BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning, and Evaluation of Integrated Distributed Energy Resources.	Rulemaking 14-10-003 (Filed October 2, 2014)

COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON THE AMENDED SCOPING MEMO OF ASSIGNED COMMISSIONER AND JOINT RULING WITH ADMINISTRATIVE LAW JUDGE

Alex J. Morris
Sr. Director, Policy & Regulatory Affairs

Jin Noh
Policy Manager

CALIFORNIA ENERGY STORAGE ALLIANCE
2150 Allston Way, Suite 210
Berkeley, California 94704
Telephone: (310) 617-3441
Email: amorris@storagealliance.org

March 29, 2018

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning, and Evaluation of Integrated Distributed Energy Resources.	Rulemaking 14-10-003 (Filed October 2, 2014)

COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON THE AMENDED SCOPING MEMO OF ASSIGNED COMMISSIONER AND JOINT RULING WITH ADMINISTRATIVE LAW JUDGE

In accordance with Rules of Practice and Procedure of the California Public Utilities Commission ("Commission"), the California Energy Storage Alliance ("CESA")[1] hereby submits these comments on the *Amended Scoping Memo of Assigned Commissioner and Joint Ruling with Administrative Law Judge* ("Joint Ruling"), issued by President Michael Picker and Administrative Law Judge Kelly A. Hymes on February 12, 2018.

[1] 8minutenergy Renewables, Able Grid Energy Solutions, Advanced Microgrid Solutions, AltaGas Services, Amber Kinetics, American Honda Motor Company, Inc., Axiom Exergy, Brenmiller Energy, Bright Energy Storage Technologies, BrightSource Energy, Brookfield Renewables, Centrica Business Solutions, 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., EnerNOC, ENGIE Energy Storage, E.ON Climate & Renewables North America, Fluence Energy, GAF, Geli, Greensmith Energy, Gridscape Solutions, IE Softworks, Ingersoll Rand, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Iteros, Johnson Controls, Lendlease Energy Development, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Magnum CAES, Mercedes-Benz Energy, NantEnergy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., NRG Energy, Inc., Ormat Technologies, Parker Hannifin Corporation, Pintail Power, Qnovo, Range Energy Storage Systems, Recurrent Energy, Renewable Energy Systems (RES), Sempra Renewables, Sharp Electronics Corporation, SNC Lavalin, Southwest Generation, Sovereign Energy, STOREME, Inc., Sunrun, Swell Energy, True North Venture Partners, 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. INTRODUCTION.

CESA appreciates that the Commission has re-added the omitted scoping items around considering and designing alternative sourcing mechanisms and/or modifying existing programs, incentives, and tariffs to incorporate locational benefits to the Integrated Distributed Energy Resources ("IDER") proceeding. To date, this proceeding has focused primarily on refining a Competitive Solicitation Framework to solicit and procure distributed energy resources ("DERs") to address identified distribution deferral needs as well as to test a new regulatory incentive in the IDER Incentive Pilots. While significant progress has been made to enable DER procurement to provide distribution capacity or services in lieu of traditional capital investments, CESA believes the Competitive Solicitation Framework as a sourcing mechanism limits the scope of distribution services that DERs can provide. DERs are capable of providing a wider range of distribution services if an alternative sourcing mechanism were developed and/or if an existing sourcing mechanism was modified to accommodate DER capabilities.

The Joint Ruling recognizes this "dilemma" in how the current IDER Incentive Pilots focus on distribution deferral needs that are sufficiently large in deferral value and materialize within a narrow band of three to five years ahead, eliminating the possibility of DERs to address shorter-term and smaller-magnitude needs.[2] Significant lead times and company resources are typically needed in this solicitation-type approach, which involves the issuance of a solicitation, contracting process, and deployment phase. Due to this structure, the IDER Incentive Pilots focus on a specific and narrow set of distribution needs. CESA strongly supports approaches that target the broader array of distribution services and thus sees ratepayer and reliability benefit from the consideration of alternative sourcing mechanisms proposed in the Joint Ruling.

[2] Joint Ruling, p. 4.

In these comments, in addition to providing responses to questions posed in the Joint Ruling, CESA proposes a framework that characterizes and aligns different distribution services with different sourcing mechanisms.

II. THE PROS AND CONS OF EACH SOURCING MECHANISMS SHOULD BE CONSIDERED TO DETERMINE THE OPTIMAL SOURCING MECHANISM FOR EACH DISTRIBUTION GRID SERVICE.

The Competitive Solicitation Framework ("CSF") Working Group identified four distribution services that DERs could potentially provide that are defined and characterized further by the timing, level, and location of the service, as well as the availability and assurance of ability of the DER solutions to provide the needed distribution grid service (as shown in Table 1). This is a useful starting point in the consideration of alternative sourcing mechanisms. The CSF and the IDER Pilots focus on one of the four identified services, distribution deferral capacity. The IDER Pilots are helpful in considering DERs as a potential alternative solution to one distribution service, but this sourcing approach (*i.e.*, competitive solicitations) may not be optimal for the sourcing of other distribution services. The CSF Working Group observed these limitations as the IDER Pilots focused on projects that met very specific criteria.

To target the other three services, alternative sourcing mechanisms are needed. These other three distribution grid services – voltage support, reliability back-tie services, and resiliency/islanding – may require approaches that are not already targeted by the IDER pilots. There are a number of alternative sourcing mechanisms that could provide the distribution grid services below, which could potentially be tested in pilot projects as well.

At the same time, CESA also notes that the list in Table 1 is not an exhaustive list of distribution services that DERs can provide, as the IDER proceeding and its 'sister proceeding', the Distributed Resources Plan ("DRP") proceeding (R.14-08-013), has not yet considered other

distribution grid services such as power quality services and equipment life extension services, which typically result in utility distribution investments and could be deferred or avoided through the procurement of DERs. Alternative sourcing mechanisms may also be needed for these other distribution grid services, but CESA understands that more work may be needed to define what these other distribution grid services are.

Table 1: Distribution Grid Services

Service	Definition	Types of Capital Projects	Characteristics of Need
Distribution capacity (deferral)	Dispatch of power output for generators or reduction in load that reliably reduces net load on desired distribution infrastructure	Thermal capacity upgrade projects	Forecasted or real-time, localized
Voltage support	Dynamic voltage management that corrects voltage limit excursions and supports future conservation voltage reduction strategies with utility control systems	Volt/VAR projects, CVR, Volt/VAR optimization	Real-time, localized
Reliability (back-tie) services	Load modifying or supply service that improves reliability and/or resiliency by providing a fast reconnection and excess reserves to reduce demand when restoring customers during abnormal configurations	Capacity upgrade projects driven by outage contingencies	Planned, real-time
Resiliency, microgrid, & islanding	Enabling technologies provide power to islanded end-use customers when central power is not supplied, reducing duration of outages	Capacity upgrade projects driven by outage contingencies	Planned, real-time

In the next subsections, CESA explores the pros and cons of each mechanism and proposes potential distribution grid services that could be procured through each mechanism. In assessing different sourcing mechanisms, it is important to consider how efficiently and effectively the sourcing mechanism procures DERs to meet the distribution grid need. While DERs may not be the solution to all distribution grid needs, it is important to consider pathways for sourcing all potentially cost-effective and reliable solutions, including DERs, to maximize ratepayer benefits. Below, CESA also considers different valuation and compensation mechanisms for each sourcing mechanism.

A. Tariffs

Tariffs typically have pricing, conditions, performance, and eligibility requirements that compensate resources for the general provision of some service – *i.e.*, a 'one size fits all' approach to service provision. This mechanism is well-suited for general needs and trends, can be technology neutral, and procures whatever resource is available at a system level, as needed. Furthermore, the process for sourcing and procurement are simpler than a competitive solicitation as interested resources would only need to meet minimum eligibility and performance criteria. On the other hand, tariffs do not provide a high level of certainty on the availability of resources to provide a particular service and may not differentiate for differences in service quality by technology, which may be reflected in pricing, higher service commitments, and/or firmer availability commitments. For certain reliability needs where DERs would need to be procured to defer or avoid critical distribution upgrade investments with a high level of certainty that the DERs will materialize to provide the service, tariffs may not be the optimal sourcing mechanism.

With this in mind, CESA proposes the following alternative sourcing mechanisms for the Commission's consideration:

1. *Volt/VAR Optimization Tariff*

Presently, the Commission has a pending Draft Resolution E-4898 around the incorporation of Smarter Inverter Phase 3 functions into the Rule 21 interconnection tariff, which among other things, proposes to adopt the Volt-Watt and Frequency-Watt modes as a requirement for all inverter-based generation. The Volt-Watt mode modifies active power from DERs based on predetermined voltage ranges to prevent the local voltage from rising/dropping outside of allowable levels, which can help when utilities

have not planned for a voltage rise from interconnecting PV systems producing active power in the area. However, as parties including CESA raised in comments to the Draft Resolution, specific concerns exist about the capital and operational costs that these mandated functions impose on DERs, as well as broader concerns about the lack of compensation for providing these additional distribution grid services. For example, without a compensation mechanism for the curtailment of power output from rooftop solar systems, there would be significant economic impacts to these projects even as these projects provide Commission-recognized self-consumption services to the customer.

Rather than imposing this cost on DERs, a new Volt/VAR Optimization ("VVO") tariff may present opportunities to source these voltage support services and compensate these resources at the lost opportunity cost of energy for operating outside of the normal power factor range or limiting active power output (in the case of rooftop solar to provide this service) as well as to compensate these resources at the cost of traditional capital investments, such as automated programmable capacitor controls, that are deferred or avoided.[3] In many cases, a solar or storage inverter may not be used at full capacity and be designed to have some headroom, leading to no opportunity cost of providing voltage regulation. It is thus important for DERs to be compensated for providing voltage regulation services, even in cases where there is no lost opportunity cost, as the use of the headroom of an inverter would still be providing value to the grid in terms of deferring or avoiding capital investments. In other words,

[3] In the case of energy storage systems, compensation could be based on avoided costs as well. If energy storage systems are able to respond to utility dispatch signals or price signals to increase charge to manage voltage levels (due to rooftop solar output) within the allowable range, they can be compensated for what would have been curtailed rooftop solar if not for the energy storage response.

CESA believes that it is important to have services valued appropriately and likely at non-zero rates. Finally, an additional source of savings from voltage regulation is in reducing energy consumption by all customers on the distribution grid associated with reducing unnecessarily high voltages – *i.e.*, conservation voltage reduction ("CVR"). In addition to the consideration of lost opportunity cost and avoided/deferred value, the compensation for this tariff should also consider the reduction in operational costs through CVR from DERs providing voltage regulation.

The tariff approach is also preferable because it can be adjusted based on the locational and time differences, as VVO requirements may not be universal across an entire service area, which is what is being assumed through the sourcing of these services through Rule 21 technical requirements. There may be locations, times of the day or week, or certain weather conditions where VVO needs are higher or lower. Thus, the service quantity for VVO can be adjusted to align more closely with granular needs. Furthermore, this tariff can be designed to administratively set different DER output limits by location and time, or it could be designed to have DERs respond to utility dispatch commands and price signals.

2. *Frequency Service Tariff*

Similar to the VVO tariff above, CESA has concerns with the Frequency-Watt mode as proposed in Draft Resolution E-4898 as it may require energy storage units to be called for under-frequency events without a consideration of compensating this additional service. This mode helps to counter high-frequency events due to too much power being on the grid (and vice versa), which is accomplished by reducing power in response to rising frequency (and vice versa). However, rather than setting a mandatory

technical requirement for all inverter-based generation to provide frequency response, CESA recommends a tariff-based approach to allow DERs such as energy storage that are willing to provide this distribution grid service to provide it.

Unlike voltage and VAR services, which are very localized needs, frequency response is a system-wide issue that is addressed through the California Independent System Operator ("CAISO") markets and requirements. However, the CAISO only has jurisdiction over the resources that participate in its markets and/or those resources that sign FERC-jurisdictional Small Generator Interconnection Agreements ("SGIAs") and Large Generator Interconnection Agreements ("LGIAs"). While the CAISO may explore development of frequency response 'products', a tariff for DERs to provide frequency services may also be reasonable and could reduce the need to procure and pay for CAISO-directed frequency response, reducing ratepayer costs by leveraging DERs and competition to provide this service. Since frequency response is not location-specific, it seems plausible for DERs to readily contribute to the system-wide frequency service needs, which they would otherwise not be incentivized to provide in the market.

The structure of this tariff could compensate DERs for frequency service in different ways, such as through a non-zero capacity payment and deferral value of providing frequency response capacity. The tariff could set requirements whereby a frequency events as signaled by the utility triggers autonomous responses for certain MW/0.1Hz rate until the frequency recovers to the applicable range. How utilities will recover the costs of this service should be discussed in this proceeding.

3. *Hosting Capacity Tariff*

Increasing hosting capacity as a tariff may be an additional distribution deferral opportunity apart from the CSF, where smaller and more incremental capital investments may be deferred or avoided. CESA differentiates this tariff from the CSF and IDER Pilots, which identified potential medium-term capital investment projects within 3-5 years that may be needed as certain circuits and substations approach their thermal limits. By contrast, this mechanism would allow DERs to subscribe to this tariff that commits them to not increase reverse power flows or to have other operational parameters that may reduce the hosting capacity of a given circuit. Rather than procuring DERs or opting for capital investment projects in the CSF to essentially *increase* hosting capacity, this tariff would commit DERs to *not increase* hosting capacity and would thus rely on the valuation of the incremental avoided cost of hosting capacity on a given circuit. This may reduce costs for upgrades and deliverability of other DERs and so could be valuable, including in informing the composition of interconnecting resources. Issues around Rule 21 cost allocation may also need to be addressed here.

Understandably, it may be difficult to determine what the incremental cost of hosting capacity is given that hosting capacity in itself is not a unit of measurement or service and because the Integrated Capacity Analysis ("ICA") methodology does not produce cost information at this time. CESA does not propose anything specific at this time, but it may be worthwhile for the Commission to determine how the ICA methodology can be used to determine the costs of system needs. CESA foresees the potential of this type of tariff to precede a CSF as circuits approach their thermal limits

and to function as a tool to push out the near-term need for a competitive solicitation to be run to address hosting capacity concerns.

B. Standard contracts and requests for bids

Standard contracts provide a streamlined competitive solicitation process where commoditized services can be procured based on least cost through a request for bids in a reverse auction. In California, requests for bids have worked for kWh of renewable energy (*e.g.*, Renewable Auction Mechanism) or for standardized products such as capacity (*e.g.*, Demand Response Auction Mechanism). This mechanism has the advantages of assuring utilities of the availability of procured resources, which can also be targeted in specific locations. However, while least-cost solutions are procured through standard contracts and requests for bids, this mechanism does not necessarily procure the best-fit DER portfolios, which would be achieved in a competitive solicitation under the usual least-cost, best-fit evaluation framework. For example, the utilities may lose out on the ability to build out a portfolio of DERs with complementary characteristics that may best meet the distribution grid need through higher performance, reduced deployment or operational risk, and/or increased diversity benefits. Additionally, standard contracts may face more difficulties in comparing different DER resource classes, may not account for the best-performing DERs, and may limit the utilization of DERs for other services.

CESA believes that some distribution grid services can potentially be standardized to some degree. In these cases, if distribution grid needs are clearly defined, then standardized contracts may possible and beneficial for cost-savings to ratepayers. For example, in its IDER Pilot, Pacific Gas and Electric Company ("PG&E") clearly defined the performance standards, dispatch and availability requirements, and payment structure

for the distribution deferral capacity need. Such a clearly defined 'deferral product', such as in PG&E's IDER Pilot, lends itself to more standardized contracts and sourcing through a request for bids. CESA strongly supports the transition of competitive solicitations to standardized contracts and request for bids, where possible.

C. Incentive and rebate programs

There are a number of incentive and rebate programs the drive demand from the bottom-up to achieve a specified grid or policy need by making a pool of funds available for customers and/or DER providers. The Self-Generation Incentive Program ("SGIP"), for instance, is a program that supports the deployment of renewable distributed generation and customer-sited energy storage systems and that sets incentive payout structures as well as performance and operational requirements to achieve the program's goals of greenhouse gas emission reduction, grid support, and market transformation. The use of adders or preferential/prioritized access to funds can support some level of targeting of DER deployment to specific customers or locations, as done through lottery priorities for SGIP funds in locations in Aliso Canyon affected areas when budgets are oversubscribed, or through budget carve-outs for residential customers and disadvantaged communities. However, incentive and rebate programs are disadvantaged in terms of not 'procuring' DERs in a timely fashion, as it is a function of administratively-set incentive/rebate levels and design, as well as bottom-up driven voluntary behavior. These programs or incentives also lack precise and targeted locational signals because incentives and rebates are generally available whereas distribution grid needs are often very granular.

Among the identified distribution grid services, resiliency services may be well-suited for incentive and rebate programs, as these services represent needs beyond the

minimum reliability standards and may be best driven by customers who self-identify as needing a higher level of resilience service. Customers with critical facilities that provide essential services during emergencies and natural disasters, such as hospitals, military bases, and fire stations, may realize they need to maintain certain minimum loads during grid-wide outages and seek to deploy DERs capable of providing islanded power with the assistance of an incentive or rebate program. Minimum performance and technical requirements may be set – *e.g.*, in terms of minimum number of hours for which the critical load must be supported – but the program may function optimally by having the customer specify how much resilience or islanding they need. Similar types of programs have been established in many Northeast States with the aftermath of Hurricane Sandy. The New Jersey Board of Public Utilities' ("NJBPU") Office of Clean Energy, for example, created the Renewable Energy Incentive Program ("REIP") in 2014 to add reliability and resiliency to the state's electricity infrastructure through a program that provides financial incentives to pair energy storage with existing or yet-to-be-installed rooftop solar at critical facilities to ensure that critical systems continue operating during power outages.

III. INCREMENTALITY ISSUES MUST BE ADDRESSED FOR THE COMPETITIVE SOLICITATION FRAMEWORK AND ALTERNATIVE SOURCING MECHANISMS.

An additional issue in considering different distribution grid services and alternative sourcing mechanisms is how to measure incrementality and compensate for distinct and incremental distribution grid services to allow existing DERs already sourced through other programs, tariffs, investments, and/or solicitations to be eligible for the additional distribution grid services under these alternative sourcing mechanisms. Currently, the IDER Pilots use a 'tranche' categorization approach where DERs are valued based on whether they are wholly sourced,

partially sourced, or un-sourced from other programs, tariffs, investments, or solicitations. Unfortunately, this approach provides insufficient clarity to DER providers regarding how their resources will be evaluated in competitive solicitations when the DERs being solicited are wholly or partially sourced.

Similar incrementality issues may arise under alternative sourcing mechanisms. The CSF Working Group established a reasonable principle whereby an incremental DER will provide an attribute or service that was not included in the distribution planning assumptions when determining whether a traditional infrastructure investment is needed.[4] However, the challenge with this definition of incrementality is that current distribution planning assumptions are made at the service level rather than a more localized circuit level, making it difficult to determine incrementality for very location-specific distribution services such as distribution (deferral) capacity and voltage support.

In the Energy Storage proceeding (R.15-03-010), pursuant to the framework established in Decision ("D.") 18-01-003, the Multiple-Use Application ("MUA") Working Group is in the process of working through issues of incrementality and double compensation for energy storage resources. While specific to energy storage resources at the moment, the MUA Framework establishes three categories of MUAs that seeks to define incrementality based on a resource's attributes and services: (1) time-differentiated MUAs; (2) capacity-differentiated MUAs; and (3) simultaneous MUAs. Although the MUA Framework and categories for energy storage may not be entirely applicable for all types of DERs, there are some lessons that could be imported into this proceeding to inform the incrementality discussion. For example, an energy storage resource

[4] *Competitive Solicitation Framework Working Group Final Report Filed by Southern California Edison Company (U338-E), Pacific Gas and Electric Company (U39-M), San Diego Gas and Electric Company (U902-E), and Southern California Gas Company (U904-G)*, filed on August 1, 2016, p. 18.

participating in a demand response program or contracted for Resource Adequacy ("RA") capacity may be able to allocate a portion of the "un-sourced" or un-contracted (*i.e.*, available) capacity of the resource to provide voltage support under a new tariff. Even as the resource is committed to or contracted for multiple services at the same time, the resource's capacity can be differentiated to confirm incrementality and compensate the different, non-overlapping capacity separately. Alternatively, the energy storage resource could fully commit its available capacity to one service during certain months of the year (*e.g.*, RA capacity) and to a different service during other times of the year (*e.g.*, distribution deferral capacity), so long as the distribution needs lend itself to such time differentiation of service provision by the resource. Such a consideration of incrementality and compensation is not possible under the current IDER categorization approach based on sourcing, or at the very least, is not clear to CESA.

CESA acknowledges that some approaches to determining incrementality and compensation may involve evaluating every program, tariff, incentive, and solicitation to define the attributes and services that are being procured. For example, the NEM tariff "procures" rooftop solar self-consumption for the customer, but it does not source Volt-VAR optimization services, which can be provided through smart inverter functionalities. By evaluating and defining the attributes and services that are procured in each sourcing mechanism, it may become clear that the installation of this smart inverter functionality is incremental and thus eligible for some additional payment as an incentive or as part of a tariff and be allowed to participate in competitive solicitations.

Addressing this incrementality issue (as well as potentially harmonizing incrementality definitions and frameworks with other proceedings) may be complex and will require further stakeholder discussion. However, CESA believes this is an important element to the CSF and

alternative sourcing mechanisms as already sourced DERs may have capacity available and/or be re-purposed or retrofitted in part to address any identified distribution grid need, without the added project development and customer acquisition costs and time to deploy new, un-sourced DERs. Resolving this incrementality issue will allow for DERs to provide additional distribution grid services that are characterized by needs that materialize over shorter timeframes – one of the very dilemmas that prompted this Joint Ruling. Additionally, leveraging already sourced DERs for incremental services to a greater degree will increase the utilization of DERs, improve the cost-effectiveness of DERs in providing multiple services, and enable DERs to provide distribution grid services that it may otherwise not be able to provide due to the shorter timeframes of certain distribution grid needs.

IV. RESPONSES TO QUESTIONS.

Below, CESA provides our responses to the questions posed in the Joint Ruling that build off the ideas and proposals in the above sections. Generally, CESA hopes that this proceeding will more deeply consider tariffed and program approaches to procuring DERs for distribution grid services as well, as the questions below seem to focus more heavily on developing an expedited CSF to procure DERs.

Question 1: Describe how a tariffed approach could be used to source distributed energy resources on an expedited basis. How would the amount of the tariffed payments be determined to ensure that distributed energy resources alternatives are cost-effective? Would the tariff be available on a first-come, first served basis or should some other selection process be implemented?

As described in the section above, tariff approaches have the advantage of allowing available new and existing DERs to provide distribution grid services on an ongoing basis, so long as the DERs meet minimum eligibility and performance criteria. CESA does not have any recommendations at this time on how to determine whether tariffed payments are cost-effective,

which for DERs participating in Commission tariffs and programs are evaluated based on avoided costs. CESA proposes (above) tariffed payments based on the actual grid service value, which are not linked to cost-effectiveness frameworks, so this issue may need to be considered further in this proceeding.

Question 2: Could a streamlined version of the competitive solicitation framework used for the Incentive Pilot projects – such as a request for bids process – be a viable alternative, where distribution services are standardized? Describe in detail the steps involved in a streamlined competitive process.

Yes, CESA believes that a streamlined version of the CSF is a viable alternative. The current CSF process involves the issuance of an annual Grid Needs Assessment ("GNA") followed by a Distribution Deferral Opportunity Report ("DDOR"), review of the two filings by the Distribution Planning Advisory Group ("DPAG"), creation of Request for Offers ("RFO") documents, launch of the RFO and bid process, evaluation and selection of the final bids, and final approval by the Commission of selected contracts. A streamlined CSF would require the same steps but less time and resources at every step of the process, especially in terms of the evaluation and selection of the bids. Once the Commission establishes upfront standards and guidance (*e.g.*, procurement caps, price caps) on the solicitation framework and confirms the need identified, the utilities should be able to reasonably quickly conduct a request for bids and select winning bidders at least cost.

Question 3: Should the Commission establish separate rules and requirements for a streamlined version of the competitive solicitation framework?

Yes, it may be reasonable to establish certain separate rules and requirements for the expedited CSF. The offer evaluation process will certainly be different and simplified.

Question 4: Are there other mechanisms the Commission should consider in order to deploy cost-effective distributed energy resources that satisfy distribution planning requirements as required by Utilities Code §

769(b)(2)? Describe these other mechanisms in detail, including proposed necessary steps.

See above sections on CESA's recommended other mechanisms for further Commission consideration. In general, as a potential next step, CESA recommends that a workshop or a few working group meetings be held to discuss the characteristics of the other distribution grid services and the merits and challenges with alternative sourcing mechanisms to determine the optimal sourcing mechanism for voltage support, reliability back-tie services, and resiliency/islanding. Parties would also benefit from learning what and how the utilities procure for these different services. Several specific proposals submitted by parties should be subsequently considered in this proceeding.

Question 5: What additional information does a distributed energy resources provider need to know in order to participate in each of the mechanisms proposed in the response to the questions above? What additional information should the utilities make available to the distributed energy resources providers to create the right market signal?

Clear guidance and signals on performance and availability requirements, as well as clarity on the determination and valuation of incrementality, are important to DER providers in understanding their potential commitments by participating in the sourcing mechanism. For standard contracts, standardization of distribution grid services into products would help DER providers to properly price their bids and clarity on the determination and valuation of incrementality would also support DER providers in participating in these streamlined solicitations.

Question 6: Should expedited procurement processes only be available to certain categories of distribution services? Should they only be available to deferral opportunities below a certain threshold of deferral value (e.g., single products or cluster of projects for which the traditional investment would cost $10 million or less)? Explain why the response would differ depending on the specific type of expedited procurement process.

CESA believes that any distribution service that lends itself to a greater degree of standardization may be suitable for an expedited procurement process. CESA does not necessarily agree that deferral value should be *the* screening factor since CESA views standardization being the threshold issue for determining whether certain categories of distribution services would be suitable for an expedited procurement process. Even for projects with a high deferral value, if the distribution service is standardized, CESA believes that DER solutions could materialize and be deployed efficiently and cost-effectively.

Question 7: For each of the mechanisms proposed in response to the questions above, describe the approval process the Commission should adopt.

For our proposed tariff mechanisms, CESA recommends the use of Tier 1 advice letters to implement the tariff(s). Due to the voluntary nature of this tariff, this level of review and approval by the Commission may be sufficient. Before the utilities develop their advice letters, CESA recommends clear guidance be given to the utilities on how these mechanisms should be structured. For our proposed tariff mechanisms compensating DERs based on avoided or deferred cost of equipment, it may require a Tier 2 advice letter to implement the tariff(s) given the higher level of review needed to assess the avoided or deferred cost of equipment and to structure the tariff to get better assurances of avoiding or deferring the traditional capital investment.

For the standard contracts and requests for bids mechanism, CESA recommends the CSF process be leveraged but with lower threshold of review whereby the utilities confidentially report on the winning bids to the Commission. So long as minimum cost-effectiveness and other criteria (*e.g.*, auction cap) are met, the Commission should approve these standard contracts with an expedited advice letter process.

Finally, for resiliency programs, CESA recommends the application process to establish the framework of the program, similar to what is currently being done in the Assembly Bill ("AB")

2868 applications. Once established, the program may require modifications and improvements through Commission proceedings and/or advice letters.

Question 8: Explain whether the Commission should focus on the development of one mechanism or an assortment of optional mechanisms for providers.

At this time, CESA recommends that the Commission focus on the development of voltage and frequency related tariffs, as the Smart Inverter Phase 3 requirements will be approved and implemented within the next year, which has major implications for DERs such as rooftop solar and energy storage. Additionally, CESA recommends that the Commission prioritize the development of resiliency programs to source DERs to provide microgrid and islanding services. The utilities are in the process of developing ideas for energy storage deployments to provide added grid resiliency through competitive solicitations for utility-owned investments, but an alternative sourcing mechanism through a resiliency program may offer a different pathway by which the utility can achieve the same objective. Ratepayers will benefit from an array of options and from comparing costs of each path.

Question 9: What existing Commission-approved programs, incentives, and tariffs would benefit from a coordination plan, as required by Public Utilities Code § 769(b)(3), and result in maximum locational benefits and minimal incremental costs? Similarly, should the Commission consider coordination with the Interconnection Rulemaking (R.17-07-007) to ensure operational requirements of Smart Inverters are aligned with any relevant valuation mechanism?

CESA agrees that coordination with R.17-07-007 is critical as the IDER proceeding will ultimately determine the valuation and compensation of the smart inverter functions. The energy storage applications pursuant to AB 2868 could benefit from coordination with the efforts in this proceeding as the locational valuation and sourcing of projects to provide grid resiliency is a major focus of the utilities' plans. AB 2868 also established statutory goals for the proposals to maximize

ratepayer benefits and minimize overall costs, which aligns well with the likely efforts in this proceeding.

While it is not yet clear on how the Integrated Resources Plan ("IRP") proceeding (R.16-02-007) will incorporate DRP outputs and IDER valuation into its capacity expansion modeling, CESA believes that it represents the next step in the IRP proceeding to better optimize for DERs and identify the role of DERs in providing various grid reliability services. Improvements to the models to incorporate DER capabilities will be one of the objectives of the 2019 IRP modeling cycle, according to D.18-02-018, making it critical for coordination between the IRP and IDER proceedings.

Finally, CESA believes that the transportation electrification applications from each of the IOUs would benefit from close coordination with this proceeding. Although a portion of the deployment locations have already been determined, the work in the DRP and IDER proceedings will greatly inform the siting of other electric vehicle ("EV") chargers and other DERs to support the EV infrastructure buildout.

<u>Question 10</u>: Other than maximizing locational benefits and minimizing incremental costs pursuant to § 769(b)(3), are there other objectives the Commission should consider when developing the required coordination plan?

While not a statutory objective, CESA recommends that the Commission also consider the complexity of the alternative sourcing mechanism and assess whether the mechanism can be operationally feasible for the utility, financially viable and bankable for the DER provider, and acceptable to the customer (to the degree that the customer is involved in the sourcing mechanism). These factors will be critical to the successful implementation of the sourcing mechanism – *i.e.*, determine whether DER solutions will materialize and operate as planned.

<u>Question 11</u>: What steps could the Commission adopt to coordinate these existing programs, incentives, and tariffs and/or other proceedings in order to

maximize locational benefits and minimize incremental costs? Are there procedural steps that need to be taken to implement this coordination?

CESA recommends that the DER Action Plan be updated to reflect this coordination effort. This overarching plan affecting all DER-related issues at the Commission may require some updates to reflect the consideration of alternative sourcing mechanisms. Action Item 2.3 states that "by 2017, [the Commission should] consider how existing DER sourcing mechanisms (*e.g.*, programs and tariffs) should reflect location value and/or be transitioned to a competitive sourcing mechanism already reflecting locational value." CESA believes this item in the DER Action Plan falls somewhat short of the expectations of the original IDER scope – *i.e.*, broader consideration of alternative sourcing mechanisms in this Joint Ruling, where new tariffs and programs may be evaluated and implemented. As CESA interprets Action Item 2.3, it focuses on incorporating locational value to the CSF and existing tariffs and programs (*e.g.*, NEM) instead of broadening the scope to also consider other alternative sourcing mechanisms, which may not exist today.

<u>Question 12</u>: Given that the Locational Net Benefits Analysis Cost-Effectiveness Use-Case and Methodology is still in development in R.14-08-013, should work in this proceeding to implement Public Utilities Code § 769(b)(3) begin in parallel or should work wait for completion of the Use-Case?

CESA believes that work in the DRP and IDER proceedings can occur in parallel, as the development of alternative sourcing mechanisms is not wholly dependent on the Locational Net Benefits Analysis ("LNBA") cost-effectiveness use case and methodology, and because the distribution grid services considered in this proceeding are not entirely dependent on avoided cost values.

V. CONCLUSION.

CESA appreciates the opportunity to submit these comments on the Joint Ruling and looks forward to working with the Commission, the IOUs and other parties going forward in this proceeding.

Respectfully submitted,

Alex J. Morris
Sr. Director, Policy & Regulatory Affairs
CALIFORNIA ENERGY STORAGE ALLIANCE
2150 Allston Way, Suite 210
Berkeley, California 94704
Telephone: (310) 617-3441
Email: amorris@storagealliance.org

Date: March 29, 2018