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December 29, 2017

Gabriel Petlin, Supervisor Rachel McMahon, Public Utilities Regulatory Analyst Energy Division California Public Utilities Commission 505 Van Ness Avenue San Francisco, CA 94102

Re: Comments of CESA on Draft Resolution E-4909

Dear Mr. Petlin and Ms. McMahon:

CESA provides these comments regarding draft Resolution E-4909 issued by the Energy Division on December 8, 2017 ("Resolution"). The draft Resolution authorizes Pacific Gas & Electric Company ("PG&E") to solicit offers of energy storage or preferred resource to meet local area Resource Adequacy ("RA") capacity deficiencies in order to meet local reliability needs.

CESA strongly support the draft Resolution as a prudent exploration of resources that could bolster local reliability needs while avoiding out-of-market procurement of resources declared to be uneconomical to operate. The draft Resolution highlights the Commission's clear authority to explore resources as contemplated, and PG&E certainly has the capabilities to conduct solicitations for energy storage. Since the Commission has authority to review any ultimate filings for approval of resources, the draft Resolution provides important and timely optionality for the Commission and PG&E to manage reliability in key local areas. Importantly, the draft Resolution signals to developers of generation resources and energy storage, that the Commission seeks up-front procurements rather than back-stop resources where feasible. This focus ultimately should yield more efficient procurement decisions by load-serving entities. CESA recommends that the Commission also use the draft Resolution to prompt key reforms to the RA market in the currently active RA proceeding.

A. <u>Consideration of Energy Storage Resources for Local Capacity Needs</u> Should Yield Competitive Offers That Meet Local Needs.

Energy storage resources are uniquely suited to quickly respond to and address local capacity needs. As with the Aliso Canyon-related procurements, some energy storage resources

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can be deployed extremely quickly compared to conventional resources.¹ Energy storage resources can often be configured to meet different needs, *e.g.* a four-hour or longer need as specified in a Request for Offer ("RFO"). Some energy storage costs continue to decline, and competitive solicitations present opportunities for real price-discovery. CESA strongly supports the use of a competitive solicitation among energy storage technologies as a tool for ensuring least-cost best-fit energy storage resources.

CESA appreciates the fact that the Commission is considering a directive for PG&E to further explore energy storage resources to meet pressing grid problems. PG&E's capabilities to evaluate and contract with energy storage resources have already been established through past energy storage procurements. The Commission's forward-looking approach and response to AB 2514 set the stage for this capability. While energy storage remains a very small part of the overall grid portfolio,² the ability of energy storage to support multiple grid needs while also helping integrate and absorb renewable energy makes energy storage a compelling new area for development.

Notwithstanding concerns of timing discussed in these comments, the Commission should recognize that the industry is ready to respond. Many CESA member companies have reached out to CESA to provide input on the draft Resolution and are focused on providing resources in response to this compelling grid need. In a recent PG&E solicitation for energy storage resources, all awardees of contracts were CESA members. CESA works closely with energy storage companies to support their understanding of regulatory structures and rules so that energy storage projects can be successfully operated to deliver needed services.

B. <u>A Longer-Timeline For Projects Coming Online Could be Beneficial to Meet The Full Sub-Area Local Reliability Needs at the Scale Urged by the Draft Resolution.</u>

To the extent that the timelines for the needed energy storage or preferred resources cannot be adjusted, CESA expects that some energy storage resources can be deployed to meet needs, though these may primarily be at sites that are already viable and interconnected, or close to potential interconnection locations.

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¹ Draft Resolution E-4909, p. 6.

² CESA estimates that contracted-for energy storage (nameplate capacity) accounts for well under 5% of the available generation resources in the state. This includes existing pumped-hydro storage, storage procured via the AB 2514 procurements, Self-Generation Incentive Program-related energy storage, the Aliso Canyon energy storage, and other deployments.

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A desire to avoid resource must run ("RMR") contracts in 2019 is the basis for the timeline laid out in draft Resolution. With this schedule, however, otherwise cost-effective and viable projects may be excluded due to the length of time needed for a full capacity deliverability study required for RA-eligible resources in the interconnection process. A more extended timeline may be critical to reach the scale required to supplant the RMR units fully and to yield a cost-effective and competitive solicitation outcome.

For this reason, CESA strongly supports exploration of how to accelerate interconnections for reliability matters related to draft Resolution.3 This can be managed by the Commission and PG&E for Rule 21 interconnections. For CAISO interconnections, CESA recommends the Commission issue a directive pursuant to CAISO Tariff Section 8.6 whereby the interconnection process can be accelerated by waiving interconnection timelines pursuant to a Commission directive or order.4 Given the highly localized nature of the grid problems being solved, it is not clear that a Phase 2 system deliverability study is warranted, so acceleration of the interconnection process would be particularly desirable.

In addition to efforts to accelerate interconnections, CESA also recommends that the Commission also consider how extensions on the project online dates may be prudent. An extension of the timeline of the solicitation will expand the number of viable energy storage projects that can compete in the RFO by allowing time for projects to enter the interconnection queue in the March 2018 interconnection window. An extension of time would allow more developers to complete interconnection studies, establish site-control, and explore optimal sites. These steps in turn help ensure competitive outcomes for ratepayers. As is stands there are few, is any project in the CAISO interconnection queue for these sub-local areas. For the

³ *Ibid*, p. 9. Finding of Fact Number 14 states, "It is reasonable for PG&E to expedite the interconnection processes to allow a storage resource to connect to the grid."

⁴ CAISO Tariff Section 8.6: (emphasis added)

"The Phase II Interconnection Study shall be completed within one hundred fifty (150) calendar days following the later of (1) the posting of the initial Interconnection Financial Security or (2) the completion of the re-assessment in preparation for the Phase II Interconnection Study under Section 7.4, where the Interconnection Request meets the following criteria: (i) the Interconnection Request was not grouped with any other Interconnection Requests during the Phase I Interconnection Study or was identified as interconnecting to a point of available transmission during the Phase I Interconnection Study, and (ii) the Interconnection Customer is able to demonstrate that the general Phase II Interconnection Study timeline under GIDAP Section 8.5 is not sufficient to accommodate the Commercial Operation Date of the Generating Facility.

In addition to the above criteria, the CAISO may apply to FERC in coordination with the Interconnection Customer for a waiver of the timelines in this GIDAP to meet the schedule required by an order, ruling, or regulation of the Governor of the State of California, the CPUC, or the CEC."

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Commission to accomplish its objective at scale, it should consider how a timeline consistent with the interconnection requirements for new RA resources would be beneficial.

To illustrate, the CAISO's interconnection study process can take up to 18 months from the annual March interconnection study submittal window, and a PG&E directed Large-Generator Interconnection process can then take another 18 to 24 months if there is any work to be done at a PG&E substation. Given this reality, the Commission may wish to allow for competition from projects that can come on-line not just in 2019 but up through 2020 with the accelerated interconnections or through 2021-2022 without the accelerated interconnections. The Commission can then evaluate compare offers with later online dates with an eye also towards the potential RMR costs.

In the Aliso Canyon procurement process, CESA members observed that the accelerated timeline limited the ability of some developers to achieve some cost-savings in two main ways. First, the number of available sites was limited to those with either existing interconnections with sufficient deliverability levels or with already-established interconnection studies. In this regard, some potential in-front-of-the-meter and behind-the-meter resources were also not capable of competing. Second, fast-paced construction processes also created limited opportunities for cost-savings. CESA notes these two areas where cost savings may not be available in case the Commission has flexibility to extend the timeframes while also avoiding additional RMR or CPM costs.

Finally, CESA believes a compressed timeline may support more utility-owned projects than third-party owned, as was seen in the Aliso Canyon procurements. CESA is not opposed to utility ownership, yet believes that robust competition from third-party entities may be helpful to ratepayers' interests. As such, the Commission should explore how and where third-party ownership approaches may augment and support the goals of the draft Resolution.

C. More Information as to The Need and Criteria For the Proposed RFO Is Needed So That Bidders Can Begin To Develop Resources to Meet the Draft Resolution's Goals.

As time permits, CESA looks forward to working with key parties to further define or study the system needs. Many bidders may assume that basic RA eligibility and counting conventions of full deliverability and four-hour energy requirements will apply. CESA believes it is important to augment this assumption with further information from system-studies, *e.g.* studies by the CAISO, or information on load shapes and grid conditions that define the

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electrical need. Such studies, as have been conducted for other grid areas, provide further information on appropriate reliability needs.⁵

Given the accelerated timeframe, CESA also recommends that PG&E conduct an initial conference call to provide preliminary views in order to provide some advance guidance to bidders. PG&E should share information on the specific grid areas or need, along with any other relevant information known at the time. CESA would strongly support the use of an advance bidder's conference or other approach whereby PG&E can provide additional details on the expected need or conditions for the RFO.

D. Reforms to the Resource Adequacy Program Are Needed to Ensure That the Fleet Yielded by the Resource Adequacy Market Is Sufficient to Meet The CAISO's Needs Under Virtually All Conditions.

Focus on fast-ramping resources will be crucial to develop, along with rules to value energy storage additions to resources. CESA has advocated for overhauls to the CPUC-governed RA program for several years now. Fundamentally, CESA believes the Commission should direct the program to yield a fleet that is sufficient to meet the CAISO's high-voltage grid needs in virtually all conditions. As such, the RA fleet should yield a fast and flexible fleet where resources counting towards RA can be more readily committed and dispatched to meet CAISO needs.

Three important reforms are needed for the RA program. First, RA flexibility "products" should focus on fast-ramping flexibility, e.g. hourly flexibility. This type of fast-flexibility is becoming more and more essential to managing a grid with high-levels of renewables. Second, RA rules should authorize generation resources paired with energy storage, including by authorizing an ELCC "count" for solar paired with storage resources. These types of resources can be economical and give developers (and the grid) tools for reducing intermittency and boosting the planning capacity value of resources such as solar. Adding energy storage to gas plants can also support planning capacity needs along with improving environmental outcomes. Finally, the RA fleet should work to effectively and reasonably address excess generation conditions and downward ramping needs. Some resources may actually worsen over-generation conditions when committed for later upward-ramping needs. The inclusion of a "downward-ramping needs".

⁵ Examples include the Puente study or the Oakland (Dynegy) Peaker study. For more information, see https://www.caiso.com/Documents/Aug16_2017_MoorparkSub-AreaLocalCapacityRequirementStudy-PuentePowerProject_15-AFC-01.pdf), or the section beginning at slide 23 of: https://www.caiso.com/Documents/Day2_PG_E-Presentation_2017-2018TransmissionPlanningProcess PreliminaryReliabilityResults.pdf.

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ramping" focus in RA will ensure resources that support grid conditions in both upward and downward ramping circumstances are more appropriately valued.

Additionally, the RA program may not sufficiently signal or direct development in sub-local areas, as seen by the limited number of projects in the interconnection queue is some of these areas. This results from RA approaches whereby sub-local capacity requirements may not always be enforced. To evaluate this aspect of the RA program, the Commission can review the interconnection queues to assess if sub-local capacity is being considered or explored by developers. Robust market signals and directives are key for adequate RA planning. Ultimately, the CAISO should not be handed an RA fleet that prompts excess or even modest levels of out of market actions, including reliability curtailments. Such out of market actions represent inefficiencies that could be costly to ratepayers.

E. <u>Provisions to Address Resource Adequacy Needs Even When Community Choice Aggregators Formation May Transfer Obligations Are Needed.</u>

The bilateral RA market may also be experiencing change as a result of the formation of Community Choice Aggregators ("CCAs"). It is reasonable for every load-serving entity to have sufficient planning capacity under contract to meet needs. The need for RA capacity originated in part from the electric crisis of 2000-2001. The requirement for reasonable forward contracting of real and designated capacity remains a critical aspect of the state's electrical reliability.

The cost-allocation structure of the RMR or CPM mechanisms could conceivably be used by a load-serving entity to manage the risks of procuring capacity for load that could depart. This possibility is concerning because it highlights that load-serving entities may opt to underprocure for planning capacity, causing backstop needs. If backstop resources could in fact being used to manage departing load risks, CESA urges the Commission to encourage resources to ensure efficient up-front procurement of planning capacity, instead of less efficient back-stop procurements.

F. The Commission Should Ensure the Definition of Preferred Resources and Energy Storage Fits With the Intent of the Draft Resolution.

The draft Resolution clearly directs PG&E to explore energy storage and preferred resources "in lieu of conventional generation." As such, the Commission may wish to reference definitions or eligibility for these resources. This type of up-front definitional work will steer developers towards resources that will meet the Commission's intent and that will avoid

⁶ *Ibid*, pg. 5.

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submittal of projects that would not comply. CESA also notes that the draft Resolution fits with findings from the Integrated Resources Plan ("IRP") Draft Reference Plan, which highlights some needs for energy storage for reliability and grid needs. It would be logical that RA procurement would begin to map to future procurement needs as shown in the IRP.

G. <u>Conclusion</u>.

In conclusion, CESA strongly supports exploration of energy storage resources to meet the needs identified in the draft Resolution. The Commission is right to explore actions that may avoid undue reliance on backstop capacity resources. In general, any over reliance on RMR contracts should be avoided, and the Commission clearly has the authority to take action to manage reliability through the RA program or other grid planning tools.

Very truly yours,

Donald C. Liddell

DCL/md Enclosures: Certificate of Service Service Lists R.15-03-011 and R.17-09-020



CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the *Comments of CESA on Draft Resolution E-4909* on all parties or their attorneys as shown on the attached service lists.

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

Michelle Dangott

SERVICE LISTS

Service Lists: R.15-03-011, and R.17-09-020.

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