December 11, 2018

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Re: Response of the California Energy Storage Alliance to Advice Letter 5434-E of Pacific Gas and Electric Company and Advice Letter 3900-E of Southern California Edison Company

Dear Sir or Madam:

Pursuant to the provisions of General Order 96-B, the California Energy Storage Alliance ("CESA")[1] hereby submits this response to the above-referenced Advice Letter 3900-E of Pacific Gas and Electric Company ("PG&E"), *PG&E's Submittal of the Technology Neutral Pro Forma (TNPF) Contract* ("PG&E Advice Letter"), submitted on November 21, 2018, and to the above referenced Advice Letter 3900-E of Southern California Edison Company ("SCE"), *Southern California Edison Company's Submittal of its Technology Neutral Pro Forma Contract* ("SCE Advice Letter"), submitted on November 21, 2018.

[1] 174 Power Global, 8minutenergy Renewables, Able Grid Energy Solutions, Advanced Microgrid Solutions, AltaGas Services, Amber Kinetics, American Honda Motor Company, Inc., Avangrid Renewables, Axiom Exergy, Boston Energy Trading & Marketing, Brenmiller Energy, Bright Energy Storage Technologies, Brookfield Renewables, Carbon Solutions Group, Centrica Business Solutions, Clean Energy Associates, Consolidated Edison Development, Inc., Customized Energy Solutions, Dimension Renewable Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, ElectrIQ Power, eMotorWerks, Inc., Enel X North America, Energport, ENGIE, E.ON Climate & Renewables North America, esVolta, Fluence, Form Energy, GAF, General Electric Company, Greensmith Energy, Ingersoll Rand, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Iteros, Johnson Controls, KeraCel, 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., Parker Hannifin Corporation, Pintail Power, Primus Power, Quidnet Energy, Range Energy Storage Systems, Recurrent Energy, Renewable Energy Systems (RES), Sempra Renewables, Sharp Electronics Corporation, SNC Lavalin, Southwest Generation, Sovereign Energy, Stem, STOREME, Inc., Sunrun, Swell Energy, Tenaska, Inc., True North Venture Partners, Viridity Energy, VRB Energy, WattTime, Wellhead Electric, and Younicos. The views expressed in this Response are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies.

I. BACKGROUND AND INTRODUCTION.

In the Integrated Distributed Energy Resources ("IDER") proceeding (R.14-10-003), Decision ("D.") 16-12-036 was issued on December 22, 2016 that directed each of the investor-owned utilities ("IOUs") to reconvene the Competitive Solicitation Framework Working Group ("CSFWG") after the pilot solicitations to develop a technology neutral *pro forma* ("TNPF") contract, with the guidance of the California Public Utilities Commission ("Commission") and oversight an independent consultant, Sedway Consulting. CESA appreciated the opportunity to participate in the CSFWG and seeks to support the IOUs and the Commission in structuring IDER Request for Offers ("RFO") to successfully procure and contract distributed energy resource ("DER") solutions to provide distribution services.

In reviewing PG&E's and SCE's Advice Letters, CESA supports their proposed TNPF contracts. CESA offers a few areas of comment around potential modifications that could better balance the interests of ensuring reliable distribution grid service and of DER solution viability. Issues around incrementality pose problems, but CESA understands that resolution of these issues may require a broader policy discussion in a separate forum, perhaps in the IDER proceeding or in another proceeding.

To the broader question about technology neutrality, it is difficult to assess this question given the inherent differences between DER technologies. However, some of the eligibility and service requirements have been set up to restrict participation of certain DERs, such as behind-the-meter ("BTM") demand response ("DR"), energy storage, and solar photovoltaics ("PV") paired energy storage. CESA has not reviewed the *pro forma* terms for all resource types, as we are focused on in-front-of-the-meter ("IFOM") energy storage, BTM energy storage, BTM PV plus storage, and BTM DR plus storage. CESA is not in a position to comment on other resource types and thus cannot conclusively say the TNPF contracts are indeed technology neutral, but in terms of the resource types that CESA is focused on, the proposed TNPF contract may limit market participation, particularly for the BTM PV plus storage resource types.

CESA encourages the Commission to assess the proposed TNPF contract not strictly from the perspective of whether the contracts are indeed technology neutral but also to assess whether the TNPF contract lays out fair and reasonable terms and conditions that make it tenable for sellers while addressing the underlying identified distribution grid service. In many cases, the proposed TNPF contract does not lay out fair and reasonable terms and conditions and places excessive risk on sellers without specifically addressing the distribution grid service need. Measured against this criteria, CESA believes that PG&E's and SCE's IDER RFOs do a sufficient job of inviting a robust market response, though there are certain market segments that may face barriers.

In addition, at the request of Energy Division staff, CESA also provides our comments on the following questions regarding the elements of the TNPF contract that can be standardized across the IOUs:

1. Are there elements in the Technology Neutral Pro Forma Contract that should be standardized across all three IOUs? If so, what are they? For each specific element, is there a version (from the three submitted) that you find the most useful as model?

2. Should the IOUs work towards developing one TNPFC for future IDER solicitations? Please explain.

CESA does not find the need to develop a single standardized TNPF contract but finds that certain elements of the TNPF contract should be standardized across the IOUs. Certain elements around how incrementality is defined and applied as well as how performance and contracting requirements reflect DER capabilities should be standardized, as CESA finds no need to differentiate them for any individual IOU. CESA elaborates further in our comments in Section III of this response.

II. DISCUSSION.

Over the course of multiple working group meetings in the IDER proceeding as well as the Distribution Planning Advisory Group ("DPAG"), CESA has provided many specific redlines and feedback on the TNPF contracts and is appreciative to see that many changes were made or clarifications were provided, as recommended by CESA and other parties, including around:

- PG&E's addition of delay damages upon not achieving the initial delivery date
- PG&E's modification to increase the tolerance band for charging during Restricted Periods from 1% to 3%
- SCE's clarification that DER upgrades, if SCE's DERMS system becomes available, will be reimbursed
- SCE's clarification that development security amounts will be denominated in $/MW in the RFO solicitation documents, though it will be important to set a reasonable amount
- SCE's clarification that termination rights due to changing deferral needs will likely be a seller-bid amount, though this should be included in the TNPF contract
- SCE's removal of the "firm load" requirement for the establishment of charging energy services
- SCE's revisions to clarify that the events of default only apply if a Net Qualifying Capacity or Effective Flexible Capacity have been obtained for BTM generation and storage

- SCE's explanation around the seller capacity attributes covenant

In the comments below, CESA provides several recommendations to improve the TNPF contracts, though none of the recommended changes warrants a delay in the launch of PG&E's and SCE's IDER RFOs. CESA supports the timely launch of the IDER RFOs, recognizing that more changes can always be discussed and needed.

In addition to these points, CESA requests that the independent evaluator ("IE") to the working group also provide its assessment and recommendations, having facilitated the working group. CESA reads the IE report included as attachments as being more of a summary of discussions of the working group rather than an assessment of the negotiations and feedback on the TNPF contract that eventually lead to some key takeaways, conclusions, and recommendations. With this added assessment, CESA believes that the IE report will provide actionable advice and assistance to the Commission in assessing and potentially directing modifications of the proposed TNPF contract.

A. Day-ahead notification processes are good practice for DERs

CESA strongly supports the day-ahead notification (by 8am) proposed by PG&E in its TNPF contract,[2] which allows for continued delivery of customer benefits and may unlock additional multiple-use application ("MUA") capacity from these resources when not needed for distribution capacity. Whereas for SCE, their advice letter clarified that their TNPF contract does not preclude the use of longer advance notice of dispatch for DR resources.[3] The 15-minute advanced notification for dispatch remains in place in SCE's TNPF contract,[4] which appears reasonable to a degree given the nature of the distribution grid service need, but CESA would prefer to see specific commitments in the TNPF contract to day-ahead notification, with the flexibility preserved for SCE to dispatch with 15-minutes notice for unexpected events.

B. Charging restrictions should generally be resolved in the interconnection study process and/or account for some *de minimis* amount of charging during Restricted Periods

CESA understands that there may be certain times during which thermal loading on an already overloaded circuit or line may create distribution grid problems. Instead of Restricted Periods for charging, as proposed by the other IOUs, SCE does not appear to specify this and instead looks at certain charging restrictions. While appreciative of the removal of the firm load requirement, CESA still holds the view that the requirement to limit charge of energy storage only to the paired BTM PV (and not from the distribution

[2] PG&E Advice Letter, p. 6.
[3] SCE Advice Letter, p. 14.
[4] SCE Attachment 1-3, DR.

grid) seems unnecessary if SCE is soliciting non-NEM PV-paired storage systems.[5] The interconnection agreement should govern restricted periods of charging, and though SCE responds that charging from co-located PV is more effective than charging from the grid, the grid impacts should depend on when the charging from the grid occurs (*i.e.*, during off-peak demand hours). CESA finds the prohibition for non-NEM PV-paired storage to charge from grid to be unnecessary as other processes should address any concerns.

CESA is also appreciative of PG&E's allowance of a 3% tolerance band of charging during Restricted Periods.[6] While seemingly minor, the allowance for some minimal charging is reasonable to maintain state of charge at needed capacity for when dispatch is later required for the distribution capacity service.

C. Optionality to submit non-RA-qualifying bids into SCE's IDER RFO should be clarified

SCE's compensation structure is very dependent on BTM energy storage and DR being integrated into the wholesale market, with the potential for RA benefits. In response to CESA's feedback,[7] SCE said it is "willing to consider more targeted products (and what scheduling coordinator arrangements might be appropriate for those products) depending on the needs of a particular solicitation"[8] but, upon review of the submitted TNPF contract, CESA finds the product types to all include the sale of capacity attributes, with no options to *not* do so. CESA is appreciative of the signal for this change to provide optionality as not all DERs have RA counting methodologies (*e.g.*, BTM solar-plus-storage), and some BTM DERs, such as BTM energy storage providing DR, may face certain added capital and market integration costs to provide RA capacity. However, this change is not yet reflected in the proposed TNPF contract. CESA requests that these changes be included in the TNPF contract

CESA supports some flexibility for the IOUs to each pursue different approaches to procuring DERs. This flexibility can be preserved: SCE can still indicate its preference to procure capacity attributes through the IDER RFO, but options to submit distribution service only bids should also be allowed and evaluated accordingly. The resulting winners will bear out in the resulting net market value assessment, but this bid optionality should be allowed.

[5] SCE BTM DG/ES Attachment 1-18
[6] PG&E's Advice Letter, p. 7.
[7] Since the distribution deferral and RA capacity are different reliability services, it may be unnecessary to require such combination of services, though CESA supports the option of DERs to propose providing both services in their offers and to have those combined benefits valued accordingly.
[8] SCE Advice Letter, p. 10.

D. Telemetry requirements are market-limiting for small DERs

CESA continues to believe that CAISO telemetry dispatch is not needed for Proxy Demand Resource ("PDR") resources, which pose barriers to BTM resources given the high costs of telemetry. Telemetry is not needed for settlement purposes. CESA understands the need for SCE to have visibility into its distribution resources, so this may issue may need to be revisited at a later time, depending on the results of the 2019 IDER RFO. If there is a post-RFO evaluation, this should be one area to monitor.

E. Settlement structures must not capacity limit BTM resources

CESA observes that the proposed settlement within Section 3.02 of SCE's proposed TNPF contract[9] limits the capacity of BTM distributed generation by limiting the capacity to the customer instantaneous demand, thus limiting the resource to deliver below its full capacity potential to meet the identified distribution grid service need. CESA does not see justification for this limitation and requests that this provision be removed from SCE's proposed TNPF contract.

F. Information sharing provisions should clarify that metered data is only required for the distribution service

To be able to plan and operate the distribution system, PG&E and SCE likely need visibility into the DERs connected to its grid to provide distribution grid services, leading to information sharing provisions to be included in its proposed TNPF contract to require the sharing of metered data as necessary. In response to PG&E's comment,[10] CESA believes that the information sharing should be limited to what is necessary for the distribution grid services and such metered data requests should not be required for DERs such as energy storage engaging in MUAs, per MUA Rule 9.[11] Information for other grid or customer services provided by DERs would be above and beyond that requirement. CESA supports information sharing such that accurate performance measurement can occur, but performance measurement requirements should be cost-reasonable and reasonably accurate. CESA supports the learning objectives as discussed by PG&E, but such information sharing should be done voluntarily, as CESA understand it. Depending on the request, the information and data sharing for services outside of the contracted distribution service may also be burdensome for the DER provider.

[9] SCE Attachment 1-7 (BTM DG).
[10] PG&E's Advice Letter, p. 9.
[11] According to D.18-01-003, Rule 9: "In response to a utility RFO, the energy storage provider is required to list any additional services it currently provides outside of the solicitation. In the event that an energy storage resource is enlisted to provide additional services at a later date, the energy storage provider is required to provide an updated list of all services provided by that resource to the entities that receive service from that resource. The intent of this Rule is to provide transparency in the energy storage market."

G. NEM and SGIP-funded systems should be deemed eligible

SCE finds incrementality questions to be out of scope in the development and approval of the TNPF contract and more appropriate as policy items.[12] CESA agrees, even though we express our disagreement with the explicit elimination of all Net Energy Metering ("NEM") systems from eligibility based on provisions around the "Double Incentive" in SCE's IDER RFO.[13] This is an incrementality issue that may benefit from more nuanced assessments rather than outright prohibitions. Developers have expressed that there could be no participation from them in this solicitation as a result, and such an outcome may be counter-productive to ratepayers or learning objectives. The short-term nature of the deferral makes it less valuable and much higher risk for developers to pursue this type of solicitation instead of just participating in existing NEM tariffs that enable interconnection and export. CESA previously recommended in the working group process and continues to advocate for the removal of this provision, where appropriate and allow for incrementality assessments to be conducted for NEM systems.

Nonetheless, CESA does agree in some regard with SCE that incrementality issues may not be best addressed in the process for the approval of TNPF contracts in this Advice Letter, as it likely requires a broader proceeding to address these policy matters. If a new incrementality definition or determination is made by the Commission in a policy-focused proceeding, CESA supports the inclusion of incrementality definitions and methodologies in TNPF contracts for future IDER RFOs. PG&E also appears to agree on this point to provide market participants with greater certainty in terms of how their bids will be assessed.[14]

III. RESPONSE TO ENERGY DIVISION QUESTIONS.

Energy Division requested that parties to provide their input on the level of standardization needed across the IOUs in their respective TNPF contracts.

1. **Are there elements in the Technology Neutral Pro Forma Contract that should be standardized across all three IOUs? If so, what are they? For each specific element, is there a version (from the three submitted) that you find the most useful as model?**

To the degree possible, the *pro forma* contracts should be made consistent across the IOUs across certain elements. Though unique approaches by IOUs should be allowed, there are certain aspects of each IOU's contracts that could be taken as 'best practices' for

[12] SCE Advice Letter, p. 9.
[13] SCE BTM DG/ES Attachment 1-2.
[14] PG&E's Advice Letter, pp. 8-9.

standardization. Thus, CESA believes that the following elements of the TNPF contract can and should be standardized:

- MUAs should be enabled and reasonably allowed so long as there is no undue or material risk to providing the distribution grid service. This fundamental principle should underpin various terms and conditions of the TNPF contract, including around notification processes, incrementality, information sharing, etc.

- Incrementality is a policy issue and determines eligibility of various DERs in the IDER RFOs. Although the specific incrementality assessment may be unique to each IOU, given how incrementality should be measured against the underlying planning assumptions, the overall incremental eligibility should be standardized across the IOUs. Blanket prohibitions of NEM and SGIP-funded systems should not be allowed, which should be a standard principle across all TNPF contracts and IDER RFO solicitation documents.

- Performance testing, actual performance, and compensation should allow for tolerance bands for a reasonable level of under-performance, and a reasonable system of penalties and incentives should be used to achieve the desired performance level. The specific structure can be determined by the IOUs depending on the distribution grid service, but such a flexible performance and compensation structure should be adopted broadly by all IOUs.

- Project development securities should be reasonably balanced to mitigate development and deployment risk, but they should be commensurate with the need. Expecting the same security for a 1 MW need and a 20 MW need is unreasonable and places market-limiting barriers to DER providers targeting smaller needs. The specific security amount may vary across the IOUs, but this principle of proportionality should be standardized.

2. Should the IOUs work towards developing one TNPFC for future IDER solicitations? Please explain.

CESA agrees with the IOUs in that it is likely not worthwhile to pursue a single *pro forma* that applies for all three IOUs given the complexity of distribution service products and the different technologies that the IDER RFOs are intended to allow to participate.[15] CESA also recognizes that each IOU may structure the services that they buy differently. For example, PG&E and SDG&E are soliciting and contracting for just the distribution service (*e.g.*, due to being 'long' on RA needs) while allowing for sellers to monetize any other revenue stream, whereas SCE is looking to contract for RA in addition to the

[15] PG&E Advice Letter, p. 4 and SCE Advice Letter, p. 4.

distribution service in one package. Differences are warranted given different procurement approaches and technical grid structures and needs, but CESA believes that certain aspects of the contract should be uniform to some extent.

IV. CONCLUSION.

CESA appreciates the opportunity to submit this response to PG&E's and SCE's Advice Letters and hopes that our recommendations will be taken into consideration. CESA looks forward to collaborating with the Commission, PG&E, and SCE to ensure a competitive solicitation for identified distribution grid needs.

Respectfully submitted,

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