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December 29, 2017

Gabriel Petlin, Supervisor Jeffrey Kwan, Utilities Engineer Energy Division California Public Utilities Commission 505 Van Ness Avenue San Francisco, CA 94102

Re: Comments of CESA on Draft Resolution E-4898

Dear Mr. Petlin and Mr. Kwan:

The California Energy Storage Alliance ("CESA") provides these comments regarding draft Resolution E-4898 ("Resolution") issued by the Energy Division on December 6, 2017. CESA appreciates the Commission's consideration of these comments, and appreciates the Commission's work on these technical yet important smart-inverter working group matters. E-4898 approves with modifications the Request for Modifications to Electric Rule 21 Tariff to incorporate Smart Inverter Phase 3 Advanced Functions in compliance with Decision 16-06-052.

CESA's main positions on these matters are that requiring capabilities as set forth in the Resolution is reasonable and prudent (subject to implementation and other issues raised by CESA and other parties), but CESA opposes the mandatory activation of frequency-watt mode, a.k.a. advanced inverter Function 5. The Resolution thus errs in its Finding of Fact 18 and 19.1

The logical error of the findings results from a failure to recognize that it is unreasonable to require mandatory frequency-watt mode services from energy storage solutions absent compensation because there can be legitimate opportunity costs for energy storage resources providing this service which, absent some form of compensation, would be unreasonably borne by customers with energy storage. This can be most acute and unreasonable if applied retroactively.

<sup>&</sup>lt;sup>1</sup> Resolution, p. 26.

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The Resolutions fails to recognize that frequency-watt mode affects energy storage systems more significantly than solar installations and is thus extra unreasonable because energy storage, unlike most customer-sited solar, can *increase* its output in response to a frequency dip. Most solar installations, by contrast, likely operate at maximum levels already and so have no extra capacity to provide additional frequency-watt response, *e.g.* they may experience no effect even from an activated Function 5. For energy storage, by contrast, there is the potential for material cost implications to storage owners subject to mandatory activation of frequency watt mode.

The Resolution is also factually incorrect in deeming and categorizing Primary Frequency Response as a service that can avoid or defer distribution upgrades. Unlike voltage and VAR services, which are localized issues and are often addressed through distribution equipment (or upgrades), frequency response is a system wide issue, a.k.a. 'generation service'. As noted in the Resolution, primary frequency response is a service historically provided by large spinning generators which is "of substantial importance as the grid displaces traditional inertia-providing fossil fuel generation with renewable technologies, many of which do not provide the same inertia." Thus, function 5 is obviously not a distribution service.

The Resolution is flawed in assuming at this time that compensation for a grid-scale generation service will be developed through the IDER or interconnection proceeding<sup>2</sup>, although CESA certainly supports consideration of how best to compensate resources for valuable grid services. Frequency-response services are grid-wide services with rules being considered at both the Federal Energy Regulatory Commission ("FERC") and at the California Independent System Operator ("CAISO").<sup>3</sup> Provisioning and compensation structures are being considered by these two organizations, and Function 5 should not therefore be activated until at a later time. Presumably, the costs of compliance with grid frequency response needs will be borne broadly by Load-Serving Entities. These entities, such as the Investor Owned Utilities, can then defray some of these costs for bundled customers through retail tariff-based compensation for frequency response. At that time, activation of Function 5 would be reasonable. Based on the timelines of FERC and CAISO activities, compensation rules for Primary Frequency Response will not reasonably be implemented within 12 months of the approval date of this Resolution.

Finally, mandatory provision of frequency-watt services could force customers, absent compensation, to bear costs without recourse in order to solve problems potentially even

<sup>3</sup> See, FERC Rulemaking RM16-6-000, Essential Reliability Services and the Evolving Bulk Power System – Primary Frequency Response, November 17, 2016. Also, See CAISO Frequency Response Phase 2 Stakeholder Initiative,

<sup>&</sup>lt;sup>2</sup> Resolution, p. 19.

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occurring out of the state. This seems truly unreasonable. As the Resolution notes, "the frequency throughout the Western Interconnection is effectively the same (60 Hz). Calling DERs to support frequency events (fundamentally a system-wide problem) has the potential to affect all constituents of the 'western Interconnection, which has a population of over 80 million." Clearly, the intent of the Commission is not for a minute subset of Californians with energy storage to bear costs more properly borne by approximately 80 million other individuals. This intent can be easily reflected with a change to the Resolution to not enforce activation of Function 5.

#### **Recommended Revisions:**

CESA recommends the following edits to the Resolution to correct the unreasonableness of activating Function 5 prematurely:

### **In Findings of Fact**: (Resolution, pg. 26)

- 18. It is reasonable for the IOUs to require activation of Function 5, Frequency Watt mode, and Function 6, Volt Watt Mode.
- 19. Activation of Function 5 and Function 6 does not preclude the Commission determining that customers should be compensated at a later time.

### **THEREFORE IT IS ORDERED THAT**: (Resolution, pp. 27-28)

- 2.d. The IOUs shall incorporate Functions 2,3,4,5, and 7 as proposed; and
- 2.e The IOUs shall remove the proposed modification to Phase 2 communications requirements-; and
- 2.f The IOUs shall remove the proposed activation requirements and timeline for Function 5.
- 4. Pacific Gas and Electric, Southern California Edison, and San Diego Gas & Electric shall work with stakeholders to monitor wholesale grid-based compensation or other rules for the frequency response and amounts of curtailment posed by Function 5 and Function 6 and, in consultation with the Commission's Energy Division, file a report no later than two years after the mandatory activation of Function 5 and Function 6 on the findings.

#### **Conclusion**:

In conclusion, CEA strongly supports exploration and establishment of smart inverter functionality where reasonable and appropriately valued. CESA offers these comments based on

<sup>&</sup>lt;sup>4</sup> Resolution, p. 20

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the observation that Commission has factually erred in its assessment of the reasonableness to activate Function 5 and so should eliminate any problematic forced activation of Function 5.

Very truly yours,

Donald C. Liddell

Counsel for the

CALIFORNIA ENERGY STORAGE ALLIANCE

DCL/md

### **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served a copy of the *Comments of CESA on Draft Resolution E-4898* on all parties or their attorneys as shown on the attached service list.

Executed on December 29, 2017, at Calabasas, California.

Michelle Dangott

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