

**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 PROPOSED REFINEMENTS
TO THE SELF-GENERATION INCENTIVE PROGRAM**

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In accordance with the Rules and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”)¹ hereby submits these comments on the *Assigned Commissioner’s Ruling on Proposed Refinements to the Self-Generation Incentive Program*, issued by Assigned Commissioner Clifford Rechtschaffen on June 2, 2017 (“Ruling”).

¹ 8minutenergy Renewables, Adara Power, Advanced Microgrid Solutions, AES Energy Storage, AltaGas Services, Amber Kinetics, American Honda Motor Company, Inc., Bright Energy Storage Technologies, BrightSource Energy, Brookfield, Consolidated Edison Development, Inc., Customized Energy Solutions, Demand Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, ElectriQ Power, eMotorWerks, Inc., Energport, Energy Storage Systems Inc., Geli, Green Charge Networks, Greensmith Energy, Gridscape Solutions, Gridtential Energy, Inc., Hitachi Chemical Co., IE Softworks, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Johnson Controls, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Magnum CAES, Mercedes-Benz Energy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., NICE America Research, NRG Energy, Inc., Ormat Technologies, OutBack Power Technologies, Parker Hannifin Corporation, Qnovo, Recurrent Energy, RES Americas Inc., Sharp Electronics Corporation, SolarCity, Southwest Generation, Sovereign Energy, Stem, STOREME, Inc., Sunrun, Swell Energy, UniEnergy Technologies, Viridity Energy, Wellhead Electric, and Younicos. 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>).

I. BACKGROUND.

CESA is a strong proponent of the three primary program goals of the Self-Generation Incentive Program (“SGIP”), which were refined and adopted in D.16-06-055. These goals include:²

1. **Environmental goals:** Reduction of greenhouse gases (“GHGs”), the reduction of criteria air pollutants, and the limitation of other environmental impacts (such as water usage)³
2. **Grid support goals:** Reduce or shift peak demand, improve efficiency (*e.g.*, fewer line losses) and reliability of the transmission and distribution (“T&D”) system, lower grid infrastructure costs, provide ancillary services, and ensure customer reliability of distributed energy resources (“DERs”)⁴
3. **Market transformation goals:** Increases the adoption and penetration of DER technologies⁵

In addition to these program goals, the Commission is directed by Senate Bill 350 Section 400(a) and 400(d) to consider the economic and environmental benefits of DERs in disadvantaged communities as well as how existing Commission-run programs can be reformed to incorporate disadvantaged communities. CESA also supports the Commission’s efforts to comply with SB 350 and believes in the mission to provide affordable, clean energy to disadvantaged communities. While supportive of these goals, CESA provides comments here that raise certain clarification points and recommend several changes to the proposal attached to the Ruling.

² *Decision Revising the Self-Generation Incentive Program Pursuant to Senate Bill 861, Assembly Bill 1478, and Implementing Other Changes*, D.16-06-055, issued on July 1, 2016.

³ *Ibid*, Finding of Fact 1.

⁴ *Ibid*, Finding of Fact 2.

⁵ *Ibid*, p. 10 and Finding of Fact 3.

II. CESA SUPPORTS THE CARVE-OUT FOR DISADVANTAGED COMMUNITIES BUT RECOMMENDS SEVERAL KEY CHANGES, INCLUDING A ‘DE-COUPLING’ OF THIS CARVE-OUT FROM OTHER CATEGORIES OF FUNDING.

The Ruling proposes to implement a 20% carve-out out of the statewide budgets for Steps 3-5 for disadvantaged communities (“DACs”), which are defined as communities in any census tract that ranks in the statewide top 20% most affected census tracts in the recently adopted CalEnviroScreen 3.0. The proposal also implements this carve-out for each SGIP Program Administrator (“PA”) in proportion to the share of qualifying disadvantaged communities in their service territory. Importantly, the Ruling stated its intention to postpone Step 3 opening until these policy and IT changes can be implemented.

Focusing on census tracts with a 75% or higher percentile score on the CalEnviroScreen 3.0, CESA approximated how the SGIP budget would be allocated based on the proposal, as well as how the program has historically done in deploying energy storage projects into DACs. According to our calculations, the greatest share of DACs in the state are located in Southern California Edison Company’s (“SCE”) service territory (with 40% of the state total of DACs), followed by Southern California Gas Company (“SoCalGas”)⁶ at 31%, Pacific Gas and Electric Company (“PG&E”) at 28%, and San Diego Gas and Electric Company (“SDG&E”)⁷ at 2%. To ensure that the 20% step funds are reserved for PA service territories in accordance with their share of DACs, CESA finds it appropriate to take the proposed statewide approach, rather than to reserve an equal share of funds for the DAC carve-out for each PA, without regard to their

⁶ CESA mapped the zip codes for Los Angeles Department of Water and Power (“LADWP”) and Imperial Irrigation District (“IID”) customers to approximate the SGIP customer base for SoCalGas, whose funds are available for customers who take electric service from a non-SCE entity in Southern California.

⁷ The Center for Sustainable Energy (“CSE”) administers the SGIP program for SDG&E customers.

relative share of statewide DACs. Meanwhile, relative to the percentage of DACs in each PA’s service area by census count, the percentage of total deployed energy storage capacity in DACs is much lower, indicating that there is a clear need for this policy support to encourage deployment in DACs.

Table 1: Share of Disadvantaged Communities and DAC-located Energy Storage Project Deployments by PA Service Areas

PA	% DAC by Population	% DAC by Census Count	Rated Capacity in DACs (kW)	% Capacity in DACs
CSE	2%	2%	322	0.6%
PG&E	30%	28%	2,701	4.8%
SCE	42%	40%	9,505	1.1%
SoCalGas	26%	31%	600	17.0%

Source: CESA analysis of CalEnviroScreen 3.0⁸ and Weekly Statewide Report.⁹

While supportive of the intent and this policy change in general, CESA recommends several revisions to the proposal to ensure that this change complements other program goals and structures. These revisions to the proposal should thus ensure that energy storage projects deployed in DACs effectively provide economic, environmental, and grid reliability and resilience benefits.

A. The Commission should more clearly identify the goals and target customer segments of the carve-out to ensure the desired goals for DACs are fully met.

CESA believes that support for DACs through SGIP can come in many forms – *e.g.*, job creation and other economic development activities, equitable access to DERs, reduction of local

⁸ CESA downloaded the latest CalEnviroScreen 3.0 index scoresheet and mapped utility service territories to each census tract. There are several census tracts without a percentile score and left marked as “NA” indicating that there is incomplete data for that census tract. Thus, CESA notes that our analysis may also be incomplete. The incomplete data of CalEnviroScreen may also suggest that it needs further work to ensure all DACs are covered before full implementation.

⁹ CESA conducted a similar analysis on historical SGIP project deployments (as measured by rated capacity of these projects) using the Weekly Statewide Report accessed and downloaded at www.selfgenca.com on June 19, 2017.

pollutants, and/or customer bill savings. Depending on the goal of the program, this carve-out can be better targeted and/or structured to ensure achievement of the identified objective.

In the process of refining the objectives of the program, the Commission should consider how the definition of “disadvantaged communities” affects the achievement of said objective. For example, the definition of DACs may not always coincide with communities that have low household incomes and may overlook certain rural communities, depending on the weighting of pollution burdens, socioeconomic factors, and other population characteristics of different communities. A joint analysis conducted in R.14-07-002 showed that only about 20% of the affordable multi-family properties in California as defined by Section 2852 eligibility requirements are located in disadvantaged communities identified by the CalEnviroScreen.^{10 11} While there is a strong correlation between communities with low income and with being located in these disproportionately environmentally affected areas,¹² CESA believes it is important to ensure low-income communities are more comprehensively covered in the definition of DACs or more explicitly targeted, if that appears to be the intended goal of the program.

Additionally, as the Commission considers refinements to the DAC carve-out and how these reserved funds are committed, CESA recommends that consideration also be given to

¹⁰ *Joint Proposal by the California Housing Partnership, California Environmental Justice Alliance, Brightline Defense Project, Natural Resources Defense Council, and National Housing Law Project (Nonprofit Solar Stakeholders Coalition) on Implementation of Assembly Bill 693*, submitted on August 3, 2016 in R.14-07-002, pp. 18-19.

¹¹ CESA understands that this analysis was limited to multi-family properties, which have its own distinct challenges, but similar gaps in the DAC definition may be evident with an analysis extended to single-family homes and multi-purpose buildings in DACs. The Commission may therefore need to conduct this further analysis to help refine the program goals as it relates to supporting DACs.

¹² Krieger, Elena M., Joan A. Casey, and Seth B.C. Shonkoff. *A framework for siting and dispatch of emerging energy resources to realize environmental and health benefits: Case study on peaker power plant displacement*. Energy Policy, May 27, 2016.
<http://www.sciencedirect.com/science/article/pii/S0301421516302798>.

potential projects that may substantially benefit DACs indirectly. For example, an energy storage system deployment at a local school that serves a DAC or low-income community may improve the socioeconomic advancement of the community by generating savings that can be re-directed toward educational resources, and/or by providing shelter during natural disasters that cause grid outages. These other factors, depending on the context, may not be fully accounted for and may be appropriate to include in the DAC definition.

Generally, CESA has some concern that the CalEnviroScreen has not yet been implemented in other Commission-administered programs, beyond the Green Tariff Shared Renewables Program (“GTSR”), which requires 100 MW of the program’s capacity to come from solar generated in the 20% most disadvantaged census tracts in each IOU’s territory. As CESA was conducting an analysis of DAC composition by PA service territory, CESA found that a decent number of census tracts was marked as “NA” to indicate the lack of complete data to generate a composite index score. Without a ready-made implementation pathway or a clear definition of the objectives of the DAC carve-out, CESA is concerned about the effectiveness of implementing this DAC requirement, considering the fact that this policy change is well-intentioned and much-needed. CESA therefore supports the need for parties to continue to work with the Commission and other stakeholders in this proceeding to refine the objectives of the program, develop effective program rules and structures, and define an implementation pathway for this requirement.

B. The Commission should consider creating an independent budget category for DACs and de-couple the DAC budget from other budget categories.

While certainly lauding the Commission’s commitment to using SGIP funds to support DACs, CESA believes that the Commission should also consider de-coupling the DAC carve-out

from the other budget categories for small residential energy storage systems and large energy storage systems in order to continue market transformation in other segments of the industry. Like the independent budget category for small residential energy storage systems, which is reserved 15% of the step budget for the program, the DAC budget category should also disperse its funds separately given the unique challenges in the low-income and DAC customer segment. The nascent nature of the residential energy storage market (as indicated by historically low participation rates in the program) was cited as a reason for the 15% carve-out,¹³ and for similar reasons, the DAC budget category should also allow this under-served market segment to progress at its own pace without slowing the market transformation of other market segments, which also provide grid support and environmental benefit directly to its onsite customers and indirectly to all customers in general. As a result of this de-coupling, the DAC budget category will be able to preserve a portion of Steps 3-5 funds and allow projects for DACs to access incentive rates commensurate with its market uptake.

At the February 13, 2017 workshop hosted and facilitated by the California Energy Commission (“CEC”), the results from the *Low-Income Barriers Study* commissioned by the CEC were presented, which revealed several key findings on the structural and policy barriers to DER adoption by the low-income and DAC customer segments. Low home ownership rate in this segment leads to the issue of split incentives wherein landlords and homeowners may be less inclined to participate in DER programs because they do not directly reap the benefits. Low-income customers tend to live in older buildings, which may create physical or electrical challenges for installing rooftop solar and/or energy storage systems. This customer segment

¹³ D.16-06-055, pp. 24-25.

also tends to lack capital and credit to invest in DERs, which may necessitate new financing mechanisms that lower upfront costs and default risks. Considering these unique challenges, funds for the DAC customer segment may be dispersed at a slower pace than those for the typical residential, commercial, or industrial market segments.

CESA understands that the Commission intends to potentially hold off on Step 3 opening to implement this DAC requirement. To a degree, CESA supports this pause in order to ensure that the DAC carve-out, objectives, and program requirements are thoroughly explored and established. At the same time, CESA also cautions against unreasonably prolonging the pause to other segments of the energy storage market. Once it is determined how the Commission should allocate the 20% statewide carve-out across the PAs, funds for the non-DAC budget categories should be de-coupled and opened since the Commission will have reserved funds in Steps 3-5 for this important market segment. This enables the Commission to take more time to identify the objective of energy storage deployments in DACs and further evaluate the DAC definition while reserving sufficient funds for the DAC community, all without stalling the market for non-DAC energy storage systems. In other words, even if all the DAC objectives, definitions, and program requirements in SGIP are not determined and refined, the de-coupling of the budget categories can still occur once the Commission determines how much of each PA's budget should be allocated to the statewide DAC carve-out.

Furthermore, as previously mentioned, CESA is committed to working with the Commission and stakeholders to develop the appropriate program rules and mechanisms to ensure the achievement of the unique objectives of the DAC customer segment.

C. The Commission should clarify how the developer’s cap applies to the DAC budget category.

The Ruling proposes to not make any changes to the developer’s cap for projects that access funds from the DAC carve-out. CESA agrees but recommends that the proposal be elaborated to have qualifying DAC projects greater than 10 kW to count toward the large energy storage developer’s cap while qualifying DAC projects less than or equal to 10 kW to count toward the small residential energy storage developer’s cap. In doing so, no major changes are needed to IT systems and it would allow the DAC market segment to be transformed with a diversity of projects that support residential, commercial, and industrial customers in this segment. On the other hand, if the DAC budget category is in a different step than the other budget categories for small residential and large energy storage projects, it may present administrative and accounting difficulties that need to be worked out.

III. EXISTING PROGRAM RULES ENSURE THAT ENERGY STORAGE SYSTEMS PROVIDE GRID SERVICES AND THE PROPOSED GRID SERVICES ELIGIBILITY REQUIREMENTS ARE TOO RESTRICTIVE.

The Ruling proposes to set a ‘grid services eligibility requirement’ as a condition for project proponents to apply for and receive SGIP funds. Specifically, the Ruling requires non-residential customers seeking SGIP funds to take service on the local utility’s critical peak pricing (“CPP”) rate or participate as an aggregated DER product that is bid into the California Independent System Operator’s (“CAISO”) wholesale markets. For residential customers, eligibility to receive SGIP funds will be determined by taking service on a CPP rate or a time-of-use (“TOU”) rate, or by participating as an aggregated DER product that is bid into the CAISO’s wholesale markets.

CESA understands that these new requirements are intended to reinforce the grid support goal of the program, but CESA believes that making this a requirement may be a “blunt instrument” type of mechanism that may cut off some segments of the energy storage market and may only serve to add further complexity to an already complex program. There are also concerns regarding the implementation viability and associated reporting requirements of this new eligibility requirement. Importantly, CESA notes that there are operational requirements already in place to ensure cycling of SGIP-funded energy storage systems. Additionally, commercial and industrial (“C&I”) customer rates feature time-differentiated energy rates and demand charges, both of which serve to align customer incentives for energy consumption with grid needs. The Ruling is apparently inconsistent in this regard – *i.e.*, residential customers are deemed as meeting the grid services eligibility requirement if they are on TOU rates, but this same rate design element is not deemed sufficient for C&I customers. Instead of these eligibility requirements, CESA believes that it is incumbent on appropriate and smart rate designs to align economic dispatch of energy storage systems to grid needs and for environmental benefit.

A. The grid services eligibility requirement will cut off significant segments of the energy storage market.

A key goal of SGIP is to transform the market for behind-the-meter energy storage systems. However, the grid services eligibility requirement as currently constituted will cut off some segments of the energy storage market in California. First, there may not be CPP or TOU rate options available to the customer. For example, for Direct Access (“DA”) customers serviced by Energy Service Providers (“ESPs”), CPP or TOU rate options may not be available to take service on, causing many DA customers to be deemed ineligible for receiving SGIP funds. Importantly, while Assembly Bill (“AB”) 327 authorized the Commission to set a default

TOU rates requirement for residential customers serviced by IOUs, it did not extend the same requirement to ESPs. The policy arguments on whether ESPs should also be required to implement time-variant rates is beyond the scope of these comments, but as the current rules stand, many DA customers may not have the option to take service under CPP or TOU rates in the near future, thereby blocking this segment of the market from SGIP funds. Furthermore, ESPs serviced 12.9% of the IOUs' load in 2016, but as the recent May 19, 2017 *en banc* in Sacramento, California revealed, the share of load served by retail choice providers is expected to grow,¹⁴ potentially causing many DA customers to be cut off from SGIP funds even as they contribute to the costs for the program through the Public Purpose Program ("PPP") charge. Similarly, Community Choice Aggregators ("CCAs") may not mandate TOU rates going forward, even as CCA customers become a larger proportion of load served.

Second, many C&I customers are already operating for grid benefit by taking service under TOU and demand charge based rate structures. These rate structures have been analyzed and vetted in General Rate Cases to ensure that the adopted rates align with rate-design principles, provide grid support, and support the state's energy and environmental policy goals.¹⁵ CESA believes it should be sufficient for SGIP projects to take service on one of the dynamic, time-variant rate options made available to customers given the underlying principles and goals of adopted rate structures. It is thus unnecessary to require C&I customers to have to take service under an additional CPP requirement to be eligible for SGIP funds, which may just add additional customer acquisition difficulties and/or other risks of these projects becoming

¹⁴ *Consumer and Retail Choice, the Role of the Utility, and an Evolving Regulatory Framework: Staff White Paper*, published on May 2017, p. 3.

¹⁵ See rate design principles outlined in D.15-07-001 at p. 28 and D.17-01-006 at p. 37.

uneconomic. CESA notes that if taking service on a TOU rate is sufficient for residential customers to satisfy a grid support requirement, the same should be true for non-residential customers. The proposal to treat these customer classes differently violates the principle of “just and reasonable” rate design. If the Commission finds that the underlying rates are not sufficiently providing grid support, CESA believes that the Commission should focus its attention and effort on revising rate structures to support the grid. CESA discusses the idea of revising rate designs to achieve the program’s goals in Section III-D below.

Third, while the Distributed Energy Resource Provider (“DERP”) model was implemented in January 2017 and the Commission continues to move toward integrating supply-side demand response resources into the CAISO’s markets, there is still limited wholesale market participation by DERs. In a recent market notice to market participants and stakeholders, for example, the CAISO indicated that it does not have any non-pilot DER aggregations participating in its energy and ancillary service markets. The only DER aggregations participating in the market today are through the Proxy Demand Response (“PDR”) participation model, but even this option may be limited for certain energy storage aggregations given the challenges with baselines for frequently dispatched resources. Critically, there are still barriers preventing more robust DER participation in wholesale markets, including but not limited to, the 24-hour-a-day participation requirement for the Non-Generator Resource (“NGR”) model, many of which are being actively discussed in Commission proceedings and CAISO initiatives. Energy storage systems paired with Net Energy Metering (“NEM”) eligible generators also cannot functionally participate in the PDR model today due to the onsite generation, which limits the amount of load that can be curtailed in response to a CAISO dispatch signal. Since these

regulatory, policy, and technical issues still need to be addressed, energy storage projects would be limited in the options available to them to meet this proposed SGIP eligibility requirement.

Finally, wholesale market participation as one of the available eligibility criterion is difficult for many emerging energy storage companies to meet given the need to develop a large enough portfolio to meet the 0.1 MW minimum market participation threshold for the PDR model and the 0.5 MW minimum market participation threshold for the NGR model. One of the rationales for instituting the developer's cap is to ensure diversity in the program regarding business models and technologies. While CESA understands that this is just one of the two or three eligibility criteria offered to prospective SGIP applicants, the limited number of eligibility options available limits the prospects for any prospective SGIP applicant to qualify for the program's funds.

As it stands, the proposal for the grid services eligibility requirement is too restrictive and unnecessarily prevents a number of viable energy storage projects from being funded. CESA believes existing program rules and tariff structures ensure that systems supported by SGIP are providing grid services. As CESA discusses in Section III-D, the Commission can ensure that SGIP-funded energy storage projects provide additional grid support through optional smart rate designs, which is the most direct and effective means to achieve the Commission's intended goals, without adding complexity and administrative cost to the program. Alternatively, if the Commission wished to pursue this path toward a grid services eligibility requirement, it could expand the list of eligible rates that are determined to support the grid and suffice for the purposes of this program. However, as noted in Section III-B, CESA believes that the grid services eligibility requirement pathway, even with an expanded list of eligible rates, tariffs, and/or programs, only adds additional reporting requirements and is more difficult to implement.

B. The grid services eligibility requirement lacks clarity on impacts to SGIP projects due to regulatory and policy changes and may add additional reporting requirements that only serve to increase administrative, project development, and operational costs.

Many of the regulatory and policy underpinnings of the grid services eligibility requirement are subject to change or may be temporary in nature. The proposal lacks details and clarity on how eligibility of projects for SGIP funds would be impacted by regulatory and policy changes. For example, it is unclear from the proposal whether energy storage projects would lose eligibility for SGIP funds if the Commission eliminates CPP rates from its menu of rate options for customers, or if non-IOU service providers opt to not offer TOU or CPP rates to its customers. As another example, the proposal does not contemplate how energy storage projects that qualified as a condition of participating in the Demand Response Auction Mechanism (“DRAM”) would have its eligibility affected once the DRAM pilot expires (given that most DRAM contracts are currently structured for less than a year) or if the Commission decides to pursue a different supply-side demand response participation model.

As a matter of implementation and enforcement, the proposal would require the PAs to re-evaluate eligibility of projects due to regulatory or policy changes and have the projects take service under a new qualifying grid services eligibility rate schedule or market participation model. Unless the range of qualifying eligibility criteria is expanded to more comprehensively cover the different types of grid support programs, rates, and market participation models, it would create potential and unnecessary financial risks to projects that may lose eligibility for funds during the operational stage of the project. Even with an expanded menu of eligibility options, CESA is concerned of the costs and burden to PAs of having to consistently monitor projects to ensure their ongoing eligibility to the program, as well as the costs and burden to

developers of having to consistently provide reports and verification of its eligibility on top of the existing performance reporting requirements of the program under current rules.

C. Operational requirements are already in place to ensure cycling of energy storage systems.

While CESA understands that the grid services eligibility requirement is intended to reinforce the grid support goal of the program, the intent of this goal has already been enforced through the operating requirements adopted in D.16-06-055:¹⁶

“We agree that storage is most beneficial to meet ramping needs but do not wish to be overly restrictive in mandating certain hours and months for charging and discharge. These periods may shift over time and are potentially inconsistent with a given host customer’s needs. We agree with CSE that making modifications to tariffs is the appropriate venue for giving customers the right operating incentives. We adopt the Staff Proposal’s recommended 260-hour discharge requirement for commercial systems as a means to ensure grid benefits without prescribing the specific hours the discharges must occur.” [Emphasis added].

As noted above, the Commission added operating requirements to ensure that the systems are being cycled and determined that the appropriate means to adequately address grid support goals is to modify tariffs and rates to give customers the right economic signals, recognizing that customer choice should be preserved. The Commission also understood in D.16-06-055 the regulatory and policy risk of prescribing certain rates, tariffs, or programs as criteria for qualifying for SGIP funds as this menu of options is often subject to change, usually due to changing grid conditions. As seen in many of the rate design proposals in the 2018 General Rate Cases filed by the IOUs, new peak and super-off-peak periods are being proposed to accommodate the new distribution grid that includes an abundance of solar generation during the mid-day and a significant ramp during the early evening hours. Several years from now, those

¹⁶ D.16-06-055, p. 45.

grid conditions may yet again change, which may quickly cause the grid services eligibility criteria to become outdated and create unintended misalignment with the program's grid support goals.

The current proposal also limits customer choice by forcing a limited set of options as a condition for qualifying for SGIP funds. Additionally, energy storage systems are operationally flexible and can adjust to changing rates, tariffs, or programs, within reason, depending on the contract with the customer and as long as the changes do not impact the financeability of the project. Rather than prescribing a limited set of eligibility criteria, CESA recommends that the Commission use rate design proceedings to create the economic price signals and use other proceedings (*e.g.*, demand response applications) in pursuit of its grid support goals, through which developers can innovate and structure contracts and operational profiles that deliver customer value and a range of different grid services.

Alternatively, if the Commission does pursue the grid services eligibility requirement, albeit with a much more expansive menu of options, CESA recommends that the current operating requirements for SGIP-funded energy storage projects be eliminated. As stated in D.16-06-055, the operating requirements were intended to ensure that energy storage systems were being cycled, not standing idle, with the aim to align these projects with the program's grid support goals through modifications to rate design. However, since the grid services eligibility criteria would already ensure that energy storage systems would be providing grid support as a condition for qualifying for SGIP funds, this operating requirement would be redundant and unnecessary, potentially causing energy storage systems to be uneconomically cycled for no grid benefit. At the same time, CESA stresses that this alternative is not ideal as it presents additional administrative costs to PAs and developers, places energy storage systems at risk of regulatory

and policy changes, and may prevent many customer segments from accessing SGIP funds if the eligibility criteria do not account for all the different types of customers and grid-beneficial rates, tariffs, and programs.

Finally, if the current operating requirements are kept in place, CESA recommends that the Commission direct the PAs to begin applying the updated operating and performance requirements (as adopted in D.16-06-055) to energy storage projects currently within their five-year compliance period. The PAs would thus benefit from administering a single performance-based incentive calculation methodology, while developers will benefit from avoiding to unnecessarily cycle their energy storage systems to meet outdated operating requirements. Excessively high cycling requirements under the previous operating requirements may also risk forced dispatches of SGIP-funded energy storage systems that are not aligned with the program's grid support goals. CESA believes the Commission approved the operational provisions as in D.16-06-055 due to this very concern. Therefore, the Commission should require the PAs to file supplemental advice letters explaining how the PAs plan to address the inconsistency between hours and discharges for existing systems and new systems.

D. The Commission should focus on developing rate designs that align with grid needs and provide environmental benefit.

As highlighted in CESA's comments here, as well as in previous comments¹⁷ and in the recent *2014-2015 SGIP Impacts Evaluation Report* prepared by Itron,¹⁸ the Commission's focus should be on ensuring rates are properly designed to economically incentivize energy storage

¹⁷ *Comments of the California Energy Storage Alliance on Assigned Commissioner's Ruling on Implementation of Assembly Bill 1637*, submitted on January 31, 2017, pp. 12-14.

¹⁸ *Final Report: 2014-2015 SGIP Impacts Evaluation*, submitted to SoCalGas and the SGIP Working Group and prepared by Itron on November 4, 2016.

projects to avoid peak demand, providing ramping, avoid GHG emissions, and provide other grid services. CESA understands that the rate design proceedings typically occur over a long time frame and the Commission may wish to see energy storage systems operating more immediately to reduce GHGs and provide grid support. Therefore, in our January 31, 2017 comments to the Assigned Commissioner's Ruling, CESA proposed a "bolt-on" GHG Reduction Tariff for Energy Storage Charging in response to questions regarding concerns of net GHG emissions of energy storage systems.

A similar rationale applies wherein the Commission should consider how tariffs and rate structures can be modified to incentivize energy storage charging and discharging that support the grid and reduce GHGs. Similar to the GHG Reduction Tariff for Energy Storage Charging, CESA recommends that an immediate path to getting energy storage systems to provide grid support would be through implementing a charging tariff via an advice letter process that would allow energy storage systems to charge at super-off-peak rates using solar generation during the mid-day to be later discharged to meet peak demand needs during the evening. The charging tariff would be made available on an opt-in basis and would allow energy storage systems to be charged at the wholesale locational marginal price during defined super-off-peak hours. Retail charges would not be incurred (or be netted out) during these super-off-peak hours, although a lower base distribution rate could be applied to the wholesale locational marginal price to ensure some cost recovery for use of the distribution system to charge during those hours.

CESA recommends that the Commission further explore this idea as well as the idea proposed in our January 31, 2017, comments if the Commission intends to have energy storage systems deliver additional immediate value to the grid, even though many of the already-deployed energy storage systems deliver value to the grid through their service on TOU rates.

CESA thus recommends that the Commission not adopt the grid services eligibility requirement and rather work through this proceeding on a super-off-peak wholesale charging tariff and in the long-term through rate design proceedings on designing the appropriate price signals to deliver additional grid value and services.

IV. CONCLUSION.

CESA appreciates the opportunity to submit these comments on the Ruling and looks forward to working with the Commission and stakeholders to develop ideas on how to better ensure that SGIP meets the program's grid support, GHG emissions reduction, and market transformation goals, while also ensuring access to DACs to energy storage systems and their associated benefits.

Respectfully submitted,



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