

**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)

**REPLY COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE  
TO THE ASSIGNED COMMISSIONER'S RULING SEEKING COMMENT ON  
IMPLEMENTATION OF SENATE BILL 700 AND OTHER PROGRAM  
MODIFICATIONS**

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July 12, 2019

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MODIFICATIONS**

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits these comments to the *Assigned Commissioner’s Ruling Seeking Comment on Implementation of Senate Bill 700 and Other Program Modifications* (“Ruling”), issued by Assigned Commissioner Clifford Rechtschaffen on April 15, 2019. Pursuant to a procedural email issued on June 3, 2019 by Administrative Law Judge (“ALJ”) Cathleen A. Fogel, CESA is timely filing these reply comments on July 12, 2019 as authorized.

**I. INTRODUCTION.**

CESA continues to support improvements to the Self-Generation Incentive Program (“SGIP”) to support the deployment and market transformation of energy storage systems that provide grid-support benefits and reduce greenhouse gas (“GHG”) emissions. A wide range of ideas were proposed in opening comments – some of which warrant discussion in potential workshops or working groups to develop ideas further. Meanwhile, some ideas should be viewed within the context of a pending Proposed Decision (“PD”) establishing GHG-related operational requirements for new and legacy energy storage projects.<sup>1</sup> On the large part, the PD represents a reasoned approach to align energy storage systems with GHG objectives while providing optionality and supporting market transformation goals. Despite offering several key areas of

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<sup>1</sup> *Proposed Decision Approving Greenhouse Gas Emission Reduction Requirements for the Self-Generation Incentive Program Storage Budget* issued on May 31, 2019 in R.12-11-005.  
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M294/K815/294815788.PDF>

modification to the PD in comments, CESA was largely supportive. In light of this PD, many of the positions expressed by parties around not funding the program in future years or limiting participation based on past GHG performance of energy storage systems may no longer be applicable. Finally, some parties appear to be recirculating old ideas from previous versions of SGIP or reiterating previous positions that have already been determined by the Commission or have already been found to be unreasonable or unworkable. In these reply comments, CESA also responds to these old ideas and positions and recommends that they not be adopted or considered in this proceeding.

**II. FULL FUNDING AUTHORIZATION FROM SENATE BILL 700 IS NEEDED TO PROVIDE LONG-TERM MARKET CERTAINTY AND STRIVE TO ACHIEVE ENERGY STORAGE'S MARKET POTENTIAL.**

CESA agrees with the comments from the California Solar and Storage Association (“CALSSA”) and Center for Sustainable Energy (“CSE”) that full funding authorization from Senate Bill (“SB”) 700 is needed to mimic that market transformational success of the California Solar Initiative (“CSI”) and to support the state’s renewable energy, GHG emissions, and grid reliability goals.<sup>2</sup> However, several parties suggested that authorization of additional ratepayer collections pursuant to SB 700 should wait until more information is provided in upcoming program evaluation reports, await the adoption of new GHG and operational rules, or allow the current available pool of money be spent prior to releasing additional funds.<sup>3</sup> New GHG and operational rules will soon be adopted, so comments around addressing these requirements prior to making a funding authorization decision will soon be moot.

Comments from certain parties to condition funding authorization on new information or observed participation levels fails to provide a long-term funding signal needed to provide market certainty to the energy storage industry. Public Advocates Office (“PAO”), for example, goes beyond just waiting for new GHG and operational rules to be adopted and suggests that new funding collections should not be determined until the efficacy of these new rules will not be evaluated until at least 2022. CESA finds this unnecessary and only serves to perpetuate a start-and-stop feature of the program that was identified as a design flaw of a previous version of SGIP.

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<sup>2</sup> CALSSA comments at p. 2 and CSE comments at p. 1.

<sup>3</sup> SoCalGas comments at p. 5, PG&E comments at pp. 3-4.

According to the PD, frequent monitoring and reporting requirements will be in place to track GHG performance (and thus the efficacy of the rules) and strong performance incentives and penalties will drive energy storage operations to reduce GHG emissions.

Similarly, Pacific Gas and Electric Company (“PG&E”) recommends that further collections should wait until information from Itron’s cost-effectiveness and market transformation reports are published to assess SGIP’s alignment with the Commission’s affordability goals.<sup>4</sup> Notwithstanding the value of this report, CESA does not see how this information should impact the Commission’s funding collection decision. This and every other report evaluating the program should inform how program design and rules can be modified to support deployment and operation of these systems and better achieve program goals, similar to what was done with the GHG and operational rules in response to the GHG evaluation report.

Finally, CESA disagrees with PAO, San Diego Gas and Electric Company (“SDG&E”), and Southern California Edison Company (“SCE”) who make similar points about not authorizing additional ratepayer collections due to the large remaining pool of incentives or to refine or assess collections based on actual program funding utilization.<sup>5</sup> CESA finds flaws in this logic. SGIP is a technology incentive and market transformation program that should strive to grow the energy storage market similar to what the CSI Program did for solar. Future collections should not be tied strictly to past utilization if one of the goals is to grow the energy storage market. Additionally, fund utilization may depend on various policy barriers and/or program design issues (*e.g.*, incentive levels) rather than actual market demand, so basing the funding collection decision based on fund utilization would serve to limit storage market transformation below its potential. Rather, the Commission should focus on addressing these barriers and issues as opposed to limiting collections based on participation levels largely due to these very barriers and issues. Further, there are a range of factors that seem likely to drive significant interest in storage that render historical experience and demand in the program less useful in terms of anticipating future demand. These include changes in rate design, particularly the shift to time-varying rates with later peak periods, demand for storage to support resiliency applications, as well as potential reforms to net-energy metering including potential reduction in the value of export credits, which would make storage an increasingly important element of future behind-the-meter solar installations.

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<sup>4</sup> PG&E comments at p. 3.

<sup>5</sup> SDG&E comments at p. 2 and SCE comments at pp. 2-4.

Market stability is needed to allow for residential and commercial customers to continue making investments in energy storage and support the market transformation of storage as a grid asset class. Conditioning or delaying the funding collection decision is unnecessary and counterproductive. Especially as unspent funds can be returned to ratepayers at the end of the program period, the Commission should strive to maximize the use of the Legislature’s funding authorization to support the program’s and state’s goals, as well as emerging priorities such as around resiliency in response to the growing wildfire issue and local capacity needs due to the planned and unplanned retirement of thermal generators on the grid.

**III. FURTHER STUDIES OR REPORTS ARE NOT NEEDED TO ASSESS THE BARRIERS TO NON-RESIDENTIAL STORAGE PARTICIPATION.**

CESA pointed to two major factors that are causing the lack of non-residential storage participation in SGIP: (1) insufficient incentive rates; and (2) uncertainty of GHG emissions and operational requirements as well as pending rate designs. The second issue will be resolved or addressed by the end of this year, so the major barrier that remains is the insufficient incentive rates, which have declined at a faster pace than storage costs were anticipated to decline. However, SCE and CSE recommend that studies or reports are needed to understand why the non-residential storage category has stalled. CESA respectfully disagrees and finds that a study would only delay fixes to the non-residential storage category even as the barriers are known. CESA views the opening and reply comments to the Ruling as a “call for ideas” where stakeholders such as CESA representing a portion of SGIP participants provide insight into some of the same questions that would be asked in surveys or interviews that would go into a study or report. As such, it is unnecessary to launch a separate study when such information is already being gathered here.

Furthermore, CESA disagrees with PG&E’s assertion that new rates and changing GHG and operational requirements along with incentive rates at \$0.35/Wh will resolve the barriers to the non-residential storage market. As noted before, the insufficient incentive rates also present a major barrier. With the new rules subjecting a greater level of non-residential storage incentives to performance-based payments structures and strong penalties for non-compliance, the economics of non-residential projects are likely worse without higher incentive levels – above the \$0.35/Wh that PG&E has proposed that is at current incentive levels. As a result, CESA cautions against the Commission assuming that certainty around new rates and GHG/operational rules in and of themselves will resolve all the participation issues in the non-residential storage budget category.

**IV. MARKET TRANSFORMATION IN DIFFERENT STORAGE CUSTOMER CATEGORIES SHOULD BE PRESERVED.**

In opening comments, CESA observes that recommendations for allocating the additional SB 700 funds vary and are based on GHG performance and/or market participation for particular market segments. SDG&E and Southern California Gas Company (“SoCalGas”), for example, cast doubt on whether it is worthwhile for residential storage systems to receive any further funding given past GHG performance and cost-shift concerns from low-income ratepayers.<sup>6</sup> By contrast, PAO and PG&E recommend larger allocations to the residential storage budget category based on funding utilization levels.<sup>7</sup> First, CESA observes that SoCalGas’ comments regarding the GHG impacts of residential systems mischaracterize the conclusions of the working group report. The working group specifically recognized a number of scenarios where both solar-paired and standalone residential systems can be expected to reduce GHG emissions.<sup>8</sup> In principle, CESA believes that it is important to preserve market opportunities for residential, non-residential, and Equity storage customers while providing for some flexibility for funds to be used that reflect market demand. CESA’s proposed funding allocation structure strives to achieve this balance, as do several other parties (*e.g.*, PG&E). Sweeping remarks such as those by SDG&E and SoCalGas, however, should be dismissed. The PD establishing GHG requirements has reasonably established GHG compliance pathways to ensure GHG emissions reductions based on collaborative and robust modeling results from the GHG Signal Working Group. Any proposals to drastically modify or diminish funding allocations to one of the three market segments should be dismissed given the market transformation goals of the program and the recent policy developments.

**V. PROPOSALS FOR AN ANNUAL INCENTIVE BUDGET STRUCTURE SHOULD NOT BE ADOPTED.**

PG&E and SCE propose an annual program opening and incentive-rate setting structure that mirrors the program structure in place prior to D.16-06-055 was issued that adopted the rolling application and incentive rate step-down structure currently in place. The previous program structure created a disruptive start-and-stop structure to the program that created significant

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<sup>6</sup> SoCalGas comments at p. 5 and SDG&E comments at p. 2.

<sup>7</sup> PAO comments at p. 4 and PG&E comments at p. 5.

<sup>8</sup> SGIP GHG Signal Working Group Final Report, pp. 9-10.

uncertainty in terms of timing, availability, and incentive rates of SGIP funds, which consequently increase project financing costs and frustrate customers who are uncertain if and when their energy storage systems will be installed and operational. In one instance, the time period between program close and opening was as long as 11 months – extremely problematic for both developers and customers. In addition, the Commission should recall that this previous program structure led to a ‘stampede’ of funds upon program opening that overloaded SGIP IT systems. This program structure was already dismissed by the Commission as flawed in D.16-06-055 and should be ignored. Instead, CESA recommends that the current rolling step-down program structure be adapted to address participation issues.

**VI. SGIP IS A TECHNOLOGY INCENTIVE PROGRAM AND SHOULD NOT BE FRAMED AS OR MODIFIED TO BECOME A GRID SERVICES PROGRAM.**

CESA believes that it is important for the Commission to make a clear distinction between SGIP funds as an incentive to support the deployment and installation of energy storage systems versus compensation for grid services. However, SCE proposes to blur this distinction by tying the incentive level to the Avoided Cost Calculator (“ACC”) values for various avoided costs and by creating a “stacked incentives for stacked services” model for valuing and thus compensating for the services provided by SGIP systems, as represented in the stacked incentives.<sup>9</sup> Similarly, SoCalGas comments that dual participation in SGIP and DR programs represent “double dipping”.

CESA strongly disagrees and points to Commission determinations already made on this matter, though more explicit clarification could be made by the Commission on the meaning and distinction between SGIP incentives and grid services payments. In D.16-06-055, the Commission found “no compelling reason to prohibit projects receiving SGIP funds from providing demand response services”, thereby permitting dual participation in SGIP and DR programs.<sup>10</sup> In the recently issued PD, the Commission further clarified that “for SGIP purposes, customer payment or reduced rates received for enrollment in a DR program or the DRAM is considered payment for services, not an incentive” such that SGIP incentives could not be reduced based on participation in demand response programs or the Demand Response Auction Mechanism.<sup>11</sup> To resolve this

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<sup>9</sup> SCE comments at pp. 10-11.

<sup>10</sup> D.16-06-055 at p. 38 and Conclusion of Law 30.

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M163/K928/163928075.PDF>

<sup>11</sup> PD at p. 64.

matter, CESA recommends that the Commission explicitly clarify how SGIP funds are technology incentives that are not a payment for services and thus should not preclude these systems from participating in grid-service programs or solicitations.

## **VII. ENERGY STORAGE REPRESENTS A BETTER RESILIENCE SOLUTION THAN A TRADITIONAL DIESEL GENERATOR.**

Parties generally seemed to propose similar eligibility requirements and variations of a resiliency adder.<sup>12</sup> CESA generally supports these concepts and recommends that the Commission move expeditiously to adopt a resiliency adder to drive near-term deployment in high-fire-risk zones and to develop eligibility requirements for the adder (*e.g.*, islanding ability, eligible locations). However, CESA has some concerns with comments by PAO around limiting the adder to customers of critical facilities that have demonstrated a reasonable basis for not already having “critical infrastructure”, suggesting that medical baseline (“MB”) customers may have perverse incentives to stay in areas with evacuation concerns, and expressing concern with storage as a source of fire ignition.<sup>13</sup> First, CESA is unaware of critical facilities being required to have backup power sources for anything beyond emergency alarm systems, exit signs, elevators, doors, etc.<sup>14</sup> This resiliency adder would thus be used to support the deployment of energy storage systems to support partial or full load to enable these facilities to provide its critical services. Second, CESA finds it unreasonable to expect MB customers to uproot and move away from areas of evacuation concerns, which is not only beyond the scope of the Commission’s authority but also fails to recognize the growing number of patients with in-home healthcare and medical equipment. Furthermore, storage resources have a number of safe installation and operation standards in place to avoid any safety or ignition-related issues. Finally, CESA is concerned about PAO’s position that the Commission needs to “1) undertake a broader comparison of possible configurations of energy storage to address resilience needs, and 2) assess what engineering and infrastructure changes would be needed to facilitate these configurations.”<sup>15</sup> It is not clear to CESA what

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<sup>12</sup> CSE comments at p. 17, Joint CCA Parties comments at p. 3, Joint Fuel Cell Parties comments at pp. 14-15, PG&E comments at pp. 7, 19, and 21.

<sup>13</sup> PAO comments at pp. 8-9.

<sup>14</sup> See Chapter 27 Section 2702 Emergency and Standby Power Systems of California Building Code. <https://up.codes/viewer/california/ca-building-code-2016-v2/chapter/27/electrical#27>

<sup>15</sup> PAO comments at p. 6.



information PAO is seeking or what infrastructure changes they believe may be needed to support the deployment of backup solutions. This proposal will lead to needless delay and prevent meaningful opportunities to leverage SGIP to address pressing resiliency concerns.

Altogether, CESA believes that the Commission should expeditiously address the resiliency use case and develop an adder and other program changes needed to support storage deployments for this purpose. Energy storage is a superior backup technology to traditional diesel generators, which face refueling challenges during prolonged outages, present a significant risk of fire ignition if not installed correctly, and generate harmful local pollutants.<sup>16</sup> Given this and the likelihood of customers deploying conventional backup solutions in the absence of reasonable and cost-competitive alternatives, CESA believes that access to SGIP funds for resiliency purposes should be open to all customers, not only critical infrastructure facilities and vulnerable customers. While reasonable to prioritize these customer types, perhaps by offering a higher adder, all customers subject to the PSPS events should be able to access SGIP funds for this purpose.

**VIII. ENERGY STORAGE SYSTEMS SHOULD NOT BE HELD ACCOUNTABLE FOR POOR RATE DESIGN AND THE FOCUS SHOULD INSTEAD BE ON IMPROVING RATE DESIGNS.**

CESA disagrees with the comments by PAO and SDG&E expressing how storage-specific and other rate designs (*e.g.*, with non-coincident demand charges) may have unintended or negative impacts on reliability, costs, and GHG emissions.<sup>17</sup> First, energy storage systems that are enrolled in one of the eligible storage rates deemed to be GHG reducing should not be held accountable for results that deviated from expectations. Adjustments can be made to rate designs but storage systems acting in good-faith on Commission-approved rates for the purposes of this program should not be penalized. Second, concerns about such rates potentially resulting in higher grid infrastructure costs and decreased reliability are unreasonable. Interconnection review processes are in place to ensure that storage systems are safely and reliably installed and operated and to ensure that storage systems that would trigger upgrades pay for those costs. Finally, SDGE asserts that customers on non-coincident demand charges have no benefit to operate their storage

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<sup>16</sup> See *Home Health Care in the Dark: Why Climate, Wildfires and Other Emerging Risks Call for Resilient Energy Storage Solutions to Protect Medically Vulnerable Households from Power Outages* by Clean Energy Group and Meridian Institute published on June 4, 2019. <https://www.cleangroup.org/ceg-resources/resource/battery-storage-home-healthcare/>

<sup>17</sup> PAO comments at p. 14 and SDG&E comments at p. 4.

asset to the broader benefit of the grid. If so, CESA believes that such rate designs should be reassessed and be designed with greater cost recovery via coincident peak demand charges to ensure that resources like energy storage are given the economic signals to operate in a grid-beneficial manner.

**IX. ELECTRIC WATER HEATERS SHOULD BE INCENTED TO SUPPORT DECARBONIZATION, DISADVANTAGED COMMUNITY, AND MARKET TRANSFORMATION GOALS.**

Like CESA, a number of parties showed support for incenting electric heat pump water heaters (“EHPWH”) through SGIP,<sup>18</sup> but a few others opposed this change on the grounds that these technologies are being incented through other programs in the Building Decarbonization proceeding (*e.g.*, TECH pilot program) and the San Joaquin Valley (“SJV”) pilot projects.<sup>19</sup> While these other potential pathways for incenting EHPWHs are available, CESA agrees with the Natural Resources Defense Fund (“NRDC”) and SCE that these funds may not be enough to sufficiently support the market transformation for EHPWHs. These alternative funding programs are mere pilots, some of which may fund a wide range of technologies other than EHPWHs.

CESA reiterates the importance of incorporating EHPWH as eligible equipment to be incented through the SGIP to support the state’s climate, clean energy, and disadvantaged community goals. There are significant fuel switching benefits in the water heating sector, as close to half of gas use in residential buildings can be attributed to water heating and because estimated electric heating saturation may be low (*i.e.*, generally below 10%).<sup>20</sup> The California Energy Commission (“CEC”), for example, concluded that the electrification of efficient water heating will be essential for reducing emissions from buildings.<sup>21</sup> In addition to the fuel switching benefits, EHPWHs are also an effective tool to further support decarbonization by shifting energy load

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<sup>18</sup> SCE comments at p. 24, AO Smith comments at pp. 2-3, Joint CCA comments at pp. 3-4, and Sierra Club and NRDC comments at pp. 2, 19.

<sup>19</sup> GRID comments at p. 24, CALSSA comments at p. 24, SoCalGas comments at p. 22, and CSE comments at p. 23

<sup>20</sup> *2009 California Residential Appliance Saturation Study Volume 2 Results* prepared by KEMA in October 2010 at p. 14.

<https://ww2.energy.ca.gov/2010publications/CEC-200-2010-004/CEC-200-2010-004-V2.PDF>

<sup>21</sup> 2018 IEPR Update Vol. II, at 22 (Feb. 2019) at p. 25-26.

<https://www.energy.ca.gov/2018publications/CEC100-2018-001/CEC-100-2018-001-V2-CMF.pdf>

between off-peak and peak periods<sup>22</sup> and can support DAC goals given that many electric water heaters are located in low- and moderate-income homes whose owners or renters may be unable to afford full energy storage upgrades.<sup>23</sup> Working groups and/or workshops to enable thermal storage and EHPWH participation should be convened to discuss implementation details.

**X. THE NEGAWATT PROPRIETARY METHODOLOGY CAN BE USED FOR SGIP TO SUPPORT DYNAMIC PERFORMANCE-BASED MEASUREMENTS.**

As discussed in CESA's comments, performance-based measurements for dynamic assets will ensure that systems installed under SGIP have better transparency with regards to actual emissions reduction. The NegaWatt proprietary methodology provides a means for establishing a dynamic baseline, which is the most accurate way to measure system performance. Trane, a CESA member, and NegaWatt Assets have pledged not to proceed against any entity utilizing this methodology under the SGIP program, if adopted by the Commission.

**XI. CONCLUSION.**

CESA appreciates the opportunity to submit these reply comments to the Ruling and looks forward to working with the Commission and stakeholders in this proceeding.

Respectfully submitted,



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Date: July 12, 2019

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<sup>22</sup> *Residential Building Electrification in California* prepared by E3 in April 2019 at pp. 33, 61-63.  
[https://www.ethree.com/wp-content/uploads/2019/04/E3\\_Residential\\_Building\\_Electrification\\_in\\_California\\_April\\_2019.pdf](https://www.ethree.com/wp-content/uploads/2019/04/E3_Residential_Building_Electrification_in_California_April_2019.pdf)

<sup>23</sup> For example, CESA estimates that using just \$1 million in SGIP funds supporting the deployment of a \$500 controller for EHPWHs to turn them into grid-responsive assets (amounting to 1 MW) and allow 2,000 DAC customers to participate, assuming each electric water heater is 0.5 kW and 5 kWh in capacity.