

**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)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON ASSIGNED COMMISSIONER'S RULING ON THE IMPLEMENTATION
OF PUBLIC UTILITIES CODE SECTION 378.6 OF SENATE BILL 861
TO EXTEND THE SELF-GENERATION PROGRAM**

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October 15, 2014

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The California Energy Storage Alliance (“CESA”)¹ hereby submits these comments on the *Assigned Commissioner’s Ruling on the Implementation of Public Utilities Code Section 378.6 of Senate Bill 861 to Extend the Self-Generation Incentive Program*, issued April 5, 2014 (“ACR”).

I. INTRODUCTION.

CESA supports the Commission’s proposal described in the ACR to continue to authorize PG&E, SCE, SDG&E, and SoCalGas to collect \$83 million for the Self Generation Incentive

¹ The California Energy Storage Alliance consists of 1 Energy Systems Inc., AES Energy Storage, Alton Energy, American Vanadium, Aquion Energy, ARES North America, Beacon Power, LLC, Bosch Energy Storage Solutions Company LLC, Bright Energy Storage Technologies, Brookfield, CALMAC, Chargepoint, Clean Energy Systems, Coda Energy, Consolidated Edison Development, Inc., Cumulus Energy Storage, Customized Energy Solutions, Demand Energy, DN Tanks, Duke Energy, Eagle Crest Energy Company, EaglePicher Technologies, LLC, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, Enersys, EnerVault Corporation, EV Grid, FAFCO Thermal Storage Systems, FIAMM Energy Storage Solutions, Flextronics, Foresight Renewable Solutions, GE Energy Storage, Green Charge Networks, Greensmith Energy, Gridscape Solutions, Gridtential Energy, Inc., Halotechnics, Hitachi Chemical Co., Hydrogenics, Ice Energy, Imergy Power Systems, ImMODO Energy Services Corporation, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Invenergy LLC, K&L Gates, KYOCERA Solar, Inc., LG Chem, LightSail Energy, LS Power Development, LLC, Mitsubishi International Corporation, NEC Energy Solutions, Inc., NextEra Energy Resources, NRG Solar LLC, OCI, OutBack Power Technologies, Panasonic, Parker Hannifin Corporation, PDE Total Energy Solutions, Powertree Services Inc., Primus Power Corporation, Recurrent Energy, Renewable Energy Systems Americas Inc., Rosendin Electric, S&C Electric Company, Saft America Inc., Samsung, SEEO, Sharp Electronics Corporation, Energy Systems and Services Group, SolarCity, Sony Corporation of America, Sovereign Energy Storage LLC, STEM, Stoel Rives, SunEdison, SunPower, TAS Energy, Tri-Technic, Trimark Associates, Inc., UniEnergy Technologies, LLC, and Wellhead Electric. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. <http://storagealliance.org>.

Program (“SGIP”) per year in 2015, 2016, 2017, 2018, and 2019 according to the same allocation as is currently adopted. CESA hereby responds to the three specific questions posed in the ACR that relate to budget authorization and fiscal management of the SGIP and offers additional recommendations for the Commission’s consideration.

In addition, CESA responds to the request in the ACR for recommendations as to how the SGIP could better meet its goals. Detailed recommendations that have been shared informally with the Commission’s Energy Division are provided in Appendix A to these comments. CESA’s discussion below highlights two of CESA’s recommendations that are set out in Appendix A that speak to issues that are the most pressing, require the Commission’s immediate attention, and are in fact mission critical for the SGIP.

II. RESPONSES TO SPECIFIC QUESTIONS POSED IN THE ACR.

CESA’s responses to the specific questions posed in the ACR are as follows.

1. Should further collections be authorized for the SGIP, and why or why not? If yes, should further collections be authorized for all years 2015, 2016, 2017, 2018, and 2019?

CESA’s Response: The answer to both questions is decidedly yes. Furthermore, CESA strongly recommends that the Commission immediately authorize SGIP funding for 2015 in order to ensure that there is no interruption in the SGIP between 2014 and 2015. Funding certainty is a top concern for the many distributed generation (“DG”) and advanced energy storage developers who depend on the SGIP for their project development. CESA also strongly recommends that the SGIP continue to be funded, even with funding authorized pursuant to SB 861, until such time as the required new program rules are put into place by the Commission. The new SGIP rules mandated by the legislature pursuant to SB 861 and AB 1478² should be implemented as

² This bill was “clean-up” legislation enacted to implement SB 861.

soon as possible, but not later than Q3 2015 so as to minimize the amount of newly authorized funding spent under the current SGIP rules.

If new funds pursuant to SB 861 will not be made available to support projects until all SGIP reforms pursuant to statute have been implemented, CESA recommends that, in the interest of mitigating any market disruption that might occur should existing funds be depleted prior to new funds being available, the SGIP incentive budget and eligibility rules be modified to allow renewable and emerging technologies to reserve existing incentive funds that are currently allocated to non-renewable technologies. While there is already a process by which the SGIP Program Administrators (“s”) have the discretion to transfer funds from the non-renewable incentive budget to the renewable and emerging technology incentive budget, CESA believes that it would be helpful, in the interest of market certainty and avoiding potential market disruption, to affirmatively indicate in the immediate term that these funds are available to renewable and emerging technologies. Non-renewable technologies would still be able to draw on these funds, but renewable and emerging technologies would also be eligible to use them.

2. If further collections are authorized, should the full \$83 million per year be authorized for each year, why or why not?

CESA’s Response: The answer to this question is also yes, because the SGIP remains the sole “bankable” incentive for energy storage. SGIP is intended to spur market growth & increase deployment of DG with related benefits (mainly improved technology lower costs). An annual budget of \$83 million per calendar year has been shown to be an effective budgetary amount and should therefore not be changed.

3. If further collections are authorized, should the current annual budget allocation be continued, and why or why not? If not, propose an alternative methodology for calculating the allocation with details regarding proposed calculations, a justification for the change, and expected outcomes from the alternative methodology.

CESA’s Response: For the reasons discussed above the simple answer is clearly yes.

III. ENERGY STORAGE PROJECTS WITH CONFIRMED RESERVATIONS THAT HAVE BEEN NEGATIVELY IMPACTED BY UTILITY INTERCONNECTION DELAYS SHOULD BE GRANTED SCHEDULE EXTENSIONS IMMEDIATELY.

CESA plans to address all of the issues discussed in Appendix A at the right times and in the right places, working collaboratively with the Commission’s Energy Division staff. However, the following two issues must be addressed *immediately*:

A. Projects That Have Confirmed Reservations Should be Granted Schedule Extensions.

The statistical record very clearly shows that viable SGIP-eligible projects have not been allowed to interconnect or receive funding, as shown in the following Table.³

SGIP Applications and Completed Payments from 2009-2014(Q3)

SGIP Reservation Year	# of SGIP Applications	Payment Completed ¹	% of Projects Receiving SGIP Payments by Year	Total kW Applied	Total kW Built	% of Applied kW Built
2009	3	1	33.3%	4,500	1,000	22.2%
2010	8	1	12.5%	8,663	600	6.9%
2011	146	1	0.7%	6,940	5	0.1%
2012	532	16	3.0%	29,306	1,454	5.0%
2013	183	3	1.6%	10,669	34	0.3%
2014	420	0	0.0%	26,316	0	0.0%

Source: Center for Sustainable Energy, Quarterly Statewide Report – Q3, 2014 (posted on 10/1/2014).
<http://energycenter.org/programs/self-generation-incentive-program/program-reports>
¹ Includes completed payments and payment of PBI (in process)

Once developers of SGIP projects have a signed interconnection agreement (a process requiring up to six months if there are no errors or disputes) it can take an additional six to nine months (potentially 12 months) for the interconnecting utility to act and complete its required work. SGIP projects that are seeking interconnection under utility wholesale distribution access (“WDAT”) tariffs are particularly challenged, due to the complexity of WDAT interconnection

³ As of end of January 2014, the SGIP currently had \$128 million remaining in the emerging/renewable budget, with \$40 million in pending applications (applications received, but not yet reviewed by the SGIP Program Administrators). The non-renewable budget had \$81 million remaining, with \$3 million in pending applications. The PAs have the discretion to move non-renewable funding into the emerging/renewable bucket as needed.

requirements. These delays are putting the SGIP reservation process, and thus SGIP project's overall economic feasibility at great risk.

CESA recommends that the Commission issue immediate guidance to the SGIP PAs to extend automatic claim deadline extensions for all energy storage projects (including those projects for which SGIP reservations were submitted and confirmed prior to June 2013) caused by utility delay in the interconnection process. The PA's should automatically extend SGIP reservation upon request under such extreme circumstances such as compliance with WDAT requirements, starting of course, with the list of projects that have been unable to obtain permission to operate from their interconnecting utility submit claims for payment since prior to June 2013.

B. Implementation of D.14-05-033.

The Commission should issue a ruling describing the process for finalizing the presumed generation profile and production estimation methodology for NEM-paired energy storage devices sized at less than 10 kW so that the utilities can proceed with their NEM tariff filings required by D.14-05-033, which sets forth guidelines for NEM tariff amendments affecting both small NEM-paired storage systems (10kw and less) and larger ones (>10kW). Notably, D.14-05-033 requires a 120-day extension to the expiration date for affected SGIP projects to file applications for extension. The 120 day extension is triggered by Commission approval of the revised NEM Tariffs, and those revised NEM tariffs are to be submitted by the utilities via Tier 2 Advice Letter within 30 days *after* the Commission adopts an estimation methodology that finalizes the presumed generation profile of eligible NEM generating facilities with NEM paired energy storage devices sized at 10 KW AC or less. (*See*, Ordering Paragraphs 6, 11 and 18). Until this is accomplished and the appropriate tariff revisions have been submitted and approved,

there will continue to be considerable confusion in the marketplace as to how to treat NEM-paired energy storage.

IV. CONCLUSION.

CESA thanks the Commission for the opportunity to submit these comments on the ACR.

Respectfully submitted,



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APPENDIX A

CESA Recommendations Regarding the SGIP

August 26, 2014

Priority SGIP Changes Pursuant to SB 861

1. SGIP Program Administrators need immediate guidance from the CPUC on extending SGIP claim applications to accommodate utility-imposed delays

Issue: Early Applicants for AES projects (Powertree, Stem, etc.) have had to blaze the trail with the utilities to work through how to interconnect AES projects to the grid. Since the SGIP requires a utility interconnection and Permission To Operate (PTO) this process has been bounded by the available SGIP Claim submission deadlines.

Because utilities were totally unfamiliar with how to treat and interconnect energy storage, it has taken nearly two years in some cases to work through the delays and repeated issues introduced by the utilities (including 6 months due to use of admittedly incorrect internal forms and Supplemental Review Studies and Rate Tariff reviews) to achieve understanding and signed interconnection agreements for projects. For one of our members, Powertree, this delay caused them to lose over \$1.5 million in federal tax credits for which the projects were eligible but lost entirely due to utility delay). (See Appendix C for documentation of 2013 backlog of projects)

Once the projects have a signed interconnection it can take an additional 6 to 9 months (possibly 12 months) for the utility to act and complete its work. Projects that are seeking WDAT interconnection are particularly challenged, due to the complexity of wholesale distribution tariff interconnection requirements. These delays are putting the SGIP reservation process, and thus the specific project's overall economic feasibility at great risk.

Recommendation: CESA would like the Commission to issue immediate guidance to the PAs to extend automatic claim deadline extensions for all AES projects (including those projects for which SGIP reservations were submitted and confirmed prior to June 2013) caused by utility delay. Even non-NEM paired storage can experience very long delays initiated by utilities such as in the case of a required transformer upgrade. Such an upgrade can take 8-12 months, including study timeframes of 90 days and initial review of 60 days. Projects seeking WDAT can experience even longer delays. PA's should be able to automatically extend the SGIP reservation under such extreme circumstances, starting of course, with the list of projects that have been on the list since prior to June 2013.

Furthermore, if this has not already occurred, we would like the Commission to issue a ruling describing the process for finalizing the presumed generation profile for NEM-paired storage devices sized at less than 10 kW so that the utilities can proceed with their required NEM tariff filing. (Per D.14-05-033)

2. Incentive levels for eligible technologies should be tied to deployed capacity, not calendar year.

Issue: As a relatively new asset class on the grid, advanced energy storage projects require more time to develop than other eligible technologies in the SGIP. Reducing the incentive levels by 10% per calendar year, regardless of market progress, may inadvertently slow project development and hinder the SGIP’s market transformation goals for energy storage. Furthermore, other technologies, which have been commercialized on the grid for decades and have a large installed customer base (e.g. fuel cells), may not require artificially high incentives to achieve further market progress. In such cases, an incentive reduction tied to calendar year may unnecessarily over-incentivize certain technologies classes to the detriment of ratepayers.

Recommendation: CESA recommends creating a standard incentive reduction over time for each technology subclass that would be triggered when a particular technology hits a cumulative installed capacity. For example, once CHP or fuel cells or specific types of batteries reach a cumulative installed capacity under the SGIP, then the dollar incentive/kW would be stepped down accordingly. Historic cumulative capacity should be factored in as well, as a good benchmark of commercial progress and incentive need. This would be a fair standard that has been successfully demonstrated in the California Solar Initiative and would naturally conform to market transformation goals on a technology specific basis, and help create greater transparency and clarity for wait listed projects as well.⁴ Furthermore, linking incentive levels and step-downs to cumulative installed capacity will remove the need to explicitly differentiate between emerging and non-emerging eligible SGIP technologies.

3. A GHG reduction calculation methodology needs to be developed and adopted for energy storage.

Issue: Updates to the SGIP program, pursuant to SB 861, place significant emphasis on reducing GHG emissions and evaluating program success by a variety of GHG performance measures. Below highlights GHG-specific content pulled from the revised PUC code 379.6:

“[O]n or before July 1, 2015, the commission shall update the factor for avoided greenhouse gas emissions based on the most recent data available to the State Air Resources Board for greenhouse gas emissions from electricity sales in the self-generation incentive program administrators’ service areas as well as current estimates of greenhouse gas emissions over the useful life of the distributed energy resource, including consideration of the effects of the California Renewables Portfolio Standard.”

(2) The commission shall consider the relative amount and the cost of greenhouse gas emission reductions, peak demand reductions, system reliability benefits, and other measurable factors when allocating program funds between eligible technologies.

⁴ Concurrently, it would be very helpful to stakeholders for the CPUC and Program Administrators to clarify how unused funds from cancelled or unused applications will be credited toward future year allocations.

(l) The commission shall evaluate the overall success and impact of the self-generation incentive program based on the following performance measures:

(1) The amount of reductions of emissions of greenhouse gases.

CESA is researching various methodologies that exist for calculating GHG reductions from behind the meter energy storage right now – a key challenge is that the BEST way to do this would be via production cost modeling.

Recommendation: CESA is pursuing defensible methodologies for calculating GHG reduction enabled by storage. CESA looks forward to a continued dialogue with CPUC staff as our thinking evolves on this front, and will proactively schedule a follow up meeting on this topic in the coming weeks.

4. Consider an alternative methodology for calculating the PBI for storage systems over 30kW.

Issue: There is no uniformly accepted definition of “capacity factor” for energy storage. This term has historically been used for generation technologies, and SB 861 does not explicitly require this for energy storage. Further, the cost-effectiveness work performed by EPRI and DNV/KEMA for the CPUC showed that 10% capacity factors are not needed for maximum grid or customer benefit. The current high capacity factor may actually encourage systems to charge and discharge without grid benefit in order to increase incentive capture. Energy storage can provide value to the system even when it is not discharging.

Recommendation: PBI’s should be set around grid needs and sensible operation. CESA looks forward to working with CPUC staff on evolving this metric for energy storage.

5. Qualification for receiving an additional 20 percent from existing program funds from eligible technologies “manufactured in California” requires clarification

Issue: The definition of “manufactured in California” is not clearly defined in the statute. (See PUC code 379.6 (c) (4) (j)). For example, would equipment that is contract manufactured in California be eligible?

Recommendation: CESA would like to engage with CPUC staff on the best approach forward on this issue.

Priority Issues Related to NEM ACR Decision (D. 14-05-033 – May 15, 2014)

6. New NEM Tariff is needed to establish 120 day extension as required in D.14-05-033

Issue: Decision D.14-05-033 sets forth guidelines for NEM tariff amendments affecting both small NEM-paired storage systems (10kw and less) and larger ones (>10kW). Notably, it requires a 120-day extension to the expiration date for affected SGIP projects to file applications. The 120 day extension is triggered by Commission approval of the

revised NEM Tariffs... and those revised NEM tariffs are to be submitted by the utilities via Tier 2 Advice Letter within 30 days AFTER the Commission adopts an estimation methodology that finalizes the presumed generation profile of eligible NEM generating facilities with NEM paired storage devices sized at 10 KW AC or less. (See, Ordering Paragraphs 6, 11 and 18). Until this is done and the appropriate tariff revisions have been filed/approved, then there will continue to be considerable confusion in the marketplace as to how to treat NEM- paired storage. Also, this issue is broader than only NEM- paired storage, which is why we have suggested the remedy in item #1 above.

Recommendation: The Commission should issue a ruling describing the process for finalizing the presumed generation profile for NEM-paired storage devices sized at less than 10 kW so that the utilities can proceed with their required NEM tariff filing.

7. Measurement and Verification Costs (M&V)

Issue: M&V are very important to quantify product operation and measure against program objectives. D.14-05-033 requires “the investor owned utilities shall use their best efforts to install standard metering equipment whenever possible while interconnecting Net Energy Metering-paired storage systems and must not charge more than \$600 for fees associated with this metering requirement. However, the fee cap does not apply to systems requiring complex metering solutions.” However, ‘more complex metering solutions’ is not defined, and *excessive M&V requirements and cost should not destroy project economics. Some energy storage projects have been charged \$28k for metering and testing per project! M&V requirements should be in line with project size.* See Appendix B, Single Line Drawings for NEM Wholesale-Retail Scenarios Discussion for background.

Recommendation: The Commission should direct the PA’s to establish clarity on allowable metering equipment charges for NEM paired storage systems of all sizes. Additionally, in the upcoming SGIP deliberations, additional guidance on this topic is needed for non-NEM paired storage of all sizes.

8. Exempt behind the meter energy storage from being charged Stand-By charges.

Issue: Since the energy storage system does not reduce kWh consumed from the utility or grid, but merely shifts electricity use in time, making the usage more efficient and reducing grid stress during peaks, a standby charge is not appropriate, no more so than standby charges levied on time shifting appliances such as dishwashers and heaters.

Recommendation: The Commission should clarify that at a minimum, NEM Paired storage is exempt from standby charges, and in the upcoming SGIP deliberations, standalone storage should also be clarified to be exempt from standby charges.

Other Very Important Industry Priority Issues

9. Expand the SGIP program to include emerging applications of thermal energy storage, including packaged and unitary air conditioning applications equal to or less than 20 tons.

Issue: D. 14-08-029 (Decision on California Energy Storage Alliance’s Petition for Modification of Decision 12-04-045, dated August 18, 2014) approves CESA’s PFM and finds that “small thermal energy storage systems should be deemed and an emerging technology on an interim basis until the Commission develops a record on and approves specific criteria for emerging technologies”. This decision officially makes small thermal energy storage systems (packaged and unitary air conditioning applications of thermal storage equal to or less than 20 tons) non-eligible for the Permanent Load Shifting Program. This technology subclass of energy storage is now needs to be incorporated into the SGIP. The SGIP incentive levels offered in 2013 support viable return on investment levels for small TES systems in SCE and PG&E service territories. Without SGIP support, such systems will not be commercialized.

Recommendation: PA’s require guidance from the CPUC to immediately implement a consistent and reasonable capacity methodology for small TES when applied to air conditioning equipment. We recommend that SGIP incentive calculations be based upon the CCSE’s SGIP advice letter, which proposes a kW capacity methodology for small TES when applied to air conditioning equipment. Those calculations are based upon well-established and consistent methodologies that have been adopted by past and current Public Power and IOU small TES programs and capacity scale contracts. Using CCSE’s proposed methodology will provide fair and consistent treatment to applicable TES systems.

10. Address policy conflicts and barriers for eligibility of standalone energy storage.

Issue: There is a perceived conflict among the Program Administrators related to sizing limitations for standalone energy storage.

Recommendation: At a minimum, energy storage should be sized to the peak load, regardless of any other existing generation technology. It should not be additive, and should not be restricted to the capacity of the existing onsite generation whether PV, CHP, Wind, etc.

- a. The “Coupled” distinction should be discarded. (The “coupled” concept is a legacy from many years ago, before SB 412 and AB 1150 statutorily added energy storage into the program. Since that restriction no longer applies, it’s no longer necessary to have the “coupled” carve-out.)

- b. There should be no distinction between “Stand Alone” and “Coupled with existing SGIP generation”.

Ideally, CESA recommends increasing the size limitation to a reasonable limit greater than 100% of peak load, so that behind the meter energy storage systems can be sized to provide grid services in addition to onsite load management and demand charge reduction.

11. Allow energy storage providing peak load management for station power applications at existing generator plants to be eligible for SGIP incentives.

Issue: Currently, it is unclear whether independent power producers and other, non-electric utility entities can apply for SGIP funding for storage devices dedicated to providing peak load management for station power applications at existing generator plants. Such devices allow generating units to operate more efficiently, which reduces GHG emissions, increases plant and system reliability, and ultimately extends the life of the facility, translating to ratepayer savings.

Recommendation: CESA recommends adding clarifying language to the SGIP handbook regarding the inclusion of storage devices being used in managing peak loads at existing non-electric utility generating facilities.

12. Clarification regarding the standard by which projects will be determined to be ‘back-up systems intended solely for emergency purposes’ is needed.

Issue: The SGIP program can and should be used to encourage ratepayer use of energy storage to reduce peak demand, and to realize greater functionality from emergency backup energy storage applications, so that such storage can also provide services to the grid and help optimize the grid overall.

Recommendation: CESA recommends that in order to qualify for incentives, the energy storage system must be capable of being practically used by the host customer or the system owner (in the case of leased systems) to reduce customer exposure to peak time of use rates or demand charges. In order to receive incentives, this functionality needs to be in place at the time of installation. Additionally customers hosting systems that are receiving SGIP incentives must be on TOU rates and/or, if applicable, demand based rates in order to qualify. Alternatively, if the system owner can demonstrate that they intend to utilize the system to provide wholesale services, the system should also qualify.

13. Create O&M cost cap of 10% in the SGIP program, comparable to how O&M cost is treated in the FITC.

Issue: The SGIP currently allows for excessive incorporation of upfront O&M costs.

Recommendation: Aligning SGIP with the FITC rules will increase transparency and simplicity.

14. Ensure all projects on the waitlist are valid

Issue: Not all waitlisted projects may be valid, and if not valid, maybe unnecessarily 'tying up' scarce SGIP funds.

Recommendation: Add a second Proof of Project Milestone required six months after reservation request [or greater if a utility-imposed delay is evident]. This proof of project milestone would include two parts: 1) Proof of receipt of building permit submission and payment, and 2) Proof of receipt of interconnection application

Other Important Issues for Consideration

Revamping the SGIP program provides an opportunity to consider more broadly how behind the meter energy storage and distributed energy resources can help optimize the grid more broadly, particularly given SB 861's focus on cost effective GHG reduction. In light of this, CESA would like to make a few suggestions for CPUC consideration:

15. Encourage Vehicle to Grid Integration (VGI) and allow some VGI/V2G capable EV SE equipment capacity to count towards SGIP power level rating.

Issue: At the moment, there is no clear pathway via the SGIP to enable the build out of VGI infrastructure. The current deployed infrastructure elements do not incent or enable the potential benefits of VGI, nor are there any incentives available for grid-supporting EV charging infrastructure. Since V2G is still early in deployment and storage has a pathway now (and both technologies are explicitly highlighted in their respective Roadmaps), it makes sense that now, during the starting point of deployments of stationary storage that the additional cost, design and consideration needed to achieve a long term cost savings and advancing multiple wins; i) the SGIP goals of GHG reduction, particulate emission reduction (less gas, more EVs!), demand reduction, grid efficiency (ii) enhancing deployment of distributed resources and (iii) providing a pathway to help reduce cost of ownership for plug in vehicles via a pathway to V2G revenues.

Recommendation: Encouraging a supporting role of VGI with EV AES *enables cost efficiencies, increases grid management resources, and spurs EV deployment & VGI* by increasing bankable revenue streams for EV owners. Strategically, this step will involve rallying the support of the EV community and the governor toward the VGI roadmap. CESA's recommendations for VGI-SGIP eligibility will be the following, or something similar:

- i. Systems must be capable of V1G - Controllable charging rate from central system

- ii. Systems must ALSO be capable of V2G - Controllable and bidirectional discharge capability from vehicle, this qualifies the use case of 'on board storage device' as being eligible for the SGIP.
- iii. SGIP eligible EV charging systems must ALSO be tied to a supporting stationary storage device to simplify planning and management and metering for utility
- iv. Some fraction of maximum capable charge rate should be credited for the EVSE as SGIP-eligible. 10% is suggested. For example, if the EV storage capacity is 10KW, then it would receive 1KW credit toward SGIP sizing. This would account for vehicle variations and mobility. (We welcome input on the appropriate percentage and methodology.) The Capacity adjustment of 10% of the max power of the EV stations (i.e. 15A station * 10% = 0.33KW, 80A station * 10% = 2KW) is modest and reflects the likely incremental costs and benefits, from our experience, to enable an EVSE to be V2G capable provided there is a stationary storage device on premise.

An SGIP incentive on 10% of EVSE equipment capacity (i.e., amps of charging rate times voltage times 10%) will help offset infrastructure costs for VGI upgrades while encouraging more cost effective readiness of VGI capable infrastructure. Examples of upgrades include: networked charging stations, extra intelligence, capability to measure and control current and energy rapidly, higher capacity of EV charging station. A typical EV station is about 3kW, if one would like to do VGI, then one will need higher capacity (requiring equipment that is more expensive). Allowing SGIP incentives for a portion of EVSE equipment tied to the capacity will help support the governor's EV executive order and make it easier for the utilities to see it happen.

16. Consider establishing an arm's length relationship between the IOUs and the SGIP reservation process.

Issue: At the moment, utilities control both the issuance of reservations and the ability to get paid. This gives them a tremendous opportunity to drive customer projects forward. However, so far this influence has been tainted with unnecessary barriers and increased system costs. We have identified many examples of these barriers (i.e. utilities retroactively removing approvals for projects, demands for unnecessary information to qualify for California supplier status, refusal to allow stand-alone storage approvals, and several others), and can survey members for other examples.

Recommendation: Moving reservation approval and payment administration (namely, Initial Reservation Approval, Extensions, Questions and Claim Payment Release) to an independent party could be an option to further program goals and speed project implementation relative to the status quo, and would provide closer adherence to regulatory and legislative intent. The utilities should not be eligible to participate as program administrators. The utilities would still participate by providing administration of interconnection and payment of SGIP incentives, but reservations and claims to internal policies would be relegated to the independent party. Approvals should be

completed in no more than 30 days. Additionally, all IOUs should be required to comply with a consistent set of administrative performance guidelines such as requiring acceptance of e-signed documents (PG&E and SDG&E do, SCE does not) speeding up the processing of data requests (PG&E and SDG&E take 1-2 business days to process, SCE takes 4 weeks) and rapid scheduling of site surveys would also.

17. Greater Clarification of ‘New’ system is Needed

Issue: Currently, there is a degree of uncertainty surrounding the definition of what constitutes a “new” system (which, is required for SGIP eligibility).

Recommendation: A system should be eligible for SGIP incentives as long as it is manufactured as-new from a manufacturing facility, even if some of the internal components may be re-purposed. This will help realize efficient markets and re-use of usable components.

18. Link incentives to locational benefit on the distribution system

Issue: Part of SGIP’s goal is to improve grid reliability through improved transmission and distribution utilization. Some areas of the distribution grid would benefit from SGIP projects more than others depending on current and forecast congestion and load variability issues.

Recommendation: CESA recommends that the Commission consider adding local adders based on where the deployment of resources would be most valuable.

19. Sample-based auditing for <10kW systems

Issue: Some companies are installing a vast number of residential storage projects (<10 kW) and current rules stipulate that site visits are required to each individual project prior to receipt of SGIP funding.

Recommendation: CESA recommends that the Commission transition to a percentage-based approach to auditing SGIP eligible projects. For projects smaller than 10kW, utilities should only be required to visit a subset of projects in order to determine system eligibility. CESA believes that such a representative, sample-based auditing approach can reduce both administration and developer costs.

20. The new incentive program should not disqualify projects receiving SGIP incentives from utility Energy Efficiency project financing programs.

Issue: The ability of beneficial resources to receive both SGIP incentives and effective financing will further demonstrate the State’s vision and confidence in market transition. Currently, projects enrolled in Energy Efficiency (EE) financing programs are ineligible from receiving SGIP program benefits.

Recommendation: CESA recommends that the Commission direct the utilities to allow such EE projects to remain eligible for SGIP incentives.

21. Elimination of the Energy Efficiency (EE) Audit Requirement

Issue: The EE auditing requirement is a new addition to the 2014 SGIP handbook. Any measures identified with a payback of two years or less must be implemented (and verified by a third party) prior to receipt of SGIP incentive payments.

Recommendation: To the degree the EE auditing requirement adds costs to deploying systems and cannot demonstrate that it catalyzes significant uptake of incremental EE to justify that cost, this requirement should be eliminated.

22. Clarify that receiving SGIP does not preclude systems from earning Resource Adequacy value if operated in a RA qualifying program.

Issue: We have heard that certain IOUs are taking the position that systems that receive SGIP **AND** are part of a utility program like demand response, are not eligible for Resource Adequacy credit or contracts. This seems like a misapplication of RA accounting principles.

Recommendation: If a system receives SGIP and operates to lower system peak through a performance based contract, that system should be eligible for RA.

23. Transition to paperless application process

Issue: Requiring wet signatures and hand delivering or overnight shipping applications and contract documents is unnecessarily time consuming and expensive when cheaper, alternative options exist. As the program requires interactivity between the SGIP applicant and utility, a paperless process would benefit both parties.

Recommendation: The Commission should require the utilities to pursue a paperless, digital application process for the SGIP program.