7.[~~20~~23]

There is high demand for residential SGIP incentives currently.[~~21~~24] Thus, a seven percent residential budget allocation using 2020 to 2024 incentive funds balances evidence of significant, ongoing customer demand for general market residential storage systems with other priorities.

We ~~do not~~ establish a ~~specific~~ 2020 to 2024 budget allocation for general market heat pump water heaters (HPWH) of five percent, at this time. ~~The~~In addition, the Equity Resiliency Decision approved a HPWH budget of $4 million for equity budget customers ~~and~~, yielding an adopted HPWH budget of $44.7

[~~20~~23] As of late November 2019, nearly 7,300 small residential storage systems have received SGIP incentives. https://www.selfgenca.com/documents/reports/statewide_projects (accessed November 26, 2019).

[~~21~~24] As of late November 2019, Step 5 of all PAs' residential storage budgets are fully reserved and over 1,380 customers are waitlisted for incentives. https://www.selfgenca.com/documents/reports/statewide_projects (accessed November 26, 2019).

million between 2020 and 2025. As directed in D.19-09-027, Commission staff and PAs will hold a workshop in 2020 to explore policies to facilitate participation of this technology in the SGIP. ~~The Commission~~Consistent with party comments in section 10, allocating SGIP funding from other categories to the HPWH budget promotes SGIP goals.

HPWH deployment may provide GHG reductions that significantly exceed the five-kilogram carbon dioxide per kWh (kg CO_2/kWh) required for storage system by this Commission in the GHG Decision. The potential grid reliability, utility customer and GHG benefits of HPWHs cannot be realized without a meaningful funding allocation, including through dedicated funding in the SGIP. We may revisit the question of ~~future, dedicated~~additional HPWH budget allocations subsequent to the workshop and related processes. In addition to the guidance provided in D.19-09-027, this workshop will consider whether SGIP should require use of controls to ensure HPWH re-heating off-peak. We also note that, as in the past, thermal energy storage systems remain eligible for all categories of energy storage incentives, if they meet other applicable requirements.

4.3. Administrative Budgets

4.3.1. Accumulated Unused Funds

Currently, seven percent of the SGIP budget for each PA is set aside for program administration, including general administration, marketing, education and outreach (ME&O) and evaluation, monitoring and verification (EM&V) costs.[~~22~~25] However, administrative funds collected annually through 2024 must cover administrative costs incurred for up to eight years past the date the last SGIP application will be accepted — January 1, 2026. PA administrative costs incurred past January 1, 2026 include EM&V activities, maintenance of the SGIP

[~~22~~25] D.17-04-017 at 3.

application database, and the distribution of performance-based incentives for five years following the installation of systems receiving incentives in late 2025. In addition, EM&V for any given year can take up to 18 months and the Equity Resiliency Decision directed a range of ME&O activities using administrative budget funds.[23][26]

Table 2 below shows PA administrative budgets, estimated annual administrative expenditures averaged over the past three years, and the estimated amount of unused funds accumulated in administrative budgets since the program's inception. The estimated amount of unused funds is based on collections and spending reported prior to November 23, 2019, but some expenditures may not yet be reported. [24][27] Thus, actual values for available funds are likely lower.

Table 2: PA Administrative Annual Collections, Annual Spend, and Unused Funds

Program Administrator	Annual Admin Collections for 2017-2019	Est. Annual Admin Spend (Averaged Over 2016-2018)[25][28]	Est. Unused Admin Funds Accumulated to Date[26][29]
PG&E	$5,040,000	$2,980,000	$26,708,673
SCE	$3,920,000	$2,330,000	$31,589,564
CSE	$1,540,000	$1,440,000	$2,561,400
SoCalGas	$1,120,000	$977,000	$7,573,622
Statewide	**$11,620,000**	**$7,727,000**	**$68,433,259**

As of December 2019, PG&E and SCE have over $26 million and $31 million, respectively, in their administrative budgets, primarily because these PAs rarely spend their full, allocated annual administrative budget. Conversely,

[23][26] D. 19-09-027 at 128.

[24][27] PAs report administrative and incentive costs regularly to Energy Solutions, the third-party contractor that manages the SGIP database and public reporting of SGIP statistics. *See* SelfGenCA.com.

[25][28] Source: PA estimates provided to Energy Division staff by January 23, 2019.

[26][29] Source: PA Budget Details (Internal Only), SelfGenCA.com (accessed November 24, 2019).

CSE and SoCalGas are closer to exceeding their current administrative allocations. CSE has expressed concern that its annual seven percent administrative allocation is insufficient to cover administrative costs that are fixed regardless of the volume of incentives processed.

4.3.2. Program Administrator Allocations

The April 2019 Scoping Ruling asked parties the following questions:

1. How should the Commission address the large existing balances in PG&E and SCE's administrative budgets? Should the Commission direct PG&E and SCE to transfer administrative funds to their incentive budgets, cover future administrative expenditures using the existing balances and lower future ratepayer collections accordingly, or a different option?
2. What other modifications, if any, should the Commission implement to ensure CSE and SoCalGas collect sufficient funds to cover administrative costs through 2032 without unduly burdening ratepayers?
3. D.14-12-033 granted the PAs authorization to shift funding *from* administrative *to* incentive budgets via advice letter, with the caveat that sufficient funding must remain in the administrative budget to pay for any program evaluations or other reports required by the Commission or Energy Division.[~~27~~30] Should the Commission authorize the PAs to shift funding from incentive to administrative budgets via advice letter and, if so what criteria should the Commission use to evaluate the request?

Regarding the first question, we direct PG&E and SCE to use their remaining accumulated unspent administrative budgets to fund their SGIP administrative costs subsequent to December 31, 2019. Were the Commission to authorize expenditure of seven percent of PG&E and SCE's 2020 through 2024 budget allocations of $365.2 million and $282.2 million respectively (*see* Table 1), this would result in five -year administrative budgets for these PAs of $25.6

[~~27~~30] D.14-12-033 at 6.

million and $19.8 million respectively. Rather than allocating a portion of 2020 to 2024 collections toward PG&E and SCE's administrative costs, these companies should simply use their existing unused administrative funds. This approach is simple, straightforward and maximizes the funds available to ratepayers of these companies for equity resiliency and other SGIP incentives.

In comments, Cal Advocates and PG&E recommend that the Commission direct PG&E to return PG&E's accumulated unspent administrative funds to ratepayers, but we decline to do so. Our approved approach maximizes the value of SGIP to PG&E and SCE ratepayers because it maximizes funding for customers in immediate need of SGIP incentives for resiliency purposes while simultaneously advancing the SGIP's statutory goals.

SoCalGas does not request additional administrative budget at this time and shall continue with a seven percent allocation for the 2020-2024 period.

Regarding the second question, we increase CSE's allocation for administrative funds from seven to 10 percent for the 2020-2024 period. CSE should have access to a larger administrative budget to ensure its capacity to process the large volume of residential applications experienced in recent years—twice the volume of the previous 15 years. Unlike the IOU PAs, CSE lacks a large institutional base of resources to leverage towards SGIP administration. The GHG Decision, the Equity Resiliency Decision, and this decision add administrative complexity to the SGIP ~~program~~ and all PAs need sufficient funds to undertake the activities the Commission requires of them.

In addition, each SGIP PA shall allocate approximately 10 percent of their adopted annual administrative allocations to the customized Marketing, Education and Outreach (ME&O) Plan required in D.19-09-027 and should work to update the ME&O Plan on an annual basis. PG&E and SCE shall estimate an

annual administrative allocation for this purpose as approximately one-fifth of the accumulated unused funds that we have approved in this decision for their administrative costs subsequent to 2019. We provide further guidance on Commission expectations for the ME&O Plan in section 10.

Table 3 summarizes administrative and incentive budget allocations from the 2020 to 2024 collections for CSE and SoCalGas. Excluding administrative budget allocations, the total statewide SGIP incentive budget available from 2020 to 2024 collections is approximately $814 million.

Table 3: CSE and SoCalGas Administrative and Incentive Budgets

	Total 2020 – 2024 Allocation ($ millions)	Administrative Allocation ($ millions)	Incentive Allocation ($ millions)
CSE	$107.9	$10.79	$97.11
SoCalGas	$74.7	$5.23	$69.47

4.4. Adopted 2020 to 2024 Budget Allocations

Table 4 summarizes our adopted budget allocations using funds collected during 2020 to 2024 period and presents these alongside remaining accumulated unspent funds as of September 2019.

Table 4: 2020 to 2024 Adopted Allocations and Total Incentives Budgets

	Currently Authorized		Adopted Allocation of 2020-2024 Collections		Total Incentive Funds Available (2019-2025)	
	Percent[28][31]	Budget as of September ~~2019~~[29]2019[32] ($ millions)	Percent	Total Amount (2020-2024) ($ millions)	Budget ($ millions)	Percent
Renewable generation	20	$6,760,301	~~15~~12	$~~122,097,150~~97,677,720	$~~128,857,451~~104,438,021	~~11~~9
Large-scale storage	52	$216,818,321	~~12~~10	$~~97,677,720~~81,398,100	$~~314,496,041~~298,216,421	~~26~~25
Equity- Large Scale	17	$52,852,387	0	$0	$52,852,387	4
Residential storage	8	$3,086,504	7	$56,978,670	$60,065,174	5
Equity-residential	3	$7,231,691	3	$24,419,430	$31,651,121	3

[28][31] Authorized in D.16-06-055, D.17-04-017 and D.17-10-004 as discussed above.
[29][32] Adopted in the Equity Resiliency Decision (D.19-09-027).

Equity Resiliency		$100,000,000	63	$512,808,030	$612,808,030	50[30]50[33]
HPWH (General)		$0	5	$40,699,050	$40,699,050	3 1
San Joaquin Valley Pilots		$10,000,000	0	$0	$10,000,000	
HPWH (Equity)		$4,000,000	0	$0	$4,000,000	
San Joaquin Valley Pilots		$10,000,000	0	$0	$10,000,000	1
Total	**100**	**$400,749,204**	**100**	**$813,981,000**	**$1,214,730,204**	**100**

To streamline the advice letter submittals required to implement this decision and those required to implement D.19-09-027, we require a three-stage submittal process. This three-stage process supports the SGIP PAs fully opening the equity resiliency budget for residential customer applications no later than March 1, 2020 and opening the equity resiliency budget for non-residential customers by April 1, 2020.

First, PG&E, SCE, SoCalGas and CSE shall submit a Joint Tier 2 Implementation advice letterSupplement to PG&E 4191-G/5714-E et. al, submitted on December 17, 2019 pursuant to D.19-09-027, further revising the SGIP handbook to implement the program revisions adopted in this decision specific to equity resiliency budget residential customers, within 12 days of Commission adoption of this decision. Second, PG&E, SCE, SoCalGas and CSE shall submit a Non-Residential Equity Resiliency Joint Tier 2 advice letter revising the SGIP handbook to implement the program revisions adopted in this decision specific to equity resiliency budget non-residential customers on February 18, 2020. Finally, PG&E, SCE, SoCalGas and CSE shall submit a Joint Tier 2 Implementation advice letter revising the SGIP handbook to implement all other program revisions and budgets adopted in this decision no later than 90 days from adoption of this decision.

[30] The actual amount is 50.45 percent, rounded to 50 percent.
[33] The actual amount is 50.45 percent, rounded to 50 percent.

5. Program and Incentive Modifications

As of December 2019, all SGIP PAs are in Step 5 for residential storage incentives but insufficient funding remains in this step, so over 1,380 projects have been waitlisted as of December 2019.[3134] The reverse is true for large-scale storage technologies and for generation technologies. PG&E is in Step 2 of its large-scale storage budget and the other SGIP PAs are in Step 3. In addition, all PAs are in Step 1 of their generation technology budgets.

The April Ruling requested party comment on the reasons for the low participation levels in the generation and large-scale storage budgets asking:

1. What are the main drivers for low participation in the generation and large-scale energy storage budgets beginning in 2017?
2. What program changes should the Commission consider, if any, to increase subscription in the generation and large-scale storage budgets?
3. Are modifications to the incentive levels adopted in D.16-06-055 and D.17-04-017 warranted?
4. Should the Commission adopt additional incentive steps in the storage or generation budgets?
5. Should the Commission continue stepping down storage incentive levels by $0.05/Wh and generation incentive levels by $0.10/Wh?

The following sections adopt modifications to program requirements, incentive levels and incentive step-down structures for energy storage and generation technologies and allocate 2020 to 2024 ratepayer collections across incentive steps.

[3134] https://www.selfgenca.com/documents/reports/statewide_projects (accessed November 26, 2019).

5.1. Energy Storage Technologies

5.1.1. Large-Scale Energy Storage Incentives

The Commission in D.16-06-055 and D.17-04-017 modified large-scale storage technology incentive levels as summarized in Table 5. D.17-04-017 reduces SGIP incentives for large-scale storage projects utilizing the federal Investment Tax Credit (ITC).[3235] Modifications to the current program requirements, incentive levels and/or the incentive structure for large-scale energy storage systems should aim to reduce or eliminate barriers to participation.

Table 5: Current Large-Scale Energy Storage Incentive Structure

	Step 1 ($/Wh)	Step 2 ($/Wh)	Step 3 ($/Wh)	Step 4 ($/Wh)	Step 5 ($/Wh)
Large-scale storage	0.50	0.40	0.35	0.30	0.25
Large-scale storage + ITC	0.36	0.29	0.25	0.22	0.18

In comments, CSE and CALSSA identify the major barriers to large-scale storage as long project development lead times, exacerbated by interconnection and application processing delays, and permitting complications. Parties also point to uncertainties regarding new GHG requirements—since updated in the GHG Decision— and how changes in peak hours and demand charges will impact the value proposition of energy storage as barriers to large-scale storage project development. Tesla states that changes in peak hours and demand charges have "had a significant role in reduced demand for storage solutions in the non-residential context" because they have reduced the value of solar production, which has in turn impacted the economics of storage paired with

[3235] *See* D.17-04-017, Table 6 (slow adoption) and D.16-06-055 Tables 1 and 2. *See* Statewide Announcement on May 15, 2017 establishing a lower incentive rate for Step 2 Large-Scale Storage https://www.selfgenca.com/home/about/.

solar.[3336] CESA asserts that decreases in SGIP incentives for large-scale storage have outpaced declines in storage system costs, resulting in large-scale storage projects being uneconomic even with incentives.

Several parties state that the decline of the federal ITC to 10 percent in 2022 will negatively impact the economics of large-scale storage projects and that SGIP incentives should be increased. PG&E recommends against increasing large-scale storage incentives, observing that incentives currently offset about 40 percent of the project cost for a large-scale system and that investor certainty is more important than incentive levels. PG&E and SCE recommend moving to an annual incentive step-down structure rather than the current step-down of incentives based on the volume of demand for incentives. PG&E states that this change would reduce administrative complexity for PAs and add certainty for applicants.

To address a potential barrier in a precautionary manner, we eliminate the ITC adjustment to large-scale general and equity budget storage incentives, effective for equipment purchased after December 31, 2021. We also eliminate the ITC adjustment for large-scale equity resiliency and equity budget storage projects for equipment purchased after December 31, 2021. The SGIP PAs shall add a question about system purchase date to large-scale storage incentive applications. We agree that recently adopted changes in peak hours and demand charges, new GHG requirements and the significant reduction to the ITC may impact the economics of large-scale storage projects but cannot at this time precisely predict how. However, long project lead times mean that the decrease in ITC in the coming years will soon or may already have a chilling effect on

[3336] Tesla Opening Comments at 3.

large-scale storage project development.[3437] Further, we decline to raise incentive levels for large-scale storage technologies, as we do not have enough information to determine that large-scale storage incentives are too low.

We retain the existing large-scale storage incentive structure adopted in D.16-06-055. The current incentive structure supports market transformation by encouraging a competitive application process and this goal outweighs the potential administrative benefits of moving to an annual step-down structure as proposed by PG&E and SCE. The Commission in D.16-06-055 adopted the current step-down structure in specifically to link declining incentive levels with the volume of incentives awarded.

We allocate the nearly $98 million in 2020 to 2024 collections for large-scale storage incentives equally across the existing Step 3 to Step 5 (*see* Table 4). Allocating 2020 to 2024 collections equally across the existing large-scale energy storage incentive steps reasonably integrates new and existing unused funds and provides stability. We direct the SGIP PAs to revise the 20 percent developer caps based on the new total statewide budgets adopted for large-scale storage Step 3 through Step 5.

5.1.2. Residential Energy Storage Incentives

The residential storage incentive structure adopted in D.16-06-055 and D.17-04-017 is summarized in Table 6.[3538]

[3437] Less than half of SGIP large-scale storage projects approved from 2017 through 2019 used th e ITC. However, storage must be paired with solar to receive the ITC, and nearly 70 percent of large-scale SGIP storage projects paired with solar approved during 2017-2019 used the ITC. SGIP Project Database (Internal Only), SelfGenCa.com (accessed November 21, 2019).

[3538] *See* D.17-04-017, Table 6 and D.16-06-055 Tables 1 and 2. D

Table 6: Residential Energy Storage Incentive Structure

	Step 1 ($/Wh)	Step 2 ($/Wh)	Step 3 ($/Wh)	Step 4 ($/Wh)	Step 5 ($/Wh)
Residential storage (<=10 kW)	$0.50/Wh	$0.40/Wh	$0.35/Wh	$0.30/Wh	$0.25/Wh

Parties generally support adding additional incentive steps to the residential storage budget, declining at a rate of either $0.05/Wh per step or $0.02/Wh per step. Sunrun recommends not reducing incentive steps below $0.20/Wh, stating that a level below this amount would make residential storage projects uneconomic.

We continue the residential budget's existing $0.05/Wh incentive step-down structure through 2025. In order to maximize the number of customers able to access incentives, we authorize two additional steps, Steps 6-7, and allocate the 2020 to 2024 funds allocated to the residential storage budget equally across these two steps. Our adopted approach continues the $0.05/Wh step-down adopted in D.16-06-055 and continues the equal allocation across residential incentive steps adopted in D.17-04-017. This approach continues a stable structure with a successful track record.

Table 7 summarizes our approved residential storage budget allocation across incentive steps using funds collected from 2020 to 2024.

Table 7: Residential Storage Incentive Step Allocation (2020 to 2024 Collections)

	Step 6	Step 7
Residential storage (<=10 kW)	$0.20/Wh	$0.15/Wh
Budget Allocation ($ millions)	$28.49	$28.49

We do not approve Sunrun's suggested $0.02/Wh incentive step-down rate or a floor of $0.20/Wh for residential incentives because we do not have

evidence that an incentive level lower than $0.20/Wh will make residential storage systems uneconomical. Demand for residential SGIP storage incentives has been high in the last year. In addition, the SGIP 2017 Impact Evaluation found that a primary value obtained by residential customers installing storage is the system's ability to provide backup power.[3639] This suggests some residential customers remain willing to invest in storage regardless of energy bill savings or payback period.

5.1.3. Equity Resiliency Incentives

Table 8 summarizes equity resiliency and equity budget incentive levels as approved in the Equity Resiliency Decision. The Equity Resiliency Decision did not approve a step-down structure for equity resiliency incentives and we do not adopt one here.

Table 8: Equity Resiliency and Equity Budget Storage Incentive Levels

	Incentives (no step-down)
Equity resiliency incentives	$1.00/Wh
Equity budget incentives	$0.85/Wh

We direct SGIP PAs to allocate the full nearly $513 million equity resiliency budget approved here to the single incentive level approved in the Equity Resiliency Decision. In addition, as discussed in section 10, SGIP PAs shall update the SGIP handbook to remove sizing limitations based on inverter size for equity resiliency projects and projects using the resiliency incentive adder. This change will help ensure that projects intended for resiliency purposes can size systems more appropriately to on-site needs.

In addition, we clarify that specific resiliency projects may receive full incentives for a system that is sized above peak load if this is necessary due to modular component sizes to accommodate the customer's peak load. However,

[3639] SGIP 2017 Storage Impact Evaluation at 1-24 and 1-27.

the project must demonstrate proof of this need before the incentive can be paid. Apart from these two changes, incentive awards for resiliency projects shall continue to be based on existing SGIP sizing rules.[40] Section 10 discusses this issue further.

5.2. Renewable Generation Technologies

D.16-06-055 adopted updated incentive levels for generation technologies, as summarized in Table 9. All PAs are currently in Step 1 for generation technologies.

Table 9: Generation Technology Incentive Levels Adopted in D.16-06-055

	Step 1		Step 2		Step 3	
	Incentive per Watt (W) Capacity	**Max. Incentive w/ Biogas Adder**	**Incentive per W Capacity**	**Max. Incentive w/ Biogas Adder**	**Incentive per W Capacity**	**Max. Incentive w/ Biogas Adder**
Wind	$0.90	n/a	$0.80	n/a	$0.70	n/a
Waste heat to power	$0.60	n/a	$0.50	n/a	$0.40	n/a
Pressure reduction turbine	$0.60	$1.20	$0.50	$1.10	$0.40	$1
Internal Combustion CHP	$0.60	$1.20	$0.50	$1.10	$0.40	$1
Microturbine CHP	$0.60	$1.20	$0.50	$1.10	$0.40	$1
Gas turbine CHP	$0.60	$1.20	$0.50	$1.10	$0.40	$1
Fuel cell CHP	$0.60	$1.20	$0.50	$1.10	$0.40	$1
Fuel cell electric only	$0.60	$1.20	$0.50	$1.10	$0.40	$1

Section 379.6(m) requires that as of January 1, 2020, generation technologies receiving SGIP incentives must only use renewable fuels. In addition, D.16-06-055 requires all SGIP renewable generation projects to meet the California Energy Commission's renewable portfolio standard requirements.

In comments on the April Ruling, CCDC and JFCP state that the entry into force of § 379.6(m) combined with a limited availability of directed biogas delivered by pipeline has stymied SGIP renewable generation projects. JFCP

[40] SGIP handbook Section 5.3.2, https://www.cpuc.ca.gov/sgip/.

states that directed biogas for renewable generation projects is uneconomical because the California Low Carbon Fuel Standard and the Federal Renewable Fuel Standard offer large incentives for bio-methane for transportation uses, which has driven up demand and prices. Reflecting this barrier, developers have submitted only 17 valid SGIP renewable generation technology applications since the Commission adopted D.16-06-055.[37][41]

CCDC and JFCP request that the Commission ameliorate these barriers by increasing incentives for SGIP biofuel generation projects. JFCP states that the SGIP incentive of $3.11/W for on-site CHP fuel cells and directed biogas projects in place prior to D.16-06-055 serves as a benchmark. SoCalGas observes that the SGIP generation technology incentive level of $2.00/W that existed in 2011 induced substantial participation by renewably fueled generation projects at that time. CSE also supports increasing incentives for renewable generation projects.

Sierra Club/NRDC recommend that the Commission remove directed biogas projects from SGIP eligibility. Sierra Club/NRDC state that tracking and verification systems are not sufficient to ensure that directed biogas projects produce incremental environmental benefits. They also observe that the SGIP 2018 *Self-Generation Incentive Program: Renewable Fuel Use Report No. 27* found that most directed biogas contracts only require the project to use renewable fuels for five years, after which the project operates on 100 percent natural gas.[38][42]

We modify the incentive levels approved in D.16-06-055 to return incentives for renewable generation projects to $2.00/W with no step-down structure. Renewable generation projects offer value to California's grid and

[37][41] SGIP Project Database, SelfGenCa.com (accessed November 21, 2019).

[38][42] Sierra Club/NRDC, Opening Comments at 12; 2018 *Self-Generation Incentive Program: Renewable Fuel Use Report No. 27* at 1-6; https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Demand_Side_Management/Customer_Gen_and_Storage/SGIP-RenewableFuel-Rpt27.pdf

provide reliable GHG emission reductions. Because we have limited information on the incentive level necessary to cover the increased costs of renewable biofuels, we set incentive levels lower than the $3.11/W recommended by the JFCP but approve a significant renewable generation resiliency adder in Section 7.2.2. This approach balances a lower general market incentive level with a higher resiliency incentive adder to encourage developers to prioritize outreach to customers with critical resiliency needs.

As mentioned, § 379.6(m) requires that as of January 1, 2020, generation technologies receiving SGIP incentives must only use renewable fuels. This requirement applies to all new SGIP generation projects on an ongoing basis and for as long as the equipment is used. To enforce this, we continue the current requirement that all renewable generation projects that use directed biogas provide a contract for biogas supplies for a minimum of 10 years, prior to receiving an SGIP incentive. Limiting SGIP renewable generation projects to those with a 10-year contract for biogas supply and operation is a reasonable way to ensure compliance with § 379.6(m)'s requirement that SGIP generation projects only use renewable fuels.[~~39~~43]

To address the need for tracking and verification systems that ensure that directed biogas projects produce incremental environmental benefits, we direct the SGIP PAs to monitor the directed biogas market and authorize them to submit a Tier 2 advice letter to propose appropriate additional tracking and verification requirements for SGIP ~~directed~~ biogas projects, as needed.[~~40~~44] The SGIP PAs shall submit an advice letter if, in consultation with Commission staff,

[~~39~~43] SGIP handbook at 83, https://www.cpuc.ca.gov/sgip/.

[~~40~~44] Renewable energy credits obtained through the Western Regional Energy Generation Information System for electricity generated may be sufficient to establish environmental benefits.

they come to believe that existing directed biogas tracking and verification systems are not ensuring incremental environmental benefits.

As discussed in Sections 4.1 and 10, however, this decision directs SGIP PAs to pause acceptance of incentive applications for biomethane generation technologies using collect/use/destroy as the baseline until this Commission provides additional guidance in a decision we will issue in the next SGIP rulemaking.

6. Equity Resiliency Program Updates

6.1. Application Start Date

The Equity Resiliency Decision at Ordering Paragraph (OP) 3 directs the SGIP PAs to begin accepting applications for equity resiliency budget incentives no later than April 1, 2020. The Equity Resiliency Decision at OP 3 also authorizes the SGIP PAs to accept equity resiliency budget applications on January 1, 2020 or any other time prior to April 1, 2020 if the PA implements the requirements for new residential customers adopted in the GHG Decision at the same time.[41][45] The Equity Resiliency Decision at OP 4 authorizes the SGIP PAs to start implementing the requirements of the GHG Decision for new residential customers on January 1, 2020, or any other time prior to April 1, 2020, if they are able to do so.

In view of the changed circumstances resulting from the October 2019 PSPS events, we direct the SGIP PAs to begin accepting equity resiliency applications for small-scale residential (*i.e.* less than or equal to 10 kW) projects no later than March 1, 2020. We also accelerate the effective date for launch of the GHG requirements approved in the GHG Decision for new small-scale residential SGIP projects to no later than March 1, 2020. The scale and scope of PSPS events of late 2019 warrant accelerating these launch timelines to help

[41][45] Equity Resiliency Decision, OP 3.

eligible customers install on-site batteries as soon as possible prior to the 2020 critical wildfire season. The PAs are able to accelerate the timeframe to accept small-scale residential equity resiliency budget applications and the effective date for GHG requirements for small-scale residential systems and should do so to support customers with critical resiliency needs.

6.2. Eligibility Criteria

The Commission in the Equity Resiliency Decision defined customers with critical resiliency needs and approved such customers as eligible for the equity resiliency budget. The Equity Resiliency Decision defines residential customers with critical resiliency needs as customers residing in a Tier 3 or Tier 2 HFTD and one of the following: (1) eligible for the equity budget; (2) eligible for the medical baseline program, as defined in D.86087, 80 CPUC 182; or (3), a customer that has notified their utility of serious illness or condition that could become life-threatening if electricity is disconnected, as defined in D.12-03-054. The Equity Resiliency Decision defines non-residential customers with critical resiliency needs as those located in a Tier 3 or Tier 2 HFTD that provide critical facilities or critical infrastructure to a community located in a Tier 3 or Tier 2 HFTD that is eligible for the equity budget. The Equity Resiliency Decision also approves customers living in Tier 3 or Tier 2 HFTDs that have incentives reserved in the SASH or DAC-SASH low-income solar programs as eligible for the equity resiliency budget.

6.2.1. Customers De-energized During PSPS Events

In comments on the April Ruling, many parties urged the Commission to grant customers eligibility for the equity resiliency budget if they are based in "PSPS zones." The Equity Resiliency Decision did not approve this approach

based on a lack of information, stating that PSPS zones "have not yet been clearly defined nor reviewed by the Commission."[42][46]

PSPS events in 2019 impacted over a million PG&E customers in unprecedented large-scale shut-offs of power.[43][47] The broad geographic area in which electric meters were de-energized during the events gave the Commission a better sense of the potential impacts of PSPS events outside Tier 3 or Tier 2 HFTDs. This new information justifies updating the eligibility criteria for the SGIP equity resiliency budget to better include customers most impacted by PSPS events. In addition, on October 14, 2019, Commission President Marybel Batjer outlined steps to minimize the size and magnitude of future PSPS events.[44][48]

We update the equity resiliency budget eligibility criteria adopted in the Equity Resiliency Decision to include any customer whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives that meets the other equity resiliency budget eligibility criteria. We update the equity resiliency budget eligibility criteria to the following:

> Residential customers with critical resiliency needs— defined as customers residing in a Tier 3 or Tier 2 HFTD or whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives and one of the following: (1) eligible for the equity budget; (2) eligible for the medical baseline program, as defined in D.86087, 80 CPUC 182; or (3), a customer that has notified their utility of serious illness or condition that could become life-threatening if electricity is disconnected, as defined in D.12-03-054.

[42][46] Equity Resiliency Decision at 23.

[43][47] *See* http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M317/K701/317701325.PDFe *Order Instituting Investigation on the Commission's Own Motion on the Late 2019 Public Safety Power Shutoff Events* at http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M319/K527/319527577.PDF

[44][48] http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M317/K701/317701325.PDF

> Non-residential customers with critical resiliency needs – defined as customers that provide critical facilities or critical infrastructure to a community eligible for the equity budget and located in a Tier 3 or Tier 2 HFTD or whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives.
>
> Customers living in Tier 3 or Tier 2 HFTD or whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives who have incentives reserved in the SASH or DAC-SASH low-income solar program.

Expanding eligibility criteria for the equity resiliency budget to include customers whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives will help customers most at risk of having their electricity shut-off during PSPS events install on-site batteries prior to the 2020 critical wildfire season. In addition, limiting eligible customers to those whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives helps target the larger incentive funds to those customers most likely to be impacted by PSPS events in the future. The Commission has the authority to revise the eligibility criteria for the equity resiliency budget and should do so to be as responsive as possible to customers' needs for backup power during PSPS events. [45][49]

As indicated in the Equity Resiliency Decision, the Commission has not yet defined PSPS zones and this decision does not take this step. However, the IOUs have lists of customers whose electricity has been shut off during two or more discrete PSPS events and can further refine these lists as necessary.[46][50] We

[45][49] *See Opening Remarks of CPUC President Batjer* at the Emergency Meeting Called for October 18, 2019 and the *Governor's Letter to the CPUC*, sent October 14, 2019 at https://www.cpuc.ca.gov/deenergization/.

[46][50] *See Order Instituting Investigation on the Commission's Own Motion on the Late 2019 Public Safety Power Shutoff Events* at http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M319/K527/319527577.PDF.

understand that the approach adopted in this decision is a rough approximation and not a perfect indicator, but this method can be quickly implemented and is the best means available to identify customers most likely to be subject to PSPS events until better information becomes available. We will work toward developing a more refined method of identifying customers likely to have their electricity turned off during PSPS events in the future. Once identified, we will replace the criteria adopted in this decision with an updated approach. We also recognize that due to hardening of the distribution systems and other investments we may need to narrow the eligibility criteria because fewer areas may be subject to PSPS events in the future.

Until such time as we update our approach, IOU parties to this proceeding shall utilize lists of customer meters whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives when determining customer eligibility for equity resiliency incentives and shall further refine these lists to improve their accuracy as needed. ~~In addition, we~~We direct SDG&E and SCE to actively cooperate with CSE and SoCalGas respectively to support the timely validation of customer eligibility for the equity resiliency budget, including providing detailed information regarding customers subject to discrete PSPS events. We also direct SoCalGas to actively collaborate with the Los Angeles Department of Water and Power to identify customers whose electricity was turned off during two or more discrete PSPS events prior to applying SGIP incentives.

Finally, as discussed in section 10, we direct the electric IOUs to ensure there is a method for all customers, or their authorized representative, to identify the circuit they are served by from their bill or online, or otherwise and to verify if they were subject to two or more PSPS events. Provision of SGIP customer

eligibility information in a form other than through a publicly available map or list will support developer identification of eligible customers in an appropriate manner and help ensure customer use of the adopted resiliency incentives. The SGIP PAs shall revise the SGIP handbook to describe the methods.

We also direct electric IOUs to post on the SGIP portal a master list of all circuits that have had two or more PSPS events and the dates and times of the events. The electric IOUs shall update the lists within 30 days of any new PSPS event. In addition, as recommended by Sunrun, we direct SGIP PAs to work with Commission staff and the SGIP TWG to consider additional ways to facilitate developer identification of customers eligible for resiliency incentives that do not violate customer privacy or raise security concerns.

Further, as discussed in Section 10, each SGIP PA, including CSE in collaboration with SDG&E, should include its working definition of "discrete PSPS event" in the Joint Tier 2 Implementation advice letter required in this decision. To facilitate the objectives of this decision, the SGIP PAs and SDG&E should strive to use a standardized definition of this phrase to determine SGIP resiliency incentive eligibility, as practicable.

6.2.2. Additional Customers with Critical Resiliency Needs

This section adds several types of customers to the list of those with critical resiliency needs adopted in the Equity Resiliency Decision.[47~~51~~]

The October 2019 PSPS events revealed the centrality of grocery stores, corner stores, markets and supermarkets (jointly "markets") to customers' ability to withstand PSPS events. The PSPS events also highlighted the risk borne by

See also *PSPS Rollup Spreadsheet* at https://www.cpuc.ca.gov/deenergization/ and https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/News_Room/NewsUpdates/2019/De-energization%20Event%20History%20Thru%2019%20NOV%2019%20(as%20of%2022%20NOV%2019).xlsx

[47~~51~~] *See* D.19-09-027 at A-3 through A-4.

rural residents that source water from wells using electric pumps.[48][52] Currently, markets are not designated as critical facilities in the Equity Resiliency Decision nor are households with electric pumps explicitly eligible for the equity resiliency budget.

We add markets to the list of non-residential customers providing critical facilities or infrastructure adopted in the Equity Resiliency Decision, if the market is a small business that has average annual gross receipts of $15 million or less over the last three tax years, as measured at a single location. This is the same definition of "small business" adopted in D.17-01-004 to establish eligibility criteria for equity budget incentives. Adopting this definition here ensures that equity resiliency funds are directed to smaller businesses that lack the financial means to independently install on-site storage.[49][53] Designating markets as critical facilities for SGIP purposes supports residents of impacted communities to purchase necessities during PSPS events and, in some cases, to find an air-conditioned space.

We also define households relying on electric pump wells for water supplies residing in Tier 3 or Tier 2 HFTDs, or whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives as customers with critical resiliency needs and eligible for the equity resiliency budget incentives. Defining such customers as having critical resiliency needs helps address their drinking water, sanitation and fire response needs during a PSPS or other power outage event.

[48][52] Letter from Matt Kingsley, Member, Rural County Representatives of California to Honorable Benjamin Hueso, Chair, Senate Energy, Utilities and Communications Committee, November 5, 2019 (copied to CPUC Commissioners), at: https://www.rcrcnet.org/barbed-wire-november-08-2019#story-2

[49][53] *See* Decision 17-01-004, Conclusion of Law #9.

We define two additional types of customers as having critical resiliency needs. These are Independent Living Centers and Food Banks. During the October 2019 PSPS events, Independent Living Centers served as ad hoc PSPS centers for individuals living with disabilities, providing mobile backup services and support services.[5054] 29 U.S. Code § 796a defines a Center for Independent Living as a consumer-controlled, community-based, cross-disability, nonresidential private nonprofit agency for individuals with significant disabilities (regardless of age or income) that — (a) is designed and operated within a local community by individuals with disabilities; and (b) provides an array of independent living services, including, at a minimum, independent living core services as defined in 29 U.S. Code § 705(17).

Food Banks are essential sources of food for lower-income families during PSPS events or wildfires.[5155] 7 U.S. Code § 7501 defines a Food Bank as a public or charitable institution that maintains an established operation involving the provision of food or edible commodities, or the products of food or edible commodities, to food pantries, soup kitchens, hunger relief centers, or other food or feeding centers that, as an integral part of their normal activities, provide meals or food to feed need persons on a regular basis. It is reasonable to add Independent Living Centers and Food Banks as defined by federal statute to the list of non-residential customers with critical resiliency needs, and we do so here.

[5054] *See* PG&E Emergency Preparedness Resource Page for Individuals with Access and Functional Needs at https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/independent-living-centers.page (accessed November 26, 2019).

[5155] *See* California Health and Human Services Agency PSPS Resource Guide at https://www.chhs.ca.gov/blog/2019/10/25/public-safety-power-shutoffs-resource-guide/ (accessed November 26, 2019). D

We also clarify here that that electrical and critical load panel and wiring upgrade costs are allowable costs for equity resiliency and equity budget projects (*see* section 10).

7. Program Modifications to Support Resiliency Amongst General Market Customers

The April Ruling asked parties to comment on a series of questions relating to the value of storage for resiliency purposes during PSPS or other types of outages. The April Ruling asked:

1. Should the Commission seek to promote SGIP projects that provide resiliency benefits to customers and/or communities facing risks of a wildfire, wildfire-related de-energization events, or other adverse event?
2. Should the Commission adopt a "resiliency adder" to existing incentives for storage and/or generation projects that provide resiliency benefits to customers and/or communities to help address wildfire, wildfire-related de-energization event, or other risks? If so, what should be the eligibility criteria?
3.
4. Should projects receiving a resiliency adder be required to demonstrate or attest that they will provide resiliency benefits?
5. Should the Commission modify the existing SGIP incentive structure to facilitate storage projects that have a discharge duration that exceeds two hours?

7.1. Defining Non-Residential Customers with Critical Resiliency Needs

As discussed above, the Equity Resiliency Decision defines customers with critical resiliency needs that are eligible for the equity resiliency budget. Section 6.2 expands equity resiliency budget eligibility to include customers subject to PSPS events, markets, foodbanks, independent living centers, and customers relying on electric-pump wells for water supply. It is reasonable to similarly

define general market non-residential customers with critical resiliency needs and to offer them a resiliency incentive adder, with the exception that we do not adopt an "equity" requirement for the general market resiliency adder.

We define general market non-residential customers with critical resiliency needs as those customers that provide critical facilities or infrastructure to one or more communities in a Tier 3 or Tier 2 HFTD or a community with customers whose electricity was shut off during two or more discrete PSPS events. We clarify that if a non-residential customer with critical resiliency needs provides critical facilities or infrastructure to at least one community eligible for the equity budget, that non-residential customer is eligible for equity resiliency budget incentives. Reflecting the Equity Resiliency Decision as modified in Section 6.2, non-residential general market customers with critical resiliency needs include the following:

> Police stations; fire stations; emergency response providers as defined in D.19-05-042; emergency operations centers; 911 call centers, also referred to as Public Safety Answering Points; medical facilities including hospitals, skilled nursing facilities, nursing homes, blood banks, health care facilities, dialysis centers and hospice facilities; public and private gas, electric, water, wastewater or flood control facilities; jails and prisons; locations designated by the IOUs to provide assistance during PSPS events; cooling centers designated by state or local governments; ~~and,~~ homeless shelters supported by federal, state, or local governments; grocery stores, corner stores, markets and supermarkets that have average annual gross receipts of $15 million or less as calculated at a single location, over the last three tax years; independent living centers; and, food banks.

7.2. General Market Resiliency Adder

In comments on the April Ruling, most parties supported a $0.15/Wh incentive adder for SGIP storage projects intended to enhance customers' ability

to withstand PSPS and similar outages. The Equity Resiliency Decision adopted a $1.00/Wh incentive for the equity resiliency budget to address the barrier of lack of capital or financing faced by such customers. It approved access to the same incentive level for non-residential customers that serve equity budget-eligible communities at extreme or elevated risk of wildfire through the provision of critical facilities or infrastructure.

7.2.1. Large-Scale Storage Technologies

We approve a $0.15/Wh resiliency adder for general market large-scale storage projects for non-residential customers with critical resiliency needs. We do not approve a storage resiliency adder for general market residential customers.

The key consideration in establishing a general market resiliency adder is making on-site storage systems affordable for non-residential customers that provide critical facilities during PSPS events. Our adopted resiliency adder will cover approximately 50 percent of costs for large-scale storage technologies through Step 5. This effectively prioritizes use of SGIP incentives by the communities and businesses negatively impacted by PSPS and other outage events. This adder should encourage developers to focus their outreach on customers eligible for the resiliency adder and we expect that the majority of the general large-scale storage incentive funds will be awarded to projects that qualify for the resiliency adder.

We do not adopt a general market residential resiliency adder. As discussed earlier, there is substantial evidence of demand for residential storage incentives at present. Moreover, while general market residential incentives are still available without any income restrictions, it is appropriate to maintain the focus of the SGIP ~~program~~ on lower-income households that cannot afford

storage without significant subsidies. However, to encourage storage developers to target residential customers living in Tier 3 or Tier 2 HFTDs or residential customers whose electricity has been turned off during two or more discrete PSPS events, we adopt a "soft target" that half of the general market residential incentive budget will be used by residential customers that meet these criteria. SGIP PAs shall implement the "soft target" by pausing acceptance of SGIP applications from residential customers who do not live in a Tier 3 or Tier 2 HFTD, or who did not have their electricity turned off in two or more discrete PSPS events prior to applying for SGIP incentives, once the PA's incentive awards for such customers have reached 50 percent of that PA's available incentives for each residential incentive step.

Adopting a "soft target" for general market residential customers located in areas subject to PSPS events or that live in areas of extreme or elevated fire risk helps ensure that customers most likely to benefit from the resiliency services provided by storage learn about and use SGIP incentives. Commission staff should ensure that subsequent SGIP impact evaluation reports summarize performance in this area.

7.2.2. Renewable Generation Technologies

Section 5.2 adopts a general market generation technology incentive level of $2.00/W. This section considers a generation technology resiliency adder for customers with critical resiliency needs.

In comments on Equity Resiliency Decision, CCDC, JFCP and SoCalGas support significantly increasing incentives for renewable generation projects located in communities eligible for the equity budget or with critical resiliency needs. SoCalGas recommends adopting a base incentive of $4.50/W for equity budget generation projects and a $0.50/W resiliency adder for projects located in

communities with critical resiliency needs.[52][56] SoCalGas notes that a $4.50/W incentive level was adopted in D.09-09-048 to offset the cost of developing a generation project using renewable fuels and that the SGIP awarded 59 renewable generation incentives between 2010 to 2013.[53][57]

We adopt a renewable generation resiliency adder incentive of $2.50/W for renewable generation projects. Combined with the base incentive of $2.00/W, this results in an incentive of $4.50/W for renewable generation projects intended for resiliency purposes. Customers eligible for the equity resiliency budget and general market customers with critical resiliency needs as defined here are eligible for the renewable generation resiliency adder. Reflecting current SGIP policy, customers receiving SGIP renewable generation incentives, either with or without a resiliency adder, may apply for SGIP energy storage incentives up to a limit of $5 million per project.[54][58]

Renewable generation technologies can provide critical resiliency services to non-residential customers serving their communities during PSPS events. Providing a significant incentive adder for renewable generation projects for customers with critical resiliency needs supports such customers' ability to weather PSPS events and reflects the Commission's desire to prioritize use of SGIP incentives by customers facing wildfire related outages. We do not limit the renewable generation resiliency adder to only equity budget or equity resiliency customers for ease of administration and because this could be too restrictive to achieve the level of participation provided for in our approved budget.

[52][56] *See* "Comments on Proposed Decision Establishing a Self-Generation Incentive Program Equity Resiliency Budget, Modifying Existing Equity Budget Incentives, Approving Carry-Over of Accumulated Unspent Funds, and Approving $10 Million to Support the San Joaquin Valley Disadvantaged Community Pilot Projects" filed on August 29, 2019 by SoCalGas; *see* also JFCP and CCDC comments filed the same day.

[53][57] SGIP Project Database, SelfGenCa.com (accessed November 23, 2019).

[54][58] SGIP handbook at 27, available at https://www.selfgenca.com/documents/handbook/2019.

7.3. Additional Information Requirements

The Equity Resiliency Decision adopted additional information submittal requirements for all equity resiliency energy storage projects and all equity budget projects with a longer than two-hour discharge duration.[5559] These additional requirements are designed to ensure that projects intended for resiliency purposes are able to island and continue to operate when the distribution system is experiencing an outage.[5660]

Specifically, the Equity Resiliency Decision requires developers applying for the equity resiliency incentive or an equity budget project with a longer than two-hour discharge duration to:

1. Provide an estimate of how long a project's fully charged battery will provide electricity for the relevant facility average load during an outage;
2. Indicate whether a project's critical loads can and will be isolated;
3. Provide an estimate of how long the project's fully charged battery will provide electricity to critical uses during an outage;
4. Provide an estimate of how long the project can operate in less-than favorable circumstances, such as if an outage occurs when the battery has been discharged or during the winter (if paired with solar);
5. Summarize information given to the customer about how the customer may best prepare the storage system to

[5559] Equity Resiliency Decision (D.19-09-027) at A3-A4.

[5660] *See* the Equity Resiliency Decision (D.19-09-027) at 42. The term "island" and "islanding" as used in Equity Resiliency Decision describe the situation where a behind-the-meter battery system provides electricity to some or all of a customer's loads at that site during a grid outage. In contrast, the IOUs' Rule 21 Tariffs define islanding as "a condition on distribution provider's distribution system in which one or more Generating Facilities deliver power to customers using a portion of distribution provider's distribution system that is electrically isolated from the remainder of distribution provider's distribution system." *See* for example, PG&E's Rule 21 Tariff, Section C, available here: https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_21.pdf

provide backup power, in the case of a PSPS event announced in advance;

6. Attest to the truth of the information provided;
7. Provide an attestation from the customer indicating that he or she received this information prior to signing a contract; and
8. Demonstrate that an Authority Having Jurisdiction has approved plans showing that the system can operate in island mode, has inspected the system after installation and has authorized operation.[57][61]

As the Commission found in the Equity Resiliency Decision, expanding information submittal requirements for projects applying for resiliency adder incentives ensures that customers installing SGIP projects with the expectation that they will provide resiliency services are basing this on accurate information about both the capabilities and limitations of the system when the grid is down. We require the same safeguards for renewable generation projects applying for resiliency adder incentives to ensure that such systems are capable of islanding during an outage and that customers installing generation systems with the intent to use them during outages are aware of their capabilities and limitations.

The Equity Resiliency Decision required the SGIP PAs to develop standard forms for customer and developer attestations in consultation with the SGIP Technical Working Group, and to notify disability advocates of the opportunity to participate in the discussion. Requiring the same steps for general market energy storage and renewable generation projects applying for a resiliency incentive adder will help ensure that general market customers also benefit from the envisioned protections.

Similarly, the Equity Resiliency Decision reviewed Rule 21 interconnection tariff, national, state, local and SGIP rules and concluded that these are adequate

[57][61] *See* Equity Resiliency Decision (D.19-09-027) at A3-A4.

to address the safety risks posed by installing storage systems, including systems installed for resiliency purposes, and that there is no evidence that additional safety protocols are needed for SGIP systems using storage for resiliency purposes. As in the Equity Resiliency Decision, we find that Rule 21 interconnection tariffs, national, state, local and SGIP rules are adequate to address the safety risks posed by the installation of general market storage and renewable generation systems for resiliency purposes.

7.4. AB 1144 Requirements

AB 1144 states that the Commission must allocate at least 10 percent of ratepayer funds collected for SGIP in 2020 for storage or eligible distributed generation for customers that operate a critical facility or critical infrastructure serving communities in HFTDs to support resiliency during a de-energization event.[5862] This decision authorizes $166 million in annual collections from 2020 to 2024. AB1144 would require a 2020 allocation of $16.6 million to support resiliency. Adopted allocations far exceed this amount. The Equity Resiliency Decision and this decision approve approximately $202.6 million in incentives for the equity resiliency budget in 2020 ($100 million carried over from 2019 and $102.6 million in 2020). In addition, this decision approves over $236 million in 2020 for critical facilities that do not qualify for the equity resiliency budget but that do qualify for the resiliency adder for large-scale storage projects. With respect to incentives for distributed generation, this decision authorizes a resiliency adder for critical facilities that serve communities in HFTDs to support resiliency during a PSPS event. These incentives equal approximately $31.1 million in 2020.

[5862] *See* Public Utilities Code section 379.9(a).

AB 1144 states that in allocating funds collected from ratepayers between 2020 and 2024, the Commission must prioritize funding to projects for eligible customers that do all of the following:

1. Demonstrate a financial need;
2. Operate a critical facility or critical infrastructure serving communities in high fire threat districts during a deenergization event; and
3. Demonstrate coordination with the electrical corporation serving the customer's community, relevant local governments and the California Office of Emergency Services.[5963]

The Equity Resiliency Decision and this decision prioritize incentive allocations in accordance with the first two criteria. To address the third criteria, we direct SGIP PAs to include a question regarding the applicant's coordination with their local governments and the Office of Emergency Services in SGIP application materials for non-residential equity resiliency budget projects and projects applying for general market resiliency adder incentives. Projects that notify their local governments that they intend to or have installed on-site storage or renewable generation meet the criterion of demonstrating coordination with their local government and the Office of Emergency Services. Equity resiliency budget applicants must demonstrate through their response to this question that coordination has or will take place with their local government and the Office of Emergency Services and SGIP PAs shall deprioritize processing an application if the customer does not demonstrate this.

In addition, in accordance with AB 1144, the SGIP evaluation report issued in 2022 shall include an evaluation of the performance and impact of the

[5963] *See* Public Utilities Code ~~section~~Section 379.9(b)(2).

non-residential projects receiving funding from the equity resiliency budget in 2020, using the factors listed in the statute.[~~60~~64]

7.5. Duration Step Down Incentive Structure

The Commission adopted a duration step-down incentive structure for storage systems in D.16-06-055 to limit the proportion of incentives claimed by large projects utilizing economies of scale. The Equity Resiliency Decision modified this step-down structure for equity resiliency projects. Table 10 summarizes the current structure.

Table 10: Current Incentive Step Down Structure for Storage Technologies

Energy Storage Duration (per kW)	**Percentage of Full Incentive- General Market (adopted in D.16-06-055)**	**Percent of Full Incentive- Equity & Equity Resiliency Budgets (adopted in Equity Resiliency Decision)**
Zero to two hours	100 percent	100 percent
Two to four hours	50 percent	
Four to six hours	25 percent	50 percent
Greater than six hours	0 percent	0 percent

Parties strongly support modifying the general market energy storage incentive step-down structure to support longer duration storage that provides increased backup power for customers during outages.

We approve the incentive step-down structure adopted in the Equity Resiliency Decision for SGIP general market energy storage systems. The rationale provided in the Equity Resiliency Decision to support modifying the incentive step-down structure for equity budget and equity resiliency storage projects applies equally well to general market storage projects. Modifying the step-down in incentives for storage systems with longer than a two-hour discharge provides customers with more system design and configuration options to ensure they are able to meet their specific resiliency needs during PSPS and other outage events.

[~~60~~64] *See* Public Utilities Code Section 379.9(b)(4).

In addition, as required in Equity Resiliency Decision, all general market SGIP storage projects must meet all GHG emission reduction, cycling and other system and operational requirements adopted by this Commission. The Commission prohibited the use of SGIP incentives for projects intended to be used only or primarily to provide backup power in D.01-03-073. Longer duration SGIP storage projects are well suited to provide resiliency services during PSPS or other outage events but must also provide the grid and GHG emission reduction services required by § 379.6 and this Commission.

8. Incentive Application Processing Targets

In comments, CALSSA and CESA state that long administrative processing times create regulatory uncertainty for SGIP large-scale storage projects. CALSSA observes that average incentive processing times for large-scale and residential storage systems have increased significantly in the last two years. From 2018 through 2019, the average time from developer submission of a large-scale storage project application to incentive reservation was 97 days.[~~61~~65] These average incentive processing times are not consistent with our goal of providing SGIP incentives to enhance resiliency to PSPS events in time for the next critical fire season.

The Commission directs the PAs to adequately staff the SGIP with sufficient resources to advance an incentive from the time of its submittal to "in review" status within 10 days and to fully process incentive applications, excluding the time the application is in "suspended" status, within approximately 45 ~~days of receipt.~~ 60 days, on average. Further, the SGIP PAs shall work with stakeholders to develop reasonable timeline expectations for each step of the application review process and for SGIP PA response times to

[~~61~~65] SGIP Project Database, SelfGenCa.com (accessed November 21, 2019).

developer email inquiries. SGIP PAs shall prioritize processing equity resiliency incentive applications.

We direct the SGIP PAs to include in the Tier 2 Implementation advice letter required in this decision a summary of the steps they have and will take to accelerate incentive processing times and other key administrative functions as identified in prior decisions in R.12-11-005 (including the GHG Decision and Equity Resiliency Decision) and previous SGIP rulemakings. We direct the SGIP PAs to annually file a notice summarizing their average, fastest and slowest incentive processing times for all technology budget categories to the service list of R.12-11-005. The SGIP PAs shall also annually post this information to the SGIP website (currently www.selfgenca.com).

9. Fund Shifting Authority

D.16-06-055 authorizes SGIP PAs to file advice letters to transfer funds between the residential and non-residential storage budgets.[6266] In comments on the April Ruling, CSE requests that the Commission grant SGIP PAs additional advice letter authority to transfer funds between the generation and storage budgets. SCE requests PA authority to shift funds between all technology incentive budget categories. These PAs argue that this authority would maximize the flexibility of PAs to respond to market conditions and help ensure that large amounts of SGIP funds are not constrained in an individual technology budget category with little demand. CSE also requests authority to transfer funds from incentive to administrative budgets.

SGIP budget allocations approved in this decision should remain stable for several years to clearly signal available funding to developers. After that, providing PAs with the flexibility to alter budget allocations in response to market demand increases the effectiveness of the SGIP in its final years.

[6266] D.16-06-055 at 24.

Expressly authorizing SGIP PAs to propose shifting funds between generation and storage budgets and between storage budget sub-categories—in an advice letter subject to Commission review—enhances this effectiveness. The Commission's goal is for SGIP incentive funds to be exhausted by December 31, 2025.

With these caveats, CSE's and SCE's requests regarding transferring funds between incentive budget categories are reasonable and are granted. We authorize SGIP PAs to submit Tier 2 advice letters to transfer funds between technology incentive budgets after December 31, ~~2023.~~2022. An SGIP PA should submit such an advice letter if it has reason to believe based on market conditions that there are likely to be unreserved funds in a given technology budget at the end of 2025 in its service territory. An SGIP PA submitting a fund transfer advice letter should provide a compelling rationale for its proposal.

We do not approve CSE's request for PA authority to submit an advice letter to transfer funds from incentive to administrative budgets. Although our modifications to SGIP create some uncertainty regarding administrative budget requirements, we expect PAs to stay within their administrative budget allocations. We disagree with CSE that the Commission should revisit administrative budget allocations in two years, as this is not necessary and may also encourage excessive administrative cost increases.

10. Comments on Proposed Decision

The proposed decision in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on ~~_____ by _____ and reply comments were filed on _____.~~January 3, 2020 by SDG&E, PG&E,

SoCalGas, SCE, CSE, GRID, SC/NRDC, Sunrun, Tesla, CALSSA, CESA, Cal Advocates, CCDC, NFCRC, Marin Clean Energy (MCE), the Climate Center, Rural County Representatives of California (RCRC) and A.O. Smith. Reply comments were filed on January 8, 202 by SCE, SoCalGas, CESA, Cal Advocates, MCE, CCDC, CSE, Tesla, GRID, SC/NRDC, CALSSA and the City of San Jose. RCRC filed a motion for party status on December 30, 2019 and Bradford White Corporation, the Climate Center and Rheem Manufacturing Company filed motions for party status on January 3, 2020. The assigned ALJ issued an email ruling approving these motions for party status on January 15, 2020.

Party comments addressed a number of substantive and procedural issues and we have made several substantive and procedural modifications to the final decision in response.

1 . Renewable Generation and HPWH Technologies

Party comments on the proposed decision differ markedly on the question of the appropriate funding allocation level, eligibility criteria, incentive levels and other program requirements for renewable generation technologies. SoCalGas, NFCRC and CCDC advocate for increasing funding allocations and incentive levels for renewable generation technologies. SC/NRDC recommends reducing renewable generation budgets from 15 to five percent and establishing a HPWH budget of 10 percent of annual collections with the difference. Similarly, A.O. Smith suggests educing funding from the allocations included in the proposed decisions to provide 10 percent of annual collections to HPWH. City of San Jose i n reply comments supports A.O. Smith's proposal.

SC/NRDC also recommend limiting eligible renewable generation technologies to on-site generated fuel or, absent these changes, explicitly requiring retention and retirement of all environmental attributes of procured

biomethane, on-site visits to verify actual biomethane generation from contracted sources, and public disclosure of the sources and quantities of procured biomethane. SC/NRDC contend that the PD made factual errors to justify a renewable generation allocation of 15 percent.

Specifically, SC/NRDC indicate that the proposed decision inadvertently attributed significant GHG emission reductions to all biofuels projects whereas the 2016-2017 Report indicates that the GHG benefits of using directed biogas from landfills or wastewater treatment plants that would otherwise be captured are minimal and will decrease over time. SC/NRDC explain that regulations require the collection and beneficial use or destruction of methane from these types of methane sources and, as such, SGIP can only consider the use and associated emission reductions of CO_2 after the captured methane is combusted when estimating GHG benefits. Because of this, SC/NRDC observe that the sole GHG benefit of directed biogas projects is displacement of grid electricity, which is rapidly becoming less carbon intensive.

SC/NRDC observe that this GHG benefit from directed biogas projects is further undermined because SGIP projects only contract for renewable fuel for as long as necessary to receive incentive funding. As such, SC/NRDC assert, the proposed decision supports installation of generation that will revert to fossil fuel use upon expiration of SGIP reporting requirements. SC/NRDC cite the 2016-2017 SGIP Report, which found that, "most directed biogas projects have fulfilled their five-year terms and will likely continue operating on natural gas."[67] These parties go on to state that the highest GHG impact under SGIP has been from on-site biogas projects co-located at dairies and that this is because methane

[67] SC/NRDC "Comments on Proposed Decision" at 6; see also 2016-2017 SGIP Report at 1-6, Figure 6-11.

capture from dairies is not currently required so the baseline assumption is that the methane would otherwise be released (vented) into the atmosphere.

The second substantive set of concerns raised by SC/NRDC is that the proposed decision did not include verification of the source and retirement of environmental attributes for directed biogas that equal those adopted by the California Air Resources Board (CARB) for the Low Carbon Fuel Standard (LCFS). SC/NRDC observe that LCFS incentives vary depending on the carbon intensity of the source fuel whereas the SGIP has not taken this step. SC/NRDC further observe that CARB has classified biomethane fuel as "high risk" with "high potential for misreporting" and that CARB therefore requires rigorous verification protocols including on-site visits that are not required by SGIP.[68] SC/NRDC observe that CARB also requires the retirement of all environmental attributes associated with biomethane generation, including avoided fossil gas use and methane destruction where the methane would otherwise be vented.[69]

SC/NRDC state that, "in failing to require contracting and retirement of these attributes, SGIP enables their double counting, fails to ensure the integrity of asserted GHG benefits from biogas projects, and raises serious questions as to whether previously claimed GHG benefits from biogas projects have not also been claimed by other entities."[70] To address these concerns, SC/NRDC recommend that to the extent directed biogas projects remain eligible for a renewable generation incentive, the final decision should explicitly require retention and retirement of all environmental attributes of procured biomethane,

[68] SC/NRDC Comments on Proposed Decision at 7-8; California Air Resources Board, Biomass-Derived Fuels Guidance for California's Mandatory GHG Reporting Program at 7 (January 11, 2019), https://ww3.arb.ca.gov/cc/reporting/ghg-rep/guidance/biomass.pdf; California Code Regulations Section 95501(b)(3) and 40 C.F.R Section 80.1472.

[69] *Ibid; See* also California Code Regulations Section 95488.8(i)(2)(C).

[70] SC/NRDC, Comments on Proposed Decision at 8.

on-site visits to verify actual biomethane generation from contracted sources, and public disclosure of the sources and quantities of procured biomethane.

SC/NRDC also observe that in 2017 the California Energy Commission (CEC) restricted directed biogas projects for purposes of the Renewable Portfolio Standard (RPS) to those that demonstrate that they provide an environmental benefit to California, but that the SGIP has yet to take this step.

Finally, SC/NRDC assert that the market transformation potential for fuel cells is limited. To support this claim, these parties point to the proposed decision's use of an incentive level first adopted 10 years ago to inform the renewable generation resiliency incentive as evidence of the lack of change.

Based on these concerns, SC/NRDC recommend that the Commission redirect 10 percent of annual collections from the renewable generation budget to a HPWH set-aside. A.O. Smith and City of San Jose support a similar reallocation of SGIP collections to HPWH projects. SC/NRDC contend that HPWH deployment would provide GHG reductions that significantly exceed the 5 kg CO_2/KWh required for storage system by this Commission in D.19-08-001 and that HPWHs provide resiliency benefits by storing heated water. SC/NRDC state that the grid reliability, utility customer and GHG benefits of HPWHs will not be realized without a meaningful funding allocation.

SoCalGas, NFCRC and CCDC oppose SC/NRDC's recommendation to reduce the 2020 – 2024 renewable generation allocation to five percent in reply comments on the proposed decision, but do not address the substantive concerns summarized here. Therefore, the following discussion closely reviews SC/NRDC's assertions of factual error in the proposed decision.

We agree with SC/NRDC that the proposed decision was in error when it attributed equal GHG emissions reductions to all SGIP renewable fuel sources

rather than stating that the majority of SGIP renewable biogas project GHG emission reductions have originated from on-site projects with methane venting as the baseline.[71] Since 2006, SGIP has provided incentives to 10 dairy projects in PG&E territory and all of these projects use renewable biogas produced on-site to power internal combustion engines that produce electricity.[72] These on-site dairy projects are the only SGIP renewable biogas projects to date that have utilized venting as the baseline.[73]

In 2016 and 2017, these 10 projects produced 26 and 40 percent of total GHG emission reductions from SGIP renewable biogas projects respectively, although they represented just below five percent of total rebated capacity for SGIP renewable fuel projects at that time. In contrast, directed renewable biogas projects produced 24 and 13 percent of total GHG emission reductions from SGIP biogas projects in 2016 and 2017 respectively, while representing 33 percent of total rebated capacity for SGIP renewable biofuel projects. [74] The proposed decision erred by failing to recognize that Figure 6-2 in the 2016-2017 Report referred to GHG emission benefits produced by fuel cells using both non-renewable and renewable fuels, as was allowed for SGIP generation projects through 2019.

Our closer review of SGIP evaluation reports indicates that for projects using renewable fuels only, GHG emission reductions from projects using a

[71] 2016-2017 Report at 6-12, Figure 6-11.

[72] SGIP Renewable Fuel Use Report No. 27 (2018), Appendix A, available here: https://www.cpuc.ca.gov/General.aspx?id=7890.

[73] SGIP Renewable Fuel Use Report No. 27 (2018) at 2-3 states that the biogas source of directed biogas projects is not always known but that historically, the primary source of SGIP directed biogas has been landfill gas. The 2016-2017 Report at C-10 states that the baseline for out-of-state directed biogas could not be confirmed but due to financial constraints was assumed to be procured only from large biogas sources such as large landfills and the renewable fuel baseline assumed for all directed biogas projects is collect/use/destroy.

[74] 2016-2017 Report, 6-14, Figure 6-12, and Appendix C, Table C-4; SGIP Report No. 27 at 2-4, Figure 2-3.

vented biomethane baseline greatly exceeds those from projects using a capture/use/destroy biomethane baseline. SGIP technologies with collect/use/destroy the biomethane as the baseline achieved reductions of between 0.16 and 0.48 metric tons CO_2 per MWh in 2016-2017 whereas internal combustion engines with venting biogas baselines achieved GHG emission reductions of between 5.52 and 7.61 metric tons CO_2 per MWh. As asserted by SC/NRDC, this significant discrepancy is because where collect/use/destroy is assumed to already be required by regulation, GHG emission reductions from SGIP biogas projects comprise CO_2 only.[75] SGIP biomethane collect/use/destroy projects include combined heat and power and all-electric fuel cells and microturbines. Fuels for these technologies were derived from methane captured at landfill, wastewater treatment plant and food processing facilities that would otherwise have been collected and used for beneficial purposes or destroyed.[76]

SC/NRDC are also correct that SGIP rules currently require that directed biogas projects meet minimum renewable fuel use requirements for 10 years. This decision clarifies that new SGIP projects must use only renewable fuels on an ongoing basis and for as long as the equipment is used.[77] However, SC/NRDC are correct and that enforcement of renewable fuel use after the initial 10 year period as envisioned in the proposed decision would be challenging.

[75] On a per mass unit basis, the global warming potential of methane (CH_4) is 21 times that of CO_2 (2016-2017 Report at 6-12). While the report does not explicitly state it, this would be on a 100-year basis for comparing the global warming potential of carbon dioxide and methane.

[76] Requirements regarding venting and the collection and beneficial use or destruction of biogas projects are governed by a variety of regulations in California. At the local level, venting and the collection, beneficial use or destruction of methane at different types of biogas facilities is regulated by California's 35 air quality agencies. At the state level, the CARB provides guidelines for control of methane and other volatile organic compounds from biogas facilities. At the federal level, New Source Performance Standards and Emission Guidelines regulate methane capture and use. SGIP Renewable Fuel Use Report No. 27 (2018) at 4-2.

[77] Conclusion of Law #13.

SC/NRDC are also correct that the GHG emissions intensity of the grid has and will continue to decline, assuming the state continues progress on its adopted GHG emission goals.[78]

We agree with SC/NRDC that verification of conditions at the source of the production of biofuels used in SGIP projects is not as rigorous as that required by CARB. SGIP does not require on-site verification of fuel injection or extraction points or that projects demonstrate that the environmental attributes of such fuels are not claimed elsewhere.[79] In 2018, while not finding evidence of non-compliance at SGIP fuel extraction points, SGIP evaluators did report a concerning level of missing or inaccurate records that rendered it infeasible to determine the compliance status of "numerous" on-site and directed biogas projects.[80]

SGIP's directed biogas verification requirements stem from the 2009 Commission decision that first approved use of these fuels. However, D.09-09-048 did not require SGIP directed biofuels projects to demonstrative exclusive rights for the environmental attributes of the directed biogas.[81] Instead, D.09-09-048 requires applicants to provide an attestation from the fuel supplier that the fuel provided "meets currently applicable renewable portfolio standard (RPS) eligibility requirements for biogas injected into a natural gas pipeline," but limits RPS eligibility requirements applicable to SGIP to "the source of the biogas, the conditions of its injection, and the measurement of biogas supply only."[82]

[78] 2016-2017 Report, Appendix B.
[79] SGIP handbook at 66-67.
[80] SGIP Renewable Fuel Use Report No. 27 (2018) at 1-5 – 1-6 and 3-9.
[81] D.09-09-048 at 9-10 noted one party's comments on renewable attributes but did not further discuss this topic.
[82] D.09-09-048 at 9-11, footnote 10.

RPS biofuel procurement eligibility requirements as of early 2020 require exclusive ownership and retirement of environmental attributes.[83]

SC/NRDC are correct in asserting that the SGIP has not explicitly required projects to demonstrate that they provide environmental benefits as is currently required for RPS biofuel projects despite the Commission in D.11.09-015 excluding out-of-state directed biogas as an eligible fuel in part to ensure environmental benefits for California ratepayers.[84] We note that although D.16-06-055 further revised program requirements to require SGIP's biogas eligibility requirements to match the eligibility requirements of the CEC's revised RPS eligibility guidelines, the SGIP handbook does not yet appear to have been modified to require a specific demonstration of environmental benefits to California at this time.[85]

In sum, SC/NRDC have raised some valid questions SGIP renewable generation technologies and the associated budget, program requirements, and relative environmental benefits.

To address these substantive issues, we take several steps. The final decision reduces the 15 percent annual budget allocation for renewable

[83] *See* California Energy Commission Renewable Portfolio Standard Eligibility, Ninth Edition (Revised) at 12-13 (April, 2017) https://www.energy.ca.gov/programs-and-topics/programs/renewables-portfolio-standard/renewables-portfolio-standard-0.

[84] D.11-09-015 at 21: "given the concerns raised regarding the ability to verify out-of-state directed biogas, as well as the lack of local environmental benefits to California ratepayers, we will exclude it from SGIP eligibility." The SGIP handbook at 111 states that "directed biogas can only be procured from in-state suppliers," but states at 66 that, "directed renewable fuel must be injected into a common carrier pipeline system that is either within the Western Electricity Coordinating Council (WECC) region or interconnected to a common carrier pipeline system located within the WECC region," a contradiction that requires our further investigation.

[85] D.16-06-055 at Conclusion of Law 8 states that "SGIP's biogas eligibility requirements should be modified to match the eligibility requirements of the California Energy Commission's RPS guidelines," and at 19 states "SGIP directed biogas eligibility requirements should be revised to be aligned with those of the California Energy Commission."

generation projects to 12 percent and allocates these three percent of annual collections to a general market HPWH budget. Consistent with SC/NRDC, A.O. Smith, and SJCE's comments, the final decision also reduces the large-scale storage budget from 12 percent to 10 percent and allocates an additional two percent to HPWHs, bringing total annual collections for the general market HPWH budget to five percent.

Due to the numerous questions raised that we wish to investigate further, we direct SGIP PAs to pause acceptance of incentive applications for renewable generation technologies using biomethane with a collect/use/destroy baseline until the Commission provides further direction. This will allow the Commission to make a more informed determination of whether to adopt SC/NRDC's recommendations. We clarify that the new renewable generation incentive levels and budgets adopted in this decision are approved for use by all other renewable generation projects during this pause period, including projects using directed biogas that would otherwise be vented.

In the upcoming SGIP rulemaking, which we intend to open early in 2020, we will revisit the performance of renewable generation technologies to date and the appropriate program requirements, incentive levels and budgets. Amongst other changes, the next SGIP rulemaking will consider adopting the same or similar requirements for tracking biomethane used in SGIP projects as those required by the CARB in the LCFS to verify the source of an SGIP project's biofuel and to ensure no double counting of the environmental benefits. Further, the next SGIP rulemaking may consider requirements regarding biomethane procurement and environmental benefits modeled on the CEC's RPS rules and/or other requirements. The potential changes discussed in this paragraph

may be imposed on all projects that submit an incentive application after the date of this decision.

In addition to directing SGIP PAs to pause acceptance of incentive applications for renewable generation technologies using collect/use/destroy as the biomethane baseline until this Commission provides further direction, we will convene a workshop on renewable generation technologies in the second or third quarters of 2020. Subsequently, the new SGIP rulemaking may revisit the question of the appropriate level of annual budget allocations using SB 700 funds for renewable generation technologies that use biofuels.

2 . Fund Shifting Authority

Many parties recommend that the Commission authorize the SGIP PAs to submit advice letters proposing fund shifts between and among technology categories prior to December 31, 2023, as set forth in the proposed decision, including CSE, CALSSA, SoCalGas, CCDC and Tesla, whereas Cal Advocates strongly opposes any changes.

We agree with Cal Advocates that our intent is to set a clear signal regarding Commission funding priorities for the SGIP for the next five years. However, to provide some increased flexibility, we move forward the authorized fund shifting advice letter submittal date by one year, to December 31, 2022. However, we note that the Energy Division, assigned ALJ, or assigned Commissioner may propose modification of funding allocations in this or a subsequent SGIP rulemaking at any time.

3 . Incentive Levels

CALSSA and CESA argued for increased starting incentive levels for large-scale storage and an ongoing "rachet-up" mechanism in comments on the proposed decision, as these parties and Sunrun also recommended in comments

on the April Ruling. Broadly speaking, these parties state that current Step Three incentive level for large-scale storage ($.35/Wh and $.25/Wh if using the ITC) are insufficient to ensure favorable economics due to reduction in the value proposition of solar plus storage systems driven by Commission adoption of new TOU periods. We do not make the recommended changes at this time as we considered and rejected these same arguments when preparing the proposed decision and parties did not provide new factual information in their comments to persuade us differently. In addition, as stated throughout this decision, our desire is to encourage heightened developer attention to investment opportunities for customers with critical resiliency needs or eligible for resiliency adder incentives, for whom this decision adopts substantial incentive levels.

Regarding residential incentive levels, CALSSA and Sunrun both objected to the proposed decision's approach of adopting a two-step residential incentive that moves from $0.20/Wh to $0.15/Wh, as they had in comments on the April Ruling. These parties point to the impact of the expected end of the residential ITC at the end of 2022, stating that this will negatively impact the economics of residential storage projects. Although parties did not discuss the residential ITC in comments on the April Ruling, we were aware of and considered this change to the ITC when adopting general market residential incentive levels in the proposed decision and make no change on this issue in the final decision.

4. Developer Cap

Sunrun, Tesla, CESA and CSE comment that the Commission should revise the developer cap for the general market energy storage budget categories in order to forestall stranding incentive funds if active developers reach their cap and there are insufficient additional applications within a given time frame, such

as within 90 or 180 days. Sunrun recommends eliminating the developer cap altogether.

The final decision directs SGIP PAs to submit a Tier 2 advice letter seeking suspension or modification of the developer cap for a specific incentive step if the incentive step has been open at least 12 months, at least two entities have reached their cap, and there is otherwise low participation in the incentive step. Commission staff shall consider overall customer resiliency needs, market conditions and developer participation levels in the incentive step when reviewing this advice letter. This approach encourages diverse developer participation but allows for suspension of our adopted developer cap in specific instances where developer participation is limited.

5 . Storage System Sizing Restrictions

CALSSA, CESA and Tesla recommend specific modifications to SGIP system sizing rules in comments on the proposed decision in order to facilitate larger sized systems intended for resiliency purposes. Cal Advocates opposes any substantive changes but supports CESA's recommendation to address this potential constraint by removing limitations on inverter size for resiliency projects.

The final decision removes SGIP sizing limitations based on inverter size for equity resiliency projects and projects using the resiliency incentive adder. In addition, specific resiliency projects may receive full incentives for a system that is sized above peak load if this is necessary due to modular component sizes to accommodate the customer's peak load, but the project applicant must demonstrate proof of this need before the incentive can be paid. Apart from

these two component-specific changes, incentive awards for resiliency projects shall continue to be based on existing SGIP sizing rules.[86]

Under existing SGIP sizing requirements, the availability of inverters only in specific sizing increments could result in the installation of systems for such customers that fall below the peak or critical loads during PSPS events. In addition, installing critical load panel may not always provide a viable alternative to address resiliency needs as can be costly, may require customers to shut down for several days during installation, and would necessarily limit such customers to critical loads during a PSPS event.

In addition, we are cognizant that although CALSSA, CESA and Tesla recommended revisions to SGIP system sizing rules in the April Ruling, parties comments in response to the proposed decision added more and complex detail to these earlier requests. Because we do not have a full understanding of how current sizing rules may impact customer resiliency benefits, the extent of the need for rule modifications to facilitate systems' providing longer duration backup power, or the right "amount" of resiliency that is appropriate to incentivize, we authorize the SGIP PAs to submit additional any revisions to SGIP sizing requirements they believe are appropriate in one more of the implementation advice letters required in this decision.

6. Equity Resiliency Eligibility Criteria including Customers Subject to PSPS Events

CALSSA, CESA, Tesla and Sunrun recommend requiring SGIP PAs to provide maps or publicly-available downloadable maps of customers eligible for

[86] SGIP handbook, Section 5.3.2 states that energy storage projects, whether paired or stand-alone may be sized up to the Host Customer's previous 12-month annual peak demand for systems that are rated above 10 kW but that projects with future load growth can be sized up to future peak demand, but the load must be substantiated before the incentive can be paid. Systems that are rated at 10 kW or less are exempt from the sizing requirement. SGIP 2019 Handbook. https://www.selfgenca.com/documents/handbook/2019.

resiliency incentives, stating that this would help developers identify customers. Cal Advocates cautions that there may be customer privacy and/or security concerns with publicly posting maps for this purpose.

The final decision requires the electric IOUs to ensure there is a method for all customers, or their authorized representative, to: (1) identify the circuit they are served by from their bill or online, or otherwise; and, (2) verify if they were subject to two or more PSPS events. Provision of SGIP customer eligibility in a form other than through a publicly available map or list will support developer identification of eligible customers in an appropriate manner and help ensure customer use of the adopted resiliency incentives. The SGIP handbook shall be revised to describe the methods. In addition, the final decision requires electric IOUs to post on the SGIP portal a master list of all circuits that have had two or more PSPS events and the dates and times of the events.[87] The electric IOUs shall update the lists within 30 days of any new PSPS event. In addition, as recommended by Sunrun, the final decision directs the SGIP PAs to work with Commission staff and the SGIP TWG to consider additional ways to facilitate developer identification of customers eligible for resiliency incentives that do not violate customer privacy or raise security concerns.

Sunrun requested that the Commission define "discrete PSPS event" as entailing a 24-hour duration. The final decision does not take this step, as shorter durations of de-energization negatively impact customers who should likewise be accorded eligibility for resiliency incentives. To provide additional clarity, however, each SGIP PA, including CSE in collaboration with SDG&E, should include its working definition of "discrete PSPS event" in the Joint Tier 2

[87] The Commission's website has all PSPS events in a spreadsheet, listed in chronological order. *See:* CPUC De-energization Spreadsheet (under Utility De-energization Reports) on the Commission's De-energization (PSPS) Webpage, at: https://www.cpuc.ca.gov/deenergization/.

Implementation advice letter required in this decision. To facilitate the objectives of this decision, the SGIP PAs and SDG&E should strive to use a standardized definition of this phrase to determine SGIP resiliency incentive eligibility, as practicable.

We also modify the final decision to clarify, as requested by PG&E, that the definition of markets eligible for equity resiliency incentives is one with less than $15 million in annual revenues, as calculated at a single location. We do not otherwise expand the definition of customer eligibility for the equity resiliency budget at this time.

7 . Residential General Market Customer "Soft Target"

PG&E comments on the proposed decision request clarification of C ommission expectations of SGIP PA enforcement of the "soft target" outlined in t he proposed decision. PG&E is referring here to the proposed decision's requirement that 50 percent of the general market residential budget using SB 700 funds will be used by residential customers living in Tier 3 or Tier 2 HFTDs or who had their electricity turned off in two or more discrete PSPS events prior to applying for SGIP incentives.

The objective of the "soft target" adopted in this decision is to encourage developers to significantly redirect their customer outreach efforts to HFTD and PSPS areas. To support this focus, the final decision clarifies Commission expectations for enforcement of this "soft target." The final decision clarifies that SGIP PAs shall administer the "soft target" by pausing acceptance of SGIP applications from residential customers who do not live in a Tier 3 or Tier 2 HFTD, or who did not have their electricity turned off in two or more discrete P SPS events prior to applying for SGIP incentives, once the PA's incentive

awards for such customers have reached 50 percent of that PA's available incentives for each residential energy storage incentive step.

8. Clarification of Application Processing Requirements

Several parties request clarification regarding the proposed decision's inclusion of a 45-day target for SGIP application processing. These parties provide a number of supplemental suggestions. CALSSA recommends that the Commission clarify the processing target as entailing a 10-day processing time for each step in the application review process for a total of not more than 45 days. SoCalGas states that a total of 45 days to process applications is reasonable if it excludes the period of time an application is in "suspended" status. Tesla comments that the Commission should direct PAs and stakeholders to work together to develop reasonable timeline expectations for application review and for SGIP response times to developer email inquiries.

The final decision adopts these three recommendations by requiring the PAs to adequately staff the SGIP with sufficient resources to advance an incentive from the time of its submittal to "in review" status within 10 days and to fully process incentive applications, excluding the time the application is in "suspended" status, within approximately 45 – 60 days. SGIP PAs shall work with stakeholders to develop reasonable timeline expectations for each step of the application review process and for SGIP PA response times to developer email inquiries.

9. ME&O Requirements

GRID, CSE, MCE and the City of San Jose request additional clarification on Commission expectations regarding ME&O for the 2020-2025 period. CSE's comments point out a discrepancy between Commission direction on the budget

sources, levels and frequency of ME&O funding in D.19-09-027.[88] CSE also asks if the ME&O Plan required in D.19-09-027 is intended to be an annual or longer-term plan. MCE, GRID and the City of San Jose suggest a need for specific annual ME&O funding allocations for low-income solar PAs, CCAs and local governments in order to ensure participation of these groups in the ME&O Plan required in D.19-09-027. These parties assert that the proposed decision omitted this point and request that the final decision set aside a portion of the 2020-2024 SGIP PA administrative budget out for this purpose.

In response to these comments, the final decision clarifies that each SGIP PA shall allocate approximately 10 percent of their adopted annual administrative allocations to the customized ME&O Plan required in D.19-09-027 and should update the ME&O Plan on an annual basis. The final decision further clarifies that PG&E and SCE shall estimate an annual administrative allocation for this purpose as approximately one-fifth of their accumulated unused funds, which we have approved in this decision for administrative costs subsequent to 2019.

The final decision does not direct specific funding carve-outs for ME&O Plan implementation partners as recommended by MCE, GRID and the City of San Jose. However, CSE and MCE are correct that D.19-09-027 required development of a "customized" equity resiliency and equity budget ME&O plan. We clarify here that the Commission's intent in D.19-09-027 is for SGIP PAs to develop a ME&O plan that extends well beyond an IOU-led mass marketing approach. D.19-09-027 outlines requirements and expectations for development

[88] The discrepancy in D.19-09-027 is between OP 7(f), which directs SGIP PAs to "allocate a sufficient budget to accomplish the objectives of the [ME&O] Plan of approximately 10 percent of annual administrative expenditures," and page 56, which states that, "the PAs shall allocate no more than 10 percent of their accumulated unused administrative budgets to fund the Plan."

of a customized ME&O Plan for the equity resiliency and equity budgets that will necessarily result in a targeted and community-based approach. It would seem difficult if not impossible for the SGIP PAs to accomplish this targeted and community-based approach without partnering with and appropriately funding interested local governments, CCAs and/or low-income solar PAs.

0. Annual Collections and Continuous Availability of Funds

SoCalGas and CSE state that the proposed decision contained errors in the calculation of each IOU's proportion of annual ratepayer collections. As stated by these parties, D.06-12-033 directed the distribution of SGIP budgets among the PAs in millions.[89] In addition, as SoCalGas correctly asserts, D.17-04-017 states that, "PG&E, SCE, SoCalGas and SDG&E, shall collect on an annual basis, through 2019, *double* the amount collected for SGIP in the 2008 calendar year based on the proportionate share methodology adopted in D.06-12-033 and D.06-01-024."[90] Since the distribution of $166 million using the percentages in Table 1 differs slightly from a doubling of the amounts in millions directed in D.06-12-033, the final decision amends Table 1 to reflect the doubling methodology articulated in D.17-04-017. As approved in D.16-06-055, SGIP incentive funds are available on a continuous basis.

1. Coordination with Other Relevant Ratepayer Funded Programs and Requirements Pursuant to AB 1144

Cal Advocates comments that additional direction to the PAs is required to avoid duplicative funding of backup electrical resources as authorized in Section 8386(c)(6)(C) or other ratepayer funded sources. We concur and the final decision directs the SGIP PAs to assess any ratepayer-funded program with

[89] D.06-12-033 at 33, Table 2.
[90] D.17-04-017 at 10, emphasis added, and OP 1b.

potential to provide duplicative funding for resources intended to provide behind-the-meter backup power and to develop a process to prevent this.

12. Streamlining of R.12-11-005 AL filing timelines

CALSSA recommends that the final decision consolidate advice letter filings ordered here and those ordered in D.19-09-027. We agree that a partial consolidation of advice letters could help decrease stakeholder confusion and demands on Commission staff. The final decision provides direction to SGIP PAs to accomplish this.

Specifically, the final decision directs the SGIP PAs to: (a) submit a Joint Supplement to PG&E 4191-G/5714-E, submitted December 17, 2019 pursuant to D.19-09-027, that further revises the SGIP handbook to implement the program revisions adopted in this decision specific to equity resiliency budget residential customers within 12 days of Commission adoption of this decision; (b) submit a Joint Tier 2 Non-Residential Equity Resiliency advice letter revising the SGIP handbook to implement the program revisions adopted in this decision specific to non-residential equity resiliency budget customers on February 18, 2020; [91] and, (c) submit a Joint Tier 2 Implementation advice letter revising the SGIP handbook to implement all other program revisions and budgets adopted in this decision no later than 90 days from adoption of this decision.

As indicated in D.19-08-001, the start date for the GHG requirements adopted in that decision for non-residential projects is no later than April 1, 2020.

13. Customer Coordination with Local Governments and the California Office of Emergency Services pursuant to AB 1144.

[91] *See* letter, "Approval of Joint Request by Self-Generation Incentive Program Administrators for an Extension of Time to Comply with the Full Requirements of Ordering Paragraph 7 subsections (a), (b), (d), and (e) of Decision 19-09-027" issued by Commission Executive Director Alice Stebbins on December 17, 2019.

SCE requested clarifications on Commission expectations regarding customer coordination with local governments and the California Office of Emergency Services pursuant to AB 1144 in its comments on the proposed decision. The final decision clarifies that equity resiliency budget applicants must demonstrate through their response to this question that coordination has or will take place with their local government and the Office of Emergency Services and requires SGIP PAs to deprioritize processing an application if the customer has not demonstrated this.

14. Correction of Inadvertent Omission in D.19-09-027

Finally, we clarify an inadvertent omission in D.19-09-027 in the final decision, specifically that electrical and critical loads panel and wiring upgrades are allowable costs for equity resiliency and equity budget projects. The intent of D.19-09-027 is that the higher incentives adopted for equity and equity resiliency budgets may be used towards these costs.

D.19-09-027 considers GRID, CESA, and CALSSA's comments on these likely additional costs for low income customers and/or critical facilities serving them that these parties made on the April Ruling and that proposed decision. Tesla raises the issue again in comments on this proposed decision.[92] D.19-09-027 as adopted discusses parties comments on the "additional costs of traveling to remote HFTD areas, electrical panel and wiring upgrades in some cases, and replacement parts and maintenance costs that could lead some projects to exceed an average cost of $0.85/Wh, a cost that is based on current SGIP residential participants who are unlikely to face the same barriers as equity budget

[92] CESA, Comments on Equity Resiliency Proposed Decision, August 29, 2019 at 4; CALSSA, Comments on Equity Resiliency Proposed Decision, August 29, 2019 at 3, and GRID, Comments on Equity Resiliency Proposed Decision, August 29, 2019 at 4.

customers," but omits a specific clarification that some of these additional costs are allowable costs for equity resiliency and equity budgets.[93]

To minimize confusion or delay, this final decision clarifies that electrical and critical load panel and wiring upgrade costs are allowable costs for equity resiliency and equity budget projects. We emphasize, however, that SGIP sizing restrictions continue to apply to all projects as do related restrictions adopted in D.19-09-027, specifically that "vendors/developers shall not sell a residential storage system that receives incentives for a total price (before incentives) that is greater than the price they sell a comparable system that does not receive incentives."[94]

11. Assignment of Proceeding

Clifford Rechtschaffen is the assigned Commissioner and Cathleen A. Fogel is the assigned ALJ in this proceeding.

Findings of Fact

New Collections and Budget Allocations

1. Authorizing 2020 to 2024 ratepayer collections of $166 million annually enables prioritization of SGIP funds to the customers most impacted by PSPS events, supports market transformation, maximizes ratepayer value, ensures the continued provision of grid services and provides for the equitable distribution of benefits.

2. The customer cost allocation method approved in Resolution E-4926 ensures the equitable distribution of SGIP costs and benefits as required in § 379.6(a)(1) and SGIP PAs are correctly implementing §379.6(k) via the Public Purpose Program charge.

[93] D.19-09-027 at 38.
[94] D.19-09-027 at 38.

3. A ~~15~~12 percent allocation of 2020 to 2024 ratepayer collections for SGIP incentives to renewable generation projects balances limited demand for incentives in recent years with a strong GHG performance by some renewable technology fuels, results in ~~nearly $129~~$104 million in renewable generation incentive funds through ~~2025,~~2025 and should stimulate developer interest~~, and is reasonable.~~ .

4.. Pausing administrator acceptance of SGIP renewable generation project applications using collect/use/destroy as the biomethane baseline will allow the Commission to make a more informed determination of whether to adopt SC/NRDC's recommendation to further limit SGIP eligibility to certain resources on a permanent basis.

5.. ~~4.~~ The key criteria to determine allocation of 2020 to 2024 ratepayer funds are anticipated customer demand and need, and community benefits.

6.. ~~5.~~ Allocating 63 percent of 2020 to 2024 funds for SGIP incentives to the equity resiliency budget prioritizes customers with the greatest immediate need for on-site storage, provides community benefits, and advances SGIP's goals.

7.. ~~6.~~ Suspending allocation of new large-scale energy storage equity budget funds until such time as demand increases supports the prioritization of 2020 to 2024 funds to equity resiliency budget customers.

8.. ~~7.~~ Allocating three percent of 2020 to 2024 collections to the residential equity budget supports increased participation in SGIP by low-income customers regardless of where they live.

9.. ~~8.~~ SGIP's general market large-scale and non-residential equity storage budgets had approximately $269 million in accumulated unused funds remaining as of September 2019.

10.0. ~~9.~~ Reducing 2020 to 2024 funding allocations for general market large-scale storage technologies to ~~12~~10 percent of incentive funds results in over $~~314~~351 million in total available funds for ~~such projects through 2025, with additional funds available in the~~ large-scale ~~energy storage~~general market and equity budget~~.~~ projects through 2025.

11.1. ~~10.~~ Adjusting the residential storage budget allocation to seven percent of 2020 to 2024 collections for incentives results in a total budget of approximately $60 million, provides incentive funds for 31,000 new residential systems and balances ongoing customer demand for general market residential storage systems with other priorities.

12.2. HPWH deployment may provide GHG reductions that significantly exceed the five kg CO_2/kWh required for storage system by this Commission in the GHG Decision.

13.3. Adopting a five percent annual budget allocation for HPWHs supports deployment of these technologies at scale and the realization of their potential grid reliability, utility customer and GHG benefits.

Energy Storage Incentives

14.4. ~~11.~~ In recent years, 70 percent of SGIP large-scale storage projects paired with solar have used the federal ITC.

15.5. ~~12.~~ The current large-scale storage incentive structure supports market transformation, and this outweighs the potential administrative benefits of moving to an annual step-down structure.

16.6. ~~13.~~ Continuing with the general market residential incentive step-down structure adopted in D.16-06-055 and D.17-04-017 and equally allocating 2020 to 2024 funds across two new incentive steps continues a stable incentive design with a successful track record.

17.7. ~~14.~~ Adopting a 50 percent spending "soft target" for general market residential customers located in areas subject to PSPS events or that live in areas of extreme or elevated fire risk helps ensure that customers most likely to benefit from the resiliency services provided by storage learn about and use SGIP incentives.

Renewable Generation Technologies

18.8. ~~15. Renewable~~SGIP renewable generation technologies using on-site biogas with venting as the baseline have a solid track record of providing GHG emission reductions.

19.9. On-site biogas SGIP projects with venting as the baseline produced over ten times as many GHG emission reductions per MWh of energy generated as did SGIP biogas projects with collect/use/destroy as the biomethane baseline in 2016-2017 and directed biogas in 2017 resulted in a small increase in GHG impacts due to biogas contracts expiring.

20.0. To date, all SGIP projects using vented methane as the baseline have been located on dairy farms.

21.1. ~~16.~~ An incentive level of $4.50/W has been shown to successfully stimulate increased adoption of SGIP renewable generation projects.

22.2. ~~17.~~ Paired on-site renewable generation and storage projects have the ability to provide continuous backup power for a longer duration than storage projects alone.

23.3. ~~18.~~ It is reasonable to approve a renewable generation technology incentive structure that prioritizes SGIP participation by the customers most negatively impacted by PSPS events, which are customers whose electricity has been shut off during two or more discrete PSPS events.

24.4. ~~19.~~ Approving a renewable generation technology incentive of $2.00/W with no step-down structure for general market customers and a resiliency adder of $2.50/W for customers with critical resiliency needs encourages developers to prioritize outreach to customers most negatively impacted by PSPS events.

25.5. ~~20.~~ Providing a significant incentive adder for renewable generation projects for customers with critical resiliency needs supports such customers' ability to withstand PSPS events and reflects the Commission's desire to prioritize use of SGIP incentives by customers facing wildfire related outages.

26.6. ~~21.~~ Section 379.6(m) requires that as of January 1, 2020, generation technologies receiving SGIP incentives must only use renewable fuels.

27.7. ~~22.~~ Limiting SGIP generation projects to those with a 10-year contract for biogas supply and operation ~~is~~may be a reasonable way to ensure compliance with the statute's requirement that SGIP generation projects only use renewable fuels.

28.8. ~~23.~~ Some parties are concerned that existing tracking and verification systems may not ensure that directed biogas projects produce incremental environmental benefits.

Equity Resiliency Budget

29.9. ~~24.~~ D.19-09-027 directed SGIP PAs to begin accepting equity resiliency budget applications on April 1, 2020 to coincide with launch of the GHG emission reduction requirements adopted in D.19-09-001.

30.0. ~~25.~~ The PSPS events of 2019 warrant accelerating the April 1, 2020 equity resiliency program start date for accepting small-scale residential equity resiliency budget applications to no later than March 1, 2020 to help eligible customers install on-site energy storage prior to the 2020 critical wildfire season.

31.1. ~~26.~~ D.19-09-027, OP 4 authorizes the SGIP PAs to start implementing the requirements of D.19-08-001 for new residential customers on January 1, 2020, or any other time prior to April 1, 2020, if they are able to do so.

32.2. ~~27.~~ SGIP PAs are capable of accepting small-scale residential equity resiliency budget applications and moving the effective date for the new small-scale residential GHG emission reduction requirements adopted in D.19-08-001 to no later than March 1, 2020.

33.3. ~~28.~~ The broad reach of meters de-energized during the 2019 PSPS events has given the Commission a clearer sense of the potential impacts of such events outside of Tier 3 or Tier 2 HFTDs and justifies updating the eligibility criteria for the equity resiliency budget to better include customers most impacted by PSPS events.

34.4. ~~29.~~ Expanding eligibility criteria for the equity resiliency budget to include customers whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives will help customers most at risk of having their electricity shut-off during PSPS events install on-site batteries prior to the 2020 critical wildfire season.

35.5. ~~30.~~ Limiting eligible customers to those whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives helps target the larger incentive funds to those customers most likely to be impacted by PSPS events in the future.

36.6. ~~31.~~ Identifying customers whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives as customers with critical resiliency needs is a rough approximation and not a perfect indicator, but is a method that can be quickly implemented and is the best

means available to identify customers most likely to be subject to PSPS events until better information becomes available.

37.7. ~~32.~~ The IOUs have lists of customer meters de-energized during PSPS events and can further refine these to improve their accuracy as necessary.

38.8. Requiring the electric IOUs to ensure there is a method for all customers, or their authorized representative, to identify the circuit they are served by from their bill or online, or otherwise, and to verify if they were subject to two or more PSPS events will support developer identification of eligible SGIP customers in an appropriate manner and help ensure customer use of the adopted resiliency incentives.

39.9. ~~33.~~ The October 2019 PSPS events revealed the centrality of grocery stores, corner stores, markets and supermarkets to customers' capacity to weather PSPS events.

40.0. ~~34.~~ Independent Living Centers served as ad hoc PSPS centers for individuals living with disabilities, providing mobile backup services and support services during the October 2019 PSPS events.

41.1. ~~35.~~ Food Banks are essential sources of food for lower-income families during PSPS events or wildfires.

42.2. ~~36.~~ Designating markets (grocery stores, corner stores, markets and supermarkets), independent living centers, and food banks as critical facilities for SGIP purposes supports communities with critical resiliency needs.

43.3. ~~37.~~ Limiting the designation of markets with critical resiliency needs to grocery stores, corner stores, markets and supermarkets with average annual gross receipts of $15 million or less over the last three tax years as calculated at a single location directs funds to smaller businesses that may lack the financial means to install on-site storage without subsidies.

44.4. ~~38.~~ The October 2019 PSPS events highlighted challenges for rural residents relying on electric pump wells for water supplies.

45.5. ~~39.~~ Defining households relying on electric pump wells for water supplies as customers with critical resiliency needs, if they reside in Tier 2 or Tier 3 HFTDs or if they are customers whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives helps address such customers' critical drinking water, sanitation and fire response needs.

46.6. It would assist customer participation if the SGIP PAs use a standardized definition of the phrase "discrete PSPS event" to determine SGIP resiliency incentive eligibility and if PAs work with Commission staff and stakeholder to explore appropriate ways to facilitate developer identification of customers eligible for resiliency incentives.

General Market Resiliency Adder

47.7. ~~40.~~ Longer duration SGIP storage projects are well suited to provide resiliency services during PSPS or other outage events.

48.8. ~~41.~~ Modifying the incentive step-down structure for general market storage systems with longer than a two-hour discharge increases incentives for systems suitable to provide backup power for customers during PSPS and other outage events.

49.9. ~~42.~~ Defining general market non-residential customers with critical resiliency needs similarly to non-residential equity resiliency customers, with the exception that there is no equity requirement for a general market resiliency adder, supports such customers' increased SGIP participation.

50.0. ~~43.~~ Defining a non-residential customer with critical resiliency needs as eligible for the equity resiliency budget if that customer provides critical facilities

to at least one community eligible for the equity resiliency budget helps ensure that the higher equity resiliency incentives are targeted where they are most needed.

51. 1. ~~44.~~ A resiliency adder of $0.15/Wh intended to cover 50 percent of current large-scale storage costs through Step 5 encourages timely use of SGIP incentives by the communities and businesses most impacted by wildfires and PSPS events.

52. 2. ~~45.~~ Adopting new information submittal requirements for general market energy storage and renewable generation projects applying for resiliency adder incentives ensures that customers installing such systems with the expectation that they will provide resiliency services are basing this on accurate information about their capabilities and limitations.

53. 3. ~~46.~~ Rule 21 interconnection tariffs, national, state, local and SGIP rules are adequate to address the safety risks posed by the installation of general market energy storage and renewable generation systems for resiliency purposes.

54. 4. ~~47.~~ AB 1144 requires the Commission to allocate at least $16.6 million of SGIP funds collected in 2020 to projects meeting the criteria identified in Public Utilities Code Section 379.9(b).

55. 5. ~~48.~~ The Commission is making available a total of $202.6 million in equity resiliency budget incentives in 2020.

56. 6. ~~49.~~ Requiring projects applying for resiliency incentives to notify their local governments that they intend to or have installed on-site storage is a reasonable way to meet the criterion of demonstrating coordination with local government and the California Office of Emergency Services required in AB 1144.

57. 7. Modifying the SGIP handbook to remove sizing limitations based on inverter size for equity resiliency projects and projects using the resiliency

incentive adder will help ensure that these types of projects can size systems more appropriately to on-site needs.

58. 8. To address modular component sizing restrictions, allowing resiliency projects to be sized larger than peak load in certain circumstances will help ensure adequate power for critical services during a PSPS event.

Administrative Budgets and Requirements

59. 9. ~~50.~~ As of December 2019, PG&E and SCE have over $26 million and $31 million, respectively, in accumulated unused SGIP administrative budgets.

60. 0. ~~51.~~ CSE lacks a large institutional base of resources to leverage towards SGIP administration and authorizing a larger administrative budget for this PA ensures its continued capacity to process the large volume of residential applications experienced in recent years and to manage SGIP administrative functions through 2033.

61. 1. ~~52.~~ Average SGIP PA incentive processing times for large-scale and residential storage systems were 97 days in 2018 and 2019, which not is consistent with the Commission's goal of providing SGIP incentives to enhance resiliency to PSPS events in time for the next critical fire season.

62. 2. Coordination between SGIP and other sources of ratepayer funding for backup electrical resources, such as that authorized in Section 8386(c)(6)(C), is necessary to avoid duplicative funding.

63. 3. A three-stage advice letter submittal process to implement the SGIP revisions adopted in this decision supports the SGIP PAs fully opening the equity resiliency budget for residential customer applications no later than March 1, 2020 and opening the equity resiliency budget for non-residential customers by April 1, 2020.

64. 4. D.19-09-027 contained an inadvertent error regarding ME&O Plan budget sources and levels and an inadvertent omission regarding equity resiliency and equity budget allowable costs, which this decision can correct.

65. 5. Requiring SGIP PAs to submit an advice letter to suspend the developer cap in certain instances encourages diverse developer participation but allows for suspension of the developer cap where developer participation is limited.

Fund Shifting Authority

66. 6. ~~53.~~ SGIP budget allocations approved in this decision should remain stable through ~~2023~~2022 but providing PAs with the flexibility to propose fund shifting after that in response to market demand increases SGIP's effectiveness in its final years.

Conclusions of Law

1. The Commission should direct PG&E, SCE, SoCalGas and SDG&E to annually collect $166 million from their customers from 2020 through 2024 for the SGIP and should use the methodology adopted in D.17-04-017 to determine individual utility collections.

2. The Commission should direct PG&E, SCE, SoCalGas and SDG&E to submit Tier 1 Budget advice letters implementing 2020 to 2024 ratepayer collections no later than 90 days after Commission adoption of this decision and to include an updated cost allocation proposal across customer classes based on the approach approved in Resolution E-4926.

3. The Commission should allocate 2020 to 2024 ratepayer collections for SGIP incentives as follows: ~~15~~12 percent for renewable generation technologies, 63 percent for the equity resiliency budget, ~~12~~10 percent for the general market large-scale storage budget, seven percent for the general market residential

budget, ~~and~~ three percent for the residential equity budget, and five percent for general market HPWHs.

4.. The Commission should direct the SGIP PAs to immediately pause acceptance of incentive applications for renewable fuel technologies using collect/use/destroy as the biomethane baseline until this Commission adopts a decision providing further guidance.

5.. ~~4.~~ To address a potential barrier, the Commission should eliminate the federal ITC adjustment to incentives for equipment purchased after December 31, 2021.

6.. ~~5.~~ The Commission should retain the existing SGIP large-scale storage incentive step-down structure and should allocate 2020 to 2024 collections for this budget equally across existing incentive Steps 3 to 5.

7.. ~~6.~~ The Commission should direct the SGIP PAs to adjust the 20 percent developer cap based on the new adopted statewide large-scale storage budgets in Steps 3 to 5.

8.. ~~7.~~ The Commission should direct the SGIP PAs to establish a $0.15/Wh resiliency adder for large-scale storage projects limited to general market customers with critical resiliency needs as defined in this decision.

9.. ~~8.~~ The Commission should direct the SGIP PAs to establish a renewable generation incentive level of $2.00/W with no step-down structure for general market customers and a renewable generation resiliency incentive adder of $2.50/W for customers with critical resiliency needs as defined in this decision.

10.0. ~~9.~~ The Commission should direct the SGIP PAs to establish two new residential storage incentive steps and to allocate the 2020 to 2024 residential storage budget equally across these two steps.

11.1. ~~10.~~ The Commission should direct the SGIP PAs to adopt a "soft target" that half of the general market residential incentive budget will be used by residential customers living in Tier 3 or Tier 2 HFTDs or residential customers whose electricity has been turned off during two or more discrete PSPS events~~.~~ and should direct PAs to implement this target by pausing acceptance of SGIP applications from residential customers that do not meet these criteria once the PA's incentive awards for customers not meeting these criteria have reached 50 percent of that PA's available incentives for each residential energy storage incentive step.

12.2. ~~11.~~ The Commission should continue the current requirement for 100 percent directed biogas projects to obtain a 10-year contract for biogas supply prior to receiving an SGIP incentive.

13.3. ~~12.~~ The Commission should require all SGIP biogas projects to use renewable fuels as long as the project is in operation.

14.4. ~~13.~~ The Commission should authorize SGIP PAs to submit a Tier 2 advice letter to propose additional tracking and verification requirements for SGIP projects using ~~directed~~ biogas if, in consultation with Commission staff, the PAs believe that existing requirements are not ensuring incremental environmental benefits.

15.5. ~~14.~~ The Commission should require the SGIP PAs to begin accepting small-scale residential equity resiliency budget applications no later than March 1, 2020.

16.6. ~~15.~~ The Commission should accelerate the effective date for GHG requirements for new small-scale residential projects to no later than March 1, 2020.

17.7. ~~16.~~ The Commission should direct SGIP PAs to expand the eligibility criteria for the equity resiliency budget adopted in D.19-09-027.

18.8. ~~17.~~ The Commission should direct the SGIP PAs to expand the definition of customers with critical resiliency needs to include: (a) any customer whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives; and, if located in Tier 3 or Tier 2 HFTD or if a customer whose electricity was shut off during two or more discrete PSPS events prior to the date of application, (b) grocery stores, corner stores, markets and supermarkets with average annual gross receipts of $15 million or less over the last three tax years as calculated at a single location, (c) independent living centers, (d) food banks, and, (e) households relying on electric pump wells for their water supplies.

19.9. ~~18.~~ The Commission should direct IOU parties to this proceeding to utilize lists of customers whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives when determining eligibility for equity resiliency incentives and to refine these lists to improve their accuracy, as needed.

20.0. ~~19.~~ The Commission should direct SDG&E and SCE to actively cooperate with CSE and SoCalGas respectively to support the timely validation of customer eligibility for the equity resiliency budget including providing detailed information regarding customers subject to PSPS events.

21.1. The Commission should direct each SGIP PA, including CSE in collaboration with SDG&E, to include its working definition of "discrete PSPS event" in the Joint Tier 2 Implementation advice letter required in this decision and, in so doing, to strive to use a standardized definition of this phrase to determine SGIP resiliency incentive eligibility, as practicable.

22. 2. The Commission should direct the electric IOUs to ensure there is a method for all customers, or their authorized representative, to identify the circuit they are served by from their bill or online, or otherwise, and to verify if they were subject to two or more PSPS events, to post on the SGIP portal a master list of all circuits that have had two or more PSPS events and the dates and times of the events, and to update the lists within 30 days of any new PSPS event.

23. 3. The Commission should direct the SGIP PAs to work with Commission staff and the SGIP TWG to consider additional ways to facilitate developer identification of customers eligible for resiliency incentives that do not violate customer privacy or raise security concerns and to revise the SGIP handbook to describe the method taken to allow all customers to identify the circuit they are served by from their bill or online, or otherwise, and to verify if they were subject to two or more PSPS events.

24. 4. ~~20.~~ The Commission should require general market SGIP storage projects using resiliency adder incentives to meet the GHG emission reduction, cycling and other system, information and operational requirements adopted in D.19-08-001 and in D.19-09-027.

25. 5. ~~21.~~ The Commission should direct SGIP PAs to include a question regarding the applicant's coordination with their local governments and the California Office of Emergency Services in SGIP application forms for the equity resiliency budget and resiliency adder incentives, require applicants to demonstrate through their response to this question that coordination has or will take place with their local government and the Office of Emergency Services, and to deprioritize processing an application if the customer has not demonstrated this.

26. 6. The Commission should direct SGIP PAs to update the SGIP handbook to remove sizing limitations based on inverter size for equity resiliency projects and projects using the resiliency incentive adder.

27. 7. The Commission should address modular component sizing restrictions by allowing resiliency projects to be sized larger than peak load in certain circumstances.

28. 8. The Commission should require the SGIP PAs to assess any ratepayer-funded program with potential to provide duplicative funding for SGIP projects intended to provide behind-the-meter backup power and develop a process to prevent this.

29. 9. ~~22.~~ The Commission should require the SGIP impact evaluation report issued in 2022 to include an evaluation of the performance and impact of the non-residential projects receiving funding from the equity resiliency budget in 2020, using the factors listed in § 379.9(b)(4).

30. 0. ~~23.~~ The Commission should direct PG&E and SCE to utilize their remaining accumulated unspent administrative budgets to fund SGIP administrative costs subsequent to December 31, ~~2019.~~ 2019 and to annually allocate budget for the ME&O Plan required in D.19-09-027 from these funds.

31. 1. ~~24.~~ The Commission should direct SoCalGas and CSE to allocate seven and 10 percent, respectively, of their share of funds collected from 2020 to 2024 for administrative purposes and to annually allocate budget for the ME&O Plan required in D.19-09-027 from these funds.

32. 2. The Commission should direct the SGIP PAs to submit a Tier 2 advice letter seeking suspension or modification of the developer cap for a specific incentive step if an incentive step has been open at least 12 months, at least two

entities have reached their cap, and there is otherwise low participation in the incentive step.

33. 3. ~~25.~~ The Commission should direct the PAs to adequately staff the SGIP with sufficient resources to advance an incentive from submittal to "in review" status within 10 days and to fully process incentive applications, excluding the time the application is in "suspended" status, within approximately 45 ~~days of receipt~~ – 60 days, on average, to work with stakeholders to develop reasonable timeline expectations for each step of the application review process and for SGIP PA response times to developer email inquiries, and to annually file a summary of their average, fastest and slowest incentive processing times.

34. 4. ~~26.~~ The Commission should authorize SGIP PAs to submit Tier 2 advice letters to transfer funds between technology incentive budgets after December 31, ~~2023~~2022 and should direct a PA to submit an advice letter if it has reason to believe that there are likely to be unreserved funds in a technology budget in its service territory at the end of 2025.

35. 5. The Commission should adopt a three-stage advice letter submittal process to implement the program revisions adopted in this decision.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas) and San Diego Gas and Electric Company (SDG&E) shall annually collect $166 million from 2020 through 2024 to fund the Self-Generation Incentive Program, allocated as follows:

Program Administrator	Percent	Annual Collection (in $ millions)	Total Collection (in $ millions)
PG&E	44	$~~73.04~~72	$~~365.2~~360
SCE	34	$~~56.44~~56	$~~282.2~~280
SDG&E	13	$~~21.58~~22	$~~107.9~~110

SoCalGas	9	$~~14.94~~16	$~~74.7~~80
Total	100	$166	$830

2. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and San Diego Gas and Electric Company shall each:

(a) Submit a Tier 1 Budget advice letter implementing the 2020 to 2024 ratepayer collections approved here no later than 90 days from Commission adoption of this decision;

(b) Include in these an updated cost allocation proposal across customer classes based on the actual benefits resulting from the disbursement of Self-Generation Incentive Program (SGIP) incentives over the previous three years in their service territories;

(c) Allocate costs on a rolling basis annually to account for changes in eligibility and market factors, until the program sunsets; and

(d) Indicate in the Tier 1 Budget advice letter, and their next available rate proceeding, their commitment to return to ratepayers all ~~unreserved~~unallocated SGIP ~~incentive~~ funds remaining as of January 1, 2026.

3.. Pacific Gas and Electric Company (PG&E), Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall submit a Supplement to advice letter PG&E 4191-G/5714-E et al. to further revise the SGIP handbook to implement the program revisions adopted in this decision specific to equity resiliency budget residential customers within 12 days of Commission adoption of this decision.

4.. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall submit a Joint Tier 2 Non-Residential Equity Resiliency advice letter revising the SGIP handbook to implement the program revisions adopted in this decision

specific to equity resiliency budget non-residential customers on February 18, 2020.

5.. ~~3.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall submit a Joint Tier 2 Implementation advice letter no later than 90 days from adoption of this decision modifying the Self-Generation Incentive Program handbook to implement ~~the~~all program and budget modifications adopted in this decision~~.~~ not included in the advice letters directed in Ordering Paragraphs 3 and 4.

6.. ~~4.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall allocate 2020 to 2024 ratepayer collections for the Self-Generation Incentive Program ~~as follows~~(SGIP) as follows but shall pause acceptance of incentive applications for generation technologies using collect/use/destroy as the biomethane baseline, effective immediately, until this Commission provides further guidance in a decision:

	Incentive Budget Allocations for 2020- 2024 Collections	
	Percent	**Amount ($ millions)**
Renewable generation	~~15~~12	$~~122~~98
Large-scale storage (greater than 10 kilowatts)	~~12~~10	$~~98~~81
Residential storage	7	$57
Residential equity	3	$24
Equity resiliency	63	$513
Heat pump water heaters	5	$41
Total	**100**	**$814**

7.. ~~5.~~ Southern California Gas Company and the Center for Sustainable Energy shall allocate seven and 10 percent of their total 2020 to 2024 collections, or $5.2 million and $10.8 million respectively, to their Self-Generation Incentive Program administrative budgets~~.~~ and shall allocate approximately 10 percent of

their adopted annual administrative allocations to the Marketing, Education and Outreach Plan required in Decision 19-09-027.

8.. Pacific Gas and Electric Company and Southern California Edison Company shall allocate their accumulated unspent administrative budgets to fund their SGIP administrative costs subsequent to December 31, 2019 and shall allocate approximately 10 percent of the resulting annual administrative budget over the five year period from 2020 through 2024 to the customized Marketing, Education and Outreach Plan approved in Decision 19-09-027, as discussed in this decision.

9.. ~~6.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall eliminate the federal tax credit incentive adjustment for large-scale general and equity budget storage incentives for equipment purchased after December 31, 2021.

10.0. ~~7.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall allocate the $~~98~~81 million in 2020 to 2024 collections for large-scale storage incentives equally across existing incentive Steps 3 through 5 and shall adjust the 20 percent developer cap based on the new statewide budgets in these incentive Steps 3 to 5.

11.1. ~~8.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall create two general market residential incentive steps, Step 6 and Step 7, with a five cent decrease in incentives per watt-hour between steps and shall equally allocate the $57 million in 2020 to 2024 collections for residential storage incentives to these steps.

12. 2. ~~9.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall ~~adopt~~implement a "soft target" such that half of the general market residential incentive budget will be used by residential customers living in Tier 3 or Tier 2 High Fire Threat Districts or residential customers whose electricity has been turned off during two or more discrete Public Safety Power Shutoff events, as discussed in this decision.

13. 3. ~~10.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall allocate the full $513 million budget approved for the equity resiliency budget from 2020 to 2024 collections to the single equity resiliency incentive level approved in Decision 19-09-027.

14. 4. ~~11.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall modify the generation technology incentive levels approved in Decision 16-06-055 to establish a base incentive level of two dollars per watt ($2.00/W) with no step-down and shall, if needed and at the direction of Commission staff, submit a Tier 2 advice letter to propose additional tracking and verification requirements for Self-Generation Incentive Program projects using ~~directed~~ biogas to ensure incremental environmental benefits.

15.

16. 6. ~~12.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall ensure that all renewable generation projects that use directed biogas provide a contract for biogas supplies for a minimum of 10 years prior to receiving Self-Generation Incentive Program incentives.

17.7. ~~13.~~ All new renewable generation projects receiving incentive funds from the Self-Generation Incentive Program must use only renewable fuels on an ongoing basis and for as long as the equipment is in use.

18.

19.9. ~~14.~~ We direct Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and the Center for Sustainable Energy to launch the greenhouse gas emission reduction requirements adopted in Decision 19-08-001 for new small-scale residential Self-Generation Incentive Program projects less than or equal to 10 kilowatts ~~to~~ no later than March 1, 2020.

20.0. ~~15.~~ We direct Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy to begin accepting applications for small-scale residential equity resiliency budget projects of less than or equal to 10 kilowatts no later than March 1, 2020.

21.1. ~~16.~~ We define the following as customers with critical resiliency needs that are eligible to apply for equity resiliency and general market resiliency adder incentives: (a) customers whose electricity was shut off during two or more discrete Public Safety Power Shutoff (PSPS) events prior to the date of application for Self-Generation Incentive Program (SGIP) incentives; and, if located in Tier 2 or Tier 3 High Fire Threat District or a customer whose electricity was shut off during two or more discrete PSPS events prior to the date of application for SGIP incentives, (b) customer meters directly serving grocery stores, corner stores, markets and supermarkets, if the customer has average annual gross receipts of $15 million or less, over the last three tax years as estimated at a single location,

(c) independent living centers, (d) food banks, and, (e) households that rely on electric-pump wells for their water supply.

22. 2. ~~17.~~ Pacific Gas and Electric Company and Southern California Edison Company shall use lists of customers whose electricity was shut off during two or more discrete Public Safety Power Shutoff (PSPS) events prior to the date of application for Self-Generation Incentive Program (SGIP) to determine customer eligibility for SGIP equity resiliency and general market resiliency adder incentives, and shall refine these lists to improve their accuracy as needed.

23. 3. ~~18.~~ San Diego Gas and Electric Company (SDG&E) and Southern California Edison (SCE) shall actively collaborate with the Center for Sustainable Energy and Southern California Gas Company, respectively, to support the timely validation of customer eligibility for the equity resiliency budget, including providing detailed information regarding SDG&E and SCE customers whose electricity was shut off during two or more discrete Public Safety Power Shutoff events.

24. 4. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and the Center for Sustainable Energy in collaboration with San Diego Gas & Electric Company shall each include their working definition of "discrete PSPS event" in the Joint Tier 2 Implementation advice letter required in this decision, striving to use a standardized definition of this phrase to determine SGIP resiliency incentive eligibility, as practicable.

25. 5. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and San Diego Gas & Electric Company shall: (a) ensure there is a method for all customers, or their authorized representative, to identify the circuit they are served by from their bill or online, or otherwise, and to verify if they were subject to two or more Public Safety Power Shutoff

(PSPS) events; (b) post on the Self-Generation Incentive Program portal a master list of all circuits that have had two or more PSPS events and the dates and times of the events; and, (c) update the lists within 30 days of any new PSPS event.

26. 6. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and the Center for Sustainable Energy shall work with Commission staff and stakeholders to consider additional ways to facilitate developer identification of customers eligible for resiliency incentives that do not violate customer privacy or raise security concerns and shall revise the Self-Generation Incentive Program handbook to describe the method taken to implement the requirement contained in Ordering Paragraph 23(a).

27. 7. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and the Center for Sustainable Energy shall submit a Joint Tier 2 advice letter seeking suspension or modification of the developer cap for a specific incentive step if: (a) an incentive step has been open at least 12 months; (b) at least two entities have reached their cap; and, (c) there is otherwise low participation in the incentive step.

28. 8. ~~19.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall modify the Self-Generation Incentive Program general market storage incentive step-down structure as follows:

Energy Storage Duration (per kW)	**Percentage of Full Incentive- General Market**
Zero to two hours	100 percent
Two to four hours	
Four to six hours	25 percent
Greater than six hours	0 percent

29. 9. ~~20.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable

Energy shall establish a resiliency incentive adder for general market projects of 15 cents per watt-hour ($0.15/Wh) for large-scale storage projects and two dollars and 50 cents per watt ($2.50/W) for renewable generation projects and shall grant eligibility for these incentives to general market customers with critical resiliency needs as defined in this decision.

30. 0. ~~21.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy (collectively Self-Generation Incentive Program administrators or SGIP PAs) shall require developers applying for a general market energy storage or a renewable generation resiliency incentive adder and all general market energy storage projects with a longer than two-hour discharge duration to:

(a) Provide an estimate of how long a project's fully charged battery — or renewable generation system — will provide electricity for the relevant facility average load during an outage;

(b) Indicate whether a project's critical loads can and will be isolated;

(c) Provide an estimate of how long a project's fully charged battery — or renewable generation system — will provide electricity to critical uses during an outage;

(d) Provide an estimate of how long the project can operate in less-than-favorable circumstances, such as if an outage occurs when an energy storage system has been discharged or during the winter (for systems paired with solar), or while experiencing similar challenges for renewable generation systems;

(e) Summarize information given to the customer about how the customer may best prepare an energy storage system to provide backup power — or, ensure operation of a renewable generation system — in the case of a Public Safety Power Shutoff event announced in advance;

(f) Attest to the truth of the information provided;

(g) Provide an attestation from the customer indicating that he or she received this information prior to signing a contract; and

(h) Demonstrate that an Authority Having Jurisdiction has approved plans showing that the system can operate in island mode, has inspected the system after installation, and has authorized operation.

31. 1. ~~22.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall include in their equity resiliency budget and resiliency adder incentive application forms a question regarding the applicant's coordination with their local government and the California Office of Emergency Services ~~and shall accept projects that notify their local governments that they intend to or have installed on-site storage as meeting this criterion~~, shall require applicants to demonstrate through their response that coordination has or will take place with their local government and the Office of Emergency Services, and shall d eprioritize processing an application if the customer has not demonstrated this.

32. 2. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy shall revise the Self-Generation Incentive Program handbook to remove sizing limitations based on inverter size for equity resiliency projects and projects using the resiliency incentive and shall allow specific projects to receive incentives for a system that is sized above peak load if this is necessary due to modular c omponent sizes to accommodate the customer's peak load, if the project applicant demonstrates proof of this need before the incentive is paid.

33. 3. ~~23.~~ Commission staff shall ensure that the Self-Generation Incentive Program impact evaluation report issued in 2022 includes an evaluation of the

performance and impact of the non-residential projects receiving funding from the equity resiliency budget in 2020, using the factors listed in § 379.9(b)(4).

34. 4. ~~24.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy (collectively program administrators) shall ~~adopt a soft target to achieve an average incentive application processing time of 45 days or less, shall~~: (a) adequately staff the Self-Generation Incentive Program (SGIP) with sufficient resources to advance an incentive from submittal to review in 10 days and to fully process incentive applications, excluding the time the application is in "suspended" status, within approximately 45 – 60 days, on average; (b) work with stakeholders to develop reasonable timeline expectations for each individual step of the application review process and for SGIP program a dministrator response times to developer email inquiries; (c) annually file a summary notice of their average, fastest and slowest incentive application processing times for all technology budget categories to the service list of Rulemaking 12-11-~~005,~~005; and ~~shall~~, (d) annually post the same information on the Self-Generation Incentive Program website (currently www.selfgenca.com).

35. 5. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy (collectively Self-Generation Incentive Program administrators or SGIP PAs) shall assess any ratepayer-funded program with potential to provide duplicative funding for Self-Generation Incentive Program projects intended to provide behind-the-meter backup power and shall develop a process to prevent this.

36. 6. ~~25.~~ Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy (collectively Self-Generation Incentive Program administrators or SGIP

PAs) are authorized to submit a Tier 2 advice letter to transfer funds between technology incentive budgets subsequent to December 31, ~~2023~~2022 if the SGIP PA believes that there are likely to be unreserved funds in that budget as of December 31, 2025.

37. ~~26.~~ Rulemaking 12-11-005 remains open.

This order is effective today.

Dated_____, at San Francisco, California.

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