STATE OF CALIFORNIA EDMUND Governor

PUBLIC UTILITIES COMMISSION
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TO PARTIES OF RECORD IN RULEMAKING 12-11-005:

This is the proposed decision of Commissioner 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 April 6, 2017, 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/ KAREN V. CLOPTON
Karen V. Clopton, Chief
Administrative Law Judge

KVC:jt2

Attachment

Decision **PROPOSED DECISION OF COMMISSIONER RECHTSCHAFFEN**
(Mailed 3/6/2017)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues.	Rulemaking 12-11-005 (Filed November 8, 2012)

DECISION REVISING THE SELF-GENERATION INCENTIVE PROGRAM PURSUANT TO ASSEMBLY BILL 1637 AND GRANTING THE PETITION FOR MODIFICATION OF DECISION 16-06-055 BY THE CALIFORNIA SOLAR ENERGY INDUSTRY ASSOCIATION

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DECISION REVISING THE SELF-GENERATION INCENTIVE PROGRAM PURSUANT TO ASSEMBLY BILL 1637 AND GRANTING THE PETITION FOR MODIFICATION OF DECISION 16-06-055 BY THE CALIFORNIA SOLAR ENERGY INDUSTRY ASSOCIATION

Summary

This decision increases the budget for California's Self-Generation Incentive Program (SGIP) consistent with the authorization established by Assembly Bill (AB) 1637 (Low, 2016). This decision also grants the November 18, 2016 Petition for Modification of Decision (D.) 16-06-055 filed by the California Solar Energy Industry Association. No other changes are made to the program. The proceeding remains open.

This decision revises SGIP as following:

- Increases SGIP's total budget per AB 1637. Beginning in 2017, Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), and Southern California Gas Company shall collect on an annual basis through 2019, double the amount collected in calendar year 2008.
- Allocates the additional funding authorized by AB 1637 to the energy storage incentive budget category and the generation category incentive budget as follows:
  - o 85% of the AB 1637 funds are available for the energy storage category but no AB 1637 funds are allocated to the existing carve-out for energy storage projects less than or equal to 10 kilowatts in size.
  - o 15% of the AB 1637 funds are available for renewable generation projects within the generation category, as defined in D.16-06-055.
- The AB 1637 funds allocated to the energy storage category are apportioned to the incentive steps as follows: Step 1 (0%), Step 2 (15%), Step 3 (30%), Step 4 (30%), and Step 5 (25%).

- The AB 1637 funds allocated to renewable projects in the generation category are apportioned to the incentive steps as follows: Step 1 (33.3%), Step 2 (33.3%), and Step 3 (33.4%).
- Revises incentive amounts in Steps 2 through 5 for all projects in the energy storage category that receive the federal Investment Tax Credit (ITC) so that the Step 1 percentage differential between projects with and without the ITC is maintained in Steps 2 through 5.

Table 1: Total AB 1637 Funds and Allocation

Authorized AB 1637 Incentive Funds (reflects doubling of 2008 collection amount of $83 million for each year 2017-2019)	
Total AB 1637 Collections	$249,000,000
Energy Storage Incentive Allocation (85%)	$196,834,500
Renewable Generation Incentive Allocation (15%)	$34,735,500
Program Administration	$17,430,000

Table 2: Increase to Incentive Budget for Energy Storage and Renewable Generation Technologies

Incentive Category	Step 1	Step 2	Step 3	Step 4	Step 5
Energy Storage (pre-AB 1637)	$40,524,750	$40,524,750	$40,524,750	$40,524,750	$40,524,750
Energy Storage (AB 1637 funds)	**$0 (no increase)**	**$29,525,175**	**$59,050,350**	**$59,050,350**	**$49,208,625**
Total Energy Storage	$40,524,750	$70,049,925	$99,575,100	$99,575,100	$89,733,375
Renewable Generation (pre-AB 1637)	$9,005,500	$9,005,500	$9,005,500	n/a	n/a
Renewable Generation (AB 1637 funds)	**$11,566,922**	**$11,566,922**	**$11,601,657**	**n/a**	**n/a**
Total Renewable Generation	$20,572,422	$20,572,422	$20,607,157	n/a	n/a

1. Background

1.1. Legislative and Procedural History

California's Self-Generation Incentive Program (SGIP) was established in 2001 by the Commission 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 SGIP several times.[1] During 2014 and 2015, the Commission acted to extend SGIP funding through 2019 and updated program eligibility criteria related to greenhouse gas (GHG) emissions, pursuant to SB 861 (Committee on Budget and Fiscal Review, 2014).[2] In 2016, the Commission adopted D.16-06-055, which made significant programmatic changes for how SGIP incentive dollars are awarded and other program refinements. On September 26, 2016, Governor Brown signed the piece of legislation we address today, AB 1637 (Low, 2016), which gives the Commission the authority to increase collections for SGIP and extends the net energy metering tariff for electric fuel cell systems.[3]

1.2. Assigned Commissioner's Ruling

On December 30, 2016, the assigned Commissioner issued a ruling seeking party comment on a set of questions and proposals related to the implementation of AB 1637.[4]

The Assigned Commissioner's Ruling (ACR) sought input from parties on whether the Commission should fully exercise the authority granted by AB 1637 to double collections from utility customers for SGIP incentives, or if some lesser amount was warranted. AB 1637 is silent on how the additional funds, if collected, should be allocated across the various resource and technology

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1 Notably, AB 1685 (Leno, 2003), AB 2778 (Lieber, 2006) and Senate Bill (SB) 412 (Kehoe, 2009), which collectively shifted SGIP's focus from peak demand reduction towards reducing criteria pollutants and greenhouse gas emissions.

2 The decisions implementing these changes are D.14-11-001 and D.15-11-027.

3 AB 1637 is codified in Pub. Util. Code §§ 379.6(a)(2) and 2827.10(c).

4 The Assigned Commissioner's Ruling can be found at the link "Docket Card" on the Commission's website : http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=171806907.

categories, as well as, the incentive steps established by D.16-06-055. On these issues, the ACR asked parties to comment on specific proposals.

Numerous parties to this proceeding filed comments to the ACR on January 31, 2017.[5] We address these comments in detail below.

1.3. Petition for Modification of D.16-06-055

On November 18, 2016, the California Solar Energy Industry Association (CalSEIA) filed a petition for modification of D.16-06-055 (Petition). In its Petition, CalSEIA seeks modification to the incentive calculation for energy storage systems that are supported by the federal Investment Tax Credit (ITC). Responses to the Petition were filed on December 15, 2016 by the Center for Sustainable Energy (CSE) and on December 19, 2016 by SolarCity, CESA, ORA, and jointly by PG&E and SCE.

We also address this Petition below.

2. Discussion

Today's decision adopts changes to SGIP in response to the authority granted to the Commission in AB 1637 regarding funding. This decision also adopts changes to SGIP that result from our granting of CalSEIA's November 18, 2016 petition for modification of D.16-06-055.

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[5] Parties that filed comments include the following: Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) filed jointly (Joint IOUs); Office of Ratepayer Advocates (ORA); California Solar Industries Association (CalSEIA); National Fuel Cell Research Center (NFCRC); California Energy Storage Alliance (CESA); Robert Bosch LLC (Robert Bosch); Sunrun, Inc. (Sunrun); Southern California Gas Company (SoCalGas); California Clean DG Coalition (CCDC); SolarCity and Tesla as Joint Parties (SolarCity/Tesla); Silicon Valley Leadership Group (SVLG); FuelCell Energy, Inc. (FCE); Advanced Microgrid Solutions (AMS), Green Charge Networks, LLC (Green Charge) and Custom Power Solar.

In D.16-06-055, less than one year ago, the Commission made significant changes to SGIP to implement legislation and align funding with program goals. The changes adopted in D.16-06-055 can be described broadly as follows: (1) enhanced environmental benefits, through reduced GHG reductions, criteria air pollutants and water usage, (2) grid support, and (3) market transformation for distributed resources.[6] SGIP applications for energy storage have been suspended since before new program rules established by D.16-06-055 went into effect, so we lack recent robust information about how SGIP-funded systems are responding to the program and their impacts on the electric grid.[7] For these reasons, we find it most prudent to refrain from making changes to SGIP beyond what is expressly authorized in AB 1637.

2.1. SGIP Program Changes to Implement AB 1637

On December 30, 2016, the assigned Commissioner issued a ruling in response to the passage of AB 1637 and sought party comment on: (1) the overall level of funding of SGIP, (2) distribution of potential new funding among technology sectors, (3) distribution of any new funding across incentive steps, and 4) consideration of developer cap and other SGIP rules. This decision adopts changes related to the first three enumerated topics.

2.1.1. Increasing the SGIP Budget

AB 1637 amended Public Utilities (Pub. Util.) Code § 379.6(a)(2) such that, "The commission, in consultation with the Energy Commission, may authorize

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[6] See *Decision Revising The Self-Generation Incentive Program Pursuant to Senate Bill 861, Assembly Bill 1478, And Implementing Other Changes* (D.16-06-055).

[7] The planned reopening of SGIP to energy storage applicants is due to occur in late March or April 2017. Information about SGIP is available on the Commission's website here (accessed on February 21, 2017): http://www.cpuc.ca.gov/General.aspx?id=5935.

the annual collection of *not more than double* the amount authorized for the self-generation incentive program in the 2008 calendar year, through December 31, 2019." (Emphasis added.)

In comments, a majority of parties including all the energy storage parties, SoCalGas, and ORA supported doubling collections in years 2017-2019, the maximum amount allowed pursuant to Pub. Util. Code § 379.6(a)(2).[8]

Parties representing companies that manufacture or supply SGIP-eligible technologies assert that legislative intent points strongly towards authorizing the maximum increase.

Robert Bosch argues that strong market demand warrants the maximum increase in SGIP funding, stating, that: "based on applicant participation in the SGIP the past couple of years, specifically for energy storage incentives, there has proven to be more than enough customer demand to warrant an increase in SGIP funding. As the Commission is aware, demand for SGIP incentives has far outstripped available funds in the past several program openings."[9]

SoCalGas and ORA also support the maximum increase in SGIP funds but with conditions for how the additional funds would be allocated. We discuss their proposals below.

The Joint IOUs oppose the full doubling of annual collections for SGIP and, instead, favor a 50% increase of the amount collected in the 2008 calendar year, with the additional funds made available only after the existing incentive steps have been fully subscribed and certain other conditions are met. CCDC

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[8] A total of 12 out of 18 commenting parties support this approach.

[9] Comments of Robert Bosch LLC on Implementation of AB 1637 at 2.

does not support increasing SGIP funding at any level at this time, primarily due to uncertainty regarding the net GHG impacts of energy storage systems.

As we affirmed recently in D.16-06-055, the Commission continues to see value in SGIP and expects this value to continue through 2019. Therefore, based on the broad support from parties and the customer demand for distributed resources participating in SGIP, we find that adopting the maximum increase in SGIP funding authorized by AB 1637 is reasonable and additional collections should begin for calendar year 2017.

Accordingly, PG&E, SCE, SDG&E and SoCalGas, shall collect from customers the maximum amount authorized by Pub. Util. Code § 379.6(a)(2) and required by this decision for years 2017, 2018, and 2019.

2.1.2. Annual Collections from Utility Customers

In D.14-12-033, the Commission extended SGIP funding through 2019 and addressed the manner in which the IOUs collect SGIP funds from their customers. Importantly, D.14-12-033 continued the methodology used to derive the annual SGIP collections among 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 has been in place for several years; however, the total amount collected will increase as a result of today's decision.[10]

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[10] Administrative expenses shall be limited to no more than 10% of each IOU's SGIP budget, as set forth in D.04-12-045 and affirmed in D.08-01-029. As a practical matter, the SGIP Administrators have proposed a 7% administrative budget for SGIP starting in 2017 in their advice letters implementing D.16-06-055 (See advice letters: SCE 3564-E; PG&E 3814-G/5029-E; SoCalGas 5074-G; CSE 76-E).

Accordingly, 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. That is, $166 million annually, an increase of $83 million above the amount authorized to be collected on an annual basis in D.14-12-033. The SGIP Program Administrators[11] shall file a Tier 2 advice letter within 10 days of the effective date of this decision to reflect this budget increase and any other changes needed to the SGIP handbook as a result of this decision.

2.1.3. Distribution of AB 1637 Funding Among Technology Incentive Budget Categories

The ACR asked parties to comment on whether the potential new funding should be distributed across the two incentive budget categories for energy storage technologies and generation technologies using the 75% energy storage/25% generation methodology adopted in D.16-06-055. The ACR also asked if the budget for the residential carve-out for energy storage and the renewable carve-out for generation adopted in D.16-06-055 should be increased through the new funding.[12]

Parties' comments reflect a broad range of views regarding how the AB 1637 funds should be used. Several parties support allocating the AB 1637 funds according to the 75% energy storage/25% generation split established in

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[11] The Program Administrators are PG&E, SCE, SoCalGas, and CSE on behalf of SDG&E.

[12] 15% of the 75% of SGIP incentive dollars allocated to energy storage projects are reserved for residential energy storage projects and 40% of the 25% of SGIP incentive dollars allocated to generation projects are reserved for renewable generation projects. (D.16-06-055 at Conclusion of Law 14.)

D.16-06-055.[13] ORA asserts that the 75%/25% split should be retained, but that funds collected from gas ratepayers should be reserved for renewable and non-renewable natural gas projects, and for energy storage paired with a natural gas onsite generator.

SoCalGas and CCDC oppose additional funding of energy storage and request that any new funds be used to support non-renewable natural gas projects that meet SGIP eligibility criteria, notwithstanding the biogas blending requirement adopted in D.16-06-055.

The remaining commenting parties generally support the 75%/25% allocation between the energy storage and generation categories but each party also put forth an alternate approach with preferences for specific technology categories, sub-categories or carve-outs. For example, NFCRC recommends that a biogas adder be applied to all biogas used (including the minimum required). CESA advocates for up to 100% of new funding being allocated to energy storage. Robert Bosch supports a higher allocation to energy storage if there is weak demand for SGIP incentives in the generation category. Custom Power Solar proposes that at least 25% of AB 1637 funding be reserved for energy storage projects paired with renewable systems in disadvantaged communities.

After considering all comments we determine that allocating the AB 1637 funds according to a 85%/15% split for the energy storage and renewable generation categories, respectively, best effectuates the SGIP goals of GHG reductions and market transformation that have been amplified by the Legislature in recent years.

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[13] The Joint IOUs (only if new funding is authorized), SVLG, CalSEIA, SolarCity/Tesla, Sunrun, FCE and AMS support this position.

Our rationale for this change to the budgetary structure of SGIP adopted in D.16-06-055 is as follows. In their comments, CESA indicated that an increase in the amount of SGIP budget allocated to energy storage projects was justified due to the fact the biogas blending rules of D.16-06-055 will practically exclude pure electric fuel cells from SGIP. In the absence of demand for SGIP incentives from such fuel cells, CESA estimates that energy storage would have accounted for 80% of SGIP incentives in 2015. Furthermore, CESA argued, that a forward-looking SGIP should account for the fact that demand from the energy storage sector will likely increase from 2015 levels, thus justifying an increased budget allocation.

Considering SGIP more broadly, as the proportion of renewable electricity on the grid increases, energy storage will play an increasingly important role in meeting California's climate goals. Additional funding for the energy storage category can help facilitate market transformation similar to how the California Solar Initiative program played an important role in the deployment of solar photovoltaic systems throughout the state. Given the considerations above, we find that 85% is a reasonable allocation of AB 1637 incentive funding to the energy storage incentive budget.

The remaining 15% of the AB 1637 incentive funding shall be reserved for renewable generation projects. Our analysis of the last several years of SGIP incentive funding requests and awards for renewable generation indicates that approximately $16 million per year of SGIP funding has been needed to meet current demand from these generation sources. We also note that the 2014-2015 SGIP Impact Evaluation found that non-renewable generation projects were increasing GHG emissions on a net basis while renewably fueled generation projects were reducing GHG emissions on a net basis. Maintaining at least enough funding for existing demand from GHG-reducing generation sources is important for SGIP to meet its goals to reduce GHG emissions on a net basis. For these reasons, we find that 15% is a reasonable amount of the AB 1637 incentive funding that should be reserved for renewable generation projects.

In order to maximize the impact of the newly authorized funds towards SGIP program goals, we direct that the AB 1637 funds allocated to the energy storage category be available to systems of all sizes, but we will not add funds to the budget reserved for energy storage projects less than or equal to 10 kilowatts in size.[14]

Furthermore, the funds allocated to the generation category will be available only for those systems that rely on renewable resources as determined by the Renewables Portfolio Standard (RPS) program and D.16-06-055.[15]

Accordingly, the Program Administrators, PG&E, SCE, SoCalGas, and CSE on behalf of SDG&E, shall implement this 85%/15% incentive budget allocation specified above, and any other changes needed to the SGIP handbook as a result of this decision by submitting a Tier 2 advice letter within 10 days of the effective date of this decision.

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[14] D.16-06-055 at Conclusion of Law 14.

[15] RPS eligibility is established in Pub. Util. Code § 399.12(e).

Table 3:Incentive Budget Allocation for Energy Storage and Renewable Generation Technologies

Authorized AB 1637 Incentive Funds (reflects doubling of 2008 collection amount of $83 million for three years, 2017-2019)	
Total AB 1637 Collections	$249,000,000
Energy Storage Incentive Allocation (85%)	$196,834,500
Renewable Generation Incentive Allocation (15%)	$34,735,500
Program Administration[16]	$17,430,000

2.1.4. Distribution of AB 1637 Funding Across Incentive Stops

The ACR asked for comments on a proposal to distribute AB 1637 funding equally across the energy storage category Steps 2-5 (25% in each step), with no increased funding for Step 1, and equally across generation category Steps 1-3 for renewable projects only. The ACR then asked a series of questions related to the proposal.

In comments, a number of perspectives were offered regarding options for distributing the new funding across incentive steps. Most parties focus on the energy storage category. Sunrun and SVLG support the proposal put forth in the ACR.

[16] This amount reflects the assumption that program administration costs equal 7% of total incentive budget.

- **Energy Storage Category**

Custom Power Solar, CalSEIA, NFCRC, CESA, SolarCity/Tesla, AMS all argue for equal distribution across all incentive steps, i.e., Steps 1-5 (20% in each step) for the energy storage category.

ORA suggests that energy storage system costs are close to the Steps 1 and 2 incentive levels, which leads ORA to recommend laddering the AB 1637 funds to later steps. ORA proposes distributing the funds allocated to energy storage in the following manner: Step 3 (20%), Step 4 (30%), and Step 5 (50%). ORA asserts that this approach maximizes the effectiveness and value of the ratepayer funded SGIP budget.

Similar to ORA, Robert Bosch suggests that the energy storage incentive Step 1 is sufficiently funded but recommends allocating larger portions of the AB 1637 budget to Steps 3 and 4 "to support market transformation when the incentives will have a positive impact on price reduction for energy storage." Robert Bosch cautions against overfunding Step 5 when the lower incentive has less of an impact on the consumer's decision to invest in the system. To balance effective use of the AB 1637 funds, Robert Bosch recommends the following distribution: Step 2 (15%), Step 3 (30%), Step 4 (30%) and Step 5 (25%).

The Joint IOUs favored creating a new, final step for energy storage (Step 6) and for generation (Step 4). In support of their approach, the Joint IOUs assert that this would help extend the SGIP program and allow time for new rules to be developed and implemented related to how energy storage systems charge and discharge energy. SoCalGas opposes any disbursement of their pro-rated share to energy storage.

In summary, the comments offer a wide range of options for how to distribute new funds across the incentive steps. Some proposals are driven by an interest to avoid funding projects when the incentive amount may represent a disproportionate share of a system's total cost, which is a laudable objective. Some proposals are elegant in their simplicity. Distributing the funds equally to all incentive steps, or all in one step, is easy to implement and administer, which also has value. Allocating all the AB 1637 funds to the last and lowest incentive step could also be easily implemented but may not assist SGIP's goal of market transformation.

On balance, we find the proposal put forth by Robert Bosch most compelling. It takes an honest account of the challenges with an administratively determined incentive program for a dynamic market in which prices are decreasing, but stops short of making any drastic decisions based on the lack of certainty about what the future holds. The allocation of funds across incentive steps can play a role in market transformation, and we find a modestly tailored distribution across Steps 2 - 5 is reasonable.

- **Renewable Projects in the Generation Category**

Turning to the renewable generation category, none of the comments offer a compelling argument to adopt anything different than the approximately equal distribution proposed in the ACR.

Therefore, the AB 1637 funds allocated to the renewable generation category will be distributed in the following manner: Step 1 (33.3%), Step 2 (33.3%) and Step 3 (33.4%).

Accordingly, the Program Administrators, PG&E, SCE, SoCalGas, and CSE on behalf of SDG&E, shall implement the AB 1637 incentive funding distribution to incentive steps for the energy storage and renewable generation categories, as set forth above and make any other changes needed to the SGIP handbook as a result of this decision by submitting a Tier 2 advice letter within 10 days of the effective date of this decision.

Table 4: Nominal Increase to Incentive Budget for Energy Storage and Renewables Generation Categories

Incentive Category	**Step 1**	**Step 2**	**Step 3**	**Step 4**	**Step 5**
Energy Storage (pre-AB 1637) [17]	$40,524,750	$40,524,750	$40,524,750	$40,524,750	$40,524,750
Energy Storage (AB 1637 funds)	**$0 (no increase)**	**$29,525,175**	**$59,050,350**	**$59,050,350**	**$49,208,625**
Total Energy Storage	$40,524,750	$70,049,925	$99,575,100	$99,575,100	$89,733,375
Renewable Generation (pre-AB 1637)[18]	$9,005,500	$9,005,500	$9,005,500	n/a	n/a
Renewable Generation (AB 1637 funds)	**$11,566,922**	**$11,566,922**	**$11,601,657**	**n/a**	**n/a**
Total Renewable Generation	$20,572,422	$20,572,422	$20,607,157	n/a	n/a

[17] Note that these figures for the pre-AB 1637 energy storage incentive budget are based on 75% of 50% of 2016 collections and 100% of authorized 2017-2019 collections net of program administration expenses (($77.19 million / 2) + ($77.19 million x 3) x 0.75). Actual incentive step budgets may be higher once carryover of forfeited application fees and other funds from previous years are factored in.

[18] Note that these figures for the pre-AB 1637 renewable generation incentive budget are based on 10% of 50% of 2016 collections and 100% of authorized 2017-2019 collections net of program administration expenses (($77.19 million / 2) + ($77.19 million x 3) x 0.1). Actual incentive step budgets may be higher once carryover of forfeited application fees and other funds from previous years are factored in.

- **Step 1 not used due to timing of AB 1637 implementation**

The ACR asked parties how to address the possibility a decision implementing AB 1637 is issued too late for any new incentive funds to be allocated to Step 1. In such an event, Custom Power Solar, CalSEIA suggest applying Step 1 funding to Step 2 and Step 3. CESA and AMS suggest applying Step 1 funding to Step 2. SolarCity/Tesla suggest disbursing Step 1 funds evenly between Steps 2 through 5.

We find that to promote administrative simplicity and fairness, in the event that a decision implementing AB 1637 is not approved by the Commission before the Step 1 incentive budget approved in D.16-06-055 for renewable generation projects is fully subscribed, the funds that would have been allocated to Step 1 will be equally allocated to Steps 2 and 3, such that 50% of the funds go towards Step 2 and 50% of the funds go towards Step 3.

This issue is moot for the energy storage category in light of our decision not to further fund Step 1.

Accordingly, the Program Administrators, PG&E, SCE, SoCalGas, and CSE, on behalf of SDG&E, shall implement the rule to equally allocate to Steps 2 and 3, such that Step 2 (50%) and Step 3 (50%), the funds that would have been allocated to Step 1 if a decision to implement AB 1637 is not issued before the Step 1 budget approved in D.16-06-055 for renewable generation projects is fully subscribed, and any other changes needed to the SGIP handbook as a result of this decision by submitting a Tier 2 advice letter due within 10 days of the effective date of this decision.

2.1.5. Consideration of Other SGIP Program Changes

The ACR asked a number of questions related to changes to SGIP for parties to consider in relation to implementing AB 1637, including:

- whether any changes to the developer cap should be considered;
- whether changes to the lottery should be considered;
- whether residential energy storage systems subject to time-of-use rates should be prioritized;
- whether operational requirements should be imposed to address the concerns surrounding the net GHG emissions impact of energy storage systems and non-renewable generation identified in the recent SGIP evaluation report prepared by Itron.[19]

In addition, parties also came forward with their own proposed changes to SGIP, including:

- FCE advocated for reserved funding for long-duration energy storage with discharge durations above 6 hours;
- The Joint IOUs recommended creating additional incentive steps;
- Customer Solar Power suggested reserving some budget for energy storage projects paired with renewable systems in disadvantaged communities.

While most parties suggest that it is premature to make changes to the program, some express interest in doing so now. Most notably, the Joint IOUs strongly urge the Commission to impose a range of operational conditions on energy storage systems in an effort to affect when these systems charge/discharge and to increase system efficiency. On this issue, ORA argues

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[19] *Final Report: 2014-2015 SGIP Impacts Evaluation Report (November 6, 2016)* available at (accessed on February 21, 2017): http://www.cpuc.ca.gov/General.aspx?id=5935.

against imposing operational conditions for energy storage systems, and, instead, argues in favor of having the charge/discharge decisions driven by rate design.

NFCRC opposes the idea that changes would be made to SGIP too soon after the lengthy deliberation that led to D.16-06-055, and in the absence of data from the revised program that has not yet opened.

In deciding whether to make additional changes to SGIP now, we consider the potential benefits that may come from the changes raised in parties' comments against the disruption to customers and market participants from making changes to the program that is scheduled to open within the next two months after being suspended for more than a year, and following so closely on the adoption of our recent comprehensive SGIP decision. From this perspective, we find that it is premature to make changes at this time. We appreciate the detailed comments from the parties, and we may return to these issues once there is sufficient information from the new program to evaluate the impacts of any changes. Notwithstanding this, and in response to comments by CESA and others, we direct the SGIP Administrators to modify the SGIP Handbook such that the 20% developer cap applies to the total funding levels for each incentive step as determined by this decision.

Therefore, no additional changes will be made to the SGIP now.

2.2. CalSEIA Petition for Modification of D.16-06-055

CalSEIA's November 18, 2016 petition for modification identifies a problem with the methodology adopted in D.16-06-055 in the way large scale energy storage incentives are calculated for projects benefitting from the federal ITC.

Some technologies qualify for the 30% federal ITC, while others do not. In D.16-06-055, the Commission accounted for this in the incentive rates due to the significant benefit the ITC has on the total cost of a system, 30% of the capital cost of the project. In D.16-06-055, the Commission adjusted the Step 1 incentive of $0.50/Watt-hour (Wh) for systems without the ITC to $0.36/Wh for systems that did receive the ITC, reasoning that CalSEIA's proposed incentive level of $0.36/Wh for large systems was a substantiated level of incentive for larger systems taking advantage of the ITC. Then, having identified the "value" of the ITC at $0.14/Wh ($0.50/Wh minus $0.36/Wh), that value was then subtracted from Steps 2 through 5 to calculate the incentives for ITC projects at all steps.

The problem identified by CalSEIA in its Petition arises in Step 5 when the full incentive budget for the preceding steps are fully subscribed across all four Program Administrator's service territories within ten calendar days and the incentive steps down from $0.05/Wh to $0.10/Wh at each step.[20] Under this scenario, there would be no incentive in Step 5 for projects that qualify for the ITC.

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[20] See, D.16-06-055, Conclusion of Law 24.

Table 5: D.16-06-055 Incentive Structure for Non-Residential Energy Storage ($/Wh)

		Slow Adoption[21]			Fast Adoption[22]		
		No ITC	With ITC	ITC Pct of Non-ITC	No ITC	With ITC	ITC Pct of Non-ITC
Incentive Level	Step 1	0.50	0.36	72%	0.50	0.36	72%
	Step 2	0.45	0.31	69%	0.40	0.26	65%
	Step 3	0.40	0.26	65%	0.30	0.16	53%
	Step 4	0.35	0.21	60%	0.20	0.06	30%
	Step 5	0.30	0.16	53%	0.10	-	0%
Pct Decline in Incentive Level	Step 1	n/a	n/a		n/a	n/a	
	Step 2	10%	14%		20%	28%	
	Step 3	11%	16%		25%	38%	
	Step 4	13%	19%		33%	63%	
	Step 5	14%	24%		50%	100%	

We find that CalSEIA's explanation of the current incentive structure for non-residential energy storage demonstrates a flaw in the current methodology. To address the problem, CalSEIA recommends that the non-ITC/ITC incentive adjustment methodology for each step be based on the percentage difference at Step 1, i.e., 72%. Five parties filed responses to the Petition. CESA, SolarCity and CSE support the changes recommended by the Petition. The Joint IOUs oppose the Petition. ORA supports the Petition but recommends a different solution.

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[21] See, D.16 06 055, Conclusion of Law 23.

[22] See, D.16 06 055, Conclusion of Law 23 and 24.

The Joint IOUs' opposition to the Petition centers on their concerns that granting CalSEIA's Petition would contravene the Commission's determination in D.16-06-055 that the value of the ITC is $0.14/Wh for all projects at all incentive levels. D.16-06-055 did not make such a finding. In D.16-06-055, we determined the incentive difference between projects with and without the ITC should reflect the value of the 30% ITC and, on that basis, we set the Step 1 incentive for ITC supported projects at 72% of the incentive amount for non-ITC projects. We then took the $/Wh difference, i.e., $0.14/Wh, and reduced each of the incentive steps by that amount.

ORA's proposes an alternative fix to the issue CalSEIA identifies in the Petition. Their alternative is to set an incentive floor to ensure that ITC-supported projects do not face a Step 5 where no incentive is available. ORA proposes that Step 5 would have an incentive floor of $0.06/Wh, the same incentive level for projects without the ITC.

CalSEIA's Petition highlights a flaw in the incentive adjustment mechanism adopted in D.16-06-055 that goes beyond the most obvious problem that could occur in Step 5 under a very specific scenario. The Commission's intent in D.16-06-055 was to put SGIP projects on approximate equal footing in consideration of the federal ITC. CalSIEA's proposal to apply the percentage difference employed in D.16-06-055, not the nominal value, is the most reasonable remedy to this issue. Therefore, we grant CalSEIA's Petition. The impact of this methodology is illustrated in Table 6 below. Note that in Table 6 the incentive values for ITC-supported projects may not precisely equal 72% of the incentive values for non-ITC-supported projects, but they are adopted in any event.

Accordingly, the Program Administrators, PG&E, SCE, SoCalGas, and CSE on behalf of SDG&E, shall implement the revised incentive levels, and any other changes needed to the SGIP Handbook, by submitting a Tier 2 advice letter within 10 days of the effective date of this decision.

Table 6: Energy Storage Incentive Levels Using Fixed Percentage ($/Wh)

		Slow Adoption			Fast Adoption		
		No ITC	With ITC	ITC Pct of Non-ITC	No ITC	With ITC	ITC Pct of Non-ITC
Incentive Level	Step 1	0.50	0.36	72%	0.50	0.36	72%
	Step 2	0.45	0.32	72%	0.40	0.29	72%
	Step 3	0.40	0.29	72%	0.30	0.22	72%
	Step 4	0.35	0.25	72%	0.20	0.14	72%
	Step 5	0.30	0.22	72%	0.10	0.06	72%

3. Comments on Proposed Decision

The proposed decision of Commissioner Rechtschaffen 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 ______________, and reply comments were filed on ______________ by ____________________.

4. Assignment of Proceeding

Clifford Rechtschaffen is the assigned Commissioner and Regina DeAngelis is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. Value continues to exist in the distributed resources that participate in the Self-Generation Incentive Program (SGIP) and this value is expected to continue through 2019.

2. Doubling the SGIP budget is consistent with Assembly Bill (AB) 1637 and is broadly supported by parties.

3. The methodology used to derive the annual SGIP collections split between Pacific Gas & Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), and Sothern California Gas Company (SoCalGas) is based on the proportionate share of energy efficiency funding adopted by the Commission in Decision (D.) 06-12-033 and D.06-01-024.

4. SGIP goals of greenhouse gas (GHG) reductions and market transformation are goals supported by the Legislature.

5. As the proportion of renewable electricity on the grid increases, energy storage can play an increasingly important role in meeting California's climate goals.

6. Incentive programs can help facilitate market transformation.

7. In D.16-06-055, the Commission allocated 75% of the SGIP incentive funds to energy storage and 10% of incentive funds to renewable generation technologies.

8. In D.16-06-055, the Commission set higher incentive levels and reserved 15% of the SGIP incentive budget for energy storage projects that are less than or equal to 10 kilowatts in size.

9. Allocating 85% of the incremental incentive funds authorized by AB 1637 to the energy storage category and 15% to the renewable generation category will advance the goals of GHG reductions and market transformation.

10. In evaluating the merit of the ACR proposal to distribute AB 1637 funding across incentive steps, the following characteristics were considered: (1) not funding projects where the incentive amount represents a disproportionate share of the project's total cost, (2) administrative ease and implementation simplicity,

(3) legislative intent, and (4) market transformation when the incentives will have a positive impact on price reduction for energy storage.

11. The allocation of funds across incentive steps can play a role in market transformation.

12. A decision implementing AB 1637 may not be adopted by the Commission before the Step 1 budget approved in D.16-06-055 for renewable generation projects is fully subscribed.

13. The Commission significantly revised SGIP in D.16-06-055 and the revised program has not yet opened.

14. The Commission established a developer cap in D.16-06-055, such that any single developer/installer is limited to 20% of the available incentive funding for the generation, large energy storage and residential energy storage categories.

15. CalSEIA's petition for modification of D.16-06-055 identified a flaw in the incentive structure for non-residential energy storage projects that qualify for the federal investment tax credit.

Conclusions of Law

1. Collectively, PG&E, SCE, SDG&E and SoCalGas should collect an additional $83 million for calendar year 2017, 2018, and 2019 for purposes of the SGIP.

2. When calculating the proportionate annual SGIP collections from customers, PG&E, SCE, SDG&E, and SoCalGas should employ the methodology adopted in D.06-12-033 and D.06-01-024.

3. To promote SGIP goals of GHG reductions, grid support and market transformation, the allocation of the SGIP incentive budget authorized by AB 1637 should be 85% for the energy storage category and 15% for the renewable generation category.

4. To balance effective use of the AB 1637 funds, the following allocation for the energy storage category should be adopted as follows: Step 1 (0%), Step 2 (15%), Step 3 (30%), Step 4 (30%) and Step 5 (25%).

5. An approximately equal allocation of AB 1637 funds for the renewable generation category is reasonable and should be adopted as follows: Step 1 (33.3%), Step 2 (33.3%) and Step 3 (33.4%).

6. In the event that a decision implementing AB 1637 is not approved by the Commission before the Step 1 budget approved in D.16-06-055 for renewable generation projects is fully subscribed, those funds should be equally allocated to Step 2 and Step 3.

7. The developer cap established in D.16-06-055 should apply to the total funding levels for all SGIP incentive steps inclusive of the funding authorized by this decision.

8. In fairness to SGIP Administrators, market participants and parties to this proceeding, the revised SGIP should reopen before further changes are made to the program.

9. CalSEIA's proposal to apply the percentage difference in incentive amounts between large energy storage projects with and without the federal investment tax credit is reasonable and should be employed for all incentive steps for large energy storage projects.

10. CalSEIA's November 18, 2016 petition for modification of D.16-06-055 should be granted.

O R D E R

IT IS ORDERED that:

1. Within 10 days of the effective date of this decision, the Program Administrators (Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas), and the Center for Sustainable Energy (CSE) on behalf of San Diego Gas & Electric Company (SDG&E)) shall submit a Tier 2 advice letter with revisions to the Self-Generation Incentive Program (SGIP) incorporating the program revisions adopted in this decision, as set forth below:

   - Beginning in 2017, PG&E, SCE, SoCalGas, and SDG&E shall collect on an annual basis through 2019, the maximum amount authorized by Public Utilities Code Section 379.6(a)(2), which in total is $166 million, or double the amount collected from customers in the 2008 calendar year.
   - The amounts authorized under Assembly Bill (AB) 1637 shall continue to be collected consistent with the current methodology used to derive the annual SGIP collections split between PG&E, SCE, SDG&E, and SoCalGas based on the proportionate share of energy efficiency funding adopted by the Commission in Decision (D.) 06-12-033 and D.06-01-024.
   - The additional funding authorized by AB 1637 shall be allocated to the energy storage category and the generation category of SGIP, as follows: 85% of the AB 1637 funds to the energy storage category with no AB 1637 funds to the existing carve-out for energy storage projects less than or equal to 10 kilowatts in size, and 15% of the AB 1637 funds to renewable generation projects within the generation category, as defined in D.16-06-055 and the Renewables Portfolio Standard program.
   - The AB 1637 funds allocated to the energy storage category are apportioned to the incentive steps as follows: Step 1 (0%), Step 2 (15%), Step 3 (30%), Step 4 (30%), and Step 5 (25%).

- The AB 1637 funds allocated to renewable projects in the generation category are apportioned to the incentive steps as follows: Step 1 (33.3%), Step 2 (33.3%), and Step 3 (33.4%).
- In the event that a decision implementing AB 1637 is not approved by the Commission before the Step 1 budget approved in D.16-06-055 for renewable generation projects is fully subscribed, those funds will be equally allocated as follows: Step 2 (50%) and Step 3 (50%).
- Incentive amounts in Steps 2 through 5 for all projects in the energy storage category that are greater than 10 kilowatts in size and that receive the federal investment tax credit (ITC) shall be revised so that the Step 1 percentage differential of 72 percent between projects with and without the ITC adopted in D.16-06-055, Conclusion of Law 23 and 24 is maintained in Steps 2 through 5.
- The 20% developer cap will be calculated based on the total incentive funding levels for each incentive step as determined in D.16-06-055 and this decision.
- Make all necessary corresponding changes to the SGIP Handbook.

2. The Petition for Modification of Decision 16-06-055 by California Solar Energy Industry Association is granted.

3. Rulemaking 12-11-005 remains open.

This order is effective today.

Dated ______________________________, at Santa Rosa, California.