

**BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Pursuant to
Assembly Bill 2514 to Consider the Adoption
of Procurement Targets for Viable and Cost-
Effective Energy Storage Systems

R.10-12-007
(Filed December 26, 2010)

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
REPLY COMMENTS ON ASSIGNED COMMISSIONER'S RULING
PROPOSING STORAGE PROCUREMENT TARGETS AND MECHANISMS
AND NOTICING ALL-PARTY MEETING**

CHARLES R. MIDDLEKAUFF
MARK R. HUFFMAN

Pacific Gas and Electric Company
77 Beale Street, B30A
San Francisco, CA 94105
Telephone: (415) 973-3842
Facsimile: (415) 973-0516
E-Mail: MRH2@pge.com

Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

Dated: July 19, 2013

TABLE OF CONTENTS

| | Page |
|---|------|
| I. THE STORAGE TARGETS PROPOSED BY THE ACR SHOULD NOT BE INCREASED IN THE ABSENCE OF A DEMONSTRATED NEED THAT CAN BE MET BY STORAGE..... | 3 |
| II. PG&E’S PROPOSAL TO SHIFT APPROXIMATELY HALF THE STORAGE TARGETS FROM 2014/2016 TO 2018/2020 MAKES SENSE IN THE ABSENCE OF ANY DEMONSTRATED NEED TO PROCURE ADDITIONAL RESOURCES | 4 |
| III. THE ACR SHOULD BE MODIFIED SO THAT STORAGE SOLICITATIONS DO NOT RESTRICT ELIGIBLE TECHNOLOGIES | 4 |
| IV. THE ACR SHOULD BE MODIFIED TO REMOVE THE LIMITS CURRENTLY PLACED ON COST-EFFECTIVENESS OFF-RAMPS FOR MEETING THE STORAGE TARGETS | 5 |
| V. THE ACR SHOULD BE MODIFIED SO THAT IT DOES NOT LIMIT UTILITY OWNERSHIP OF STORAGE FACILITIES SERVING A DISTRIBUTION RELIABILITY FUNCTION | 6 |
| VI. ENERGY SERVICE PROVIDERS AND COMMUNITY CHOICE AGGREGATORS SHOULD NOT BE EXCUSED FROM THEIR SHARE OF ANY STORAGE TARGETS ADOPTED IN THIS PROCEEDING | 7 |
| VII. THE ACR SHOULD NOT BE MODIFIED TO GIVE ADDITIONAL WEIGHT TO THE COST-EFFECTIVENESS MODELING THAT HAS BEEN PRESENTED IN THIS PROCEEDING | 7 |
| VIII. THE TWO YEAR INSTALLATION REQUIREMENT PROPOSED BY CESA SHOULD BE REJECTED..... | 9 |
| IX. THE STORAGE TARGETS PROPOSED BY THE ACR SHOULD NOT BE REALLOCATED TOWARD CUSTOMER-SIDE USES..... | 10 |
| X. THE FOCUS WITH RESPECT TO CUSTOMER-SIDE STORAGE SHOULD CONTINUE TO BE ON OTHER EXISTING COMMISSION PROCEEDINGS..... | 11 |
| XI. THE ACR’S DETERMINATION TO NOT ADD STORAGE AS A PREFERRED RESOURCE TO THE STATE’S LOADING ORDER IS CORRECT, AND SHOULD NOT BE MODIFIED | 12 |
| XII. THE ACR SHOULD BE MODIFIED TO ELIMINATE THE REQUIREMENT THAT PROPOSED POWER PURCHASE AGREEMENTS BE SUBMITTED AS PART OF EACH PROPOSED SOLICITATION PROTOCOL..... | 13 |
| XIII. THE PROPOSAL TO MAKE PUBLIC THE VALUES USED TO SCORE AND EVALUATE STORAGE PROJECT BIDS SHOULD BE REJECTED..... | 14 |

TABLE OF CONTENTS
(continued)

Page

| | |
|---|----|
| XIV. PROPOSALS TO ADDRESS STORAGE INTERCONNECTION FEES AND RETAIL RATE DESIGN ARE BEYOND THE SCOPE OF THIS PROCEEDING | 14 |
|---|----|

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Pursuant to
Assembly Bill 2514 to Consider the Adoption
of Procurement Targets for Viable and Cost-
Effective Energy Storage Systems

R.10-12-007
(Filed December 26, 2010)

**PACIFIC GAS AND ELECTRIC COMPANY’S (U 39 E)
REPLY COMMENTS ON ASSIGNED COMMISSIONER’S RULING
PROPOSING STORAGE PROCUREMENT TARGETS AND MECHANISMS
AND NOTICING ALL-PARTY MEETING**

Pursuant to the schedule set forth in the “Assigned Commissioner’s Ruling Proposing Storage Procurement Targets and Mechanisms and Noticing All-Party Meeting” (ACR) dated June 10, 2013, Pacific Gas and Electric Company (PG&E) hereby files its reply comments on the ACR.

PG&E’s primary concern with respect to comments filed by other parties is that some parties urge the Commission to set very large storage targets that are completely divorced from any determination that the resources are needed. Adoption of the recommendations to set substantially higher storage targets regardless of need could result in the procurement of a significant amount of very expensive, technologically immature storage facilities. The ACR’s more measured storage targets, shifted as recommended by PG&E so that about half of the 2014/2016 targets are moved to 2018/2020, provide a path that is much more likely to be beneficial to customers. Development of storage will be encouraged, but customer benefits will be maximized by shifting more of the targets toward 2018/2020, when costs are likely to be less and technologies more mature.

PG&E supports the comments that urge the Commission to remove the limitations on eligible storage technologies currently found in the ACR. There is no benefit to customers from prohibiting some technologies, including pumped hydro storage, from competing to provide solicited storage services.

PG&E also supports the comments that urge the Commission to eliminate the ACR's restrictions on application of the cost-effectiveness off-ramps. Such restrictions would, in effect, require utilities to move forward with some storage projects regardless of costs, and whether the projects provide any benefits. It is inconsistent with Assembly Bill (AB) 2514, and could be very costly to customers without providing any commensurate benefits, if utilities are obligated to move forward with a specified level of storage projects regardless of whether any viable, cost-effective projects are proposed in response to utility storage solicitations.

These reply comments also address the following PG&E recommendations:

- The ACR should be modified so that it does not limit utility ownership of storage facilities serving a distribution reliability function.
- Energy service providers and community choice aggregators should not be excused from their share of any storage targets adopted in this proceeding.
- The ACR should not be modified to give additional weight to the cost-effectiveness modeling presented in this proceeding.
- The ACR should not be modified to add a two year installation requirement in addition to the proposed procurement targets.
- The proposed storage targets should not be reallocated toward customer-side uses.
- The focus with respect to customer-side storage should continue to be on other existing Commission proceedings.
- The ACR's determination to not add storage as a preferred resource to the state's loading order should not be modified.
- The requirement that a proposed power purchase agreement be submitted as part of each proposed solicitation protocol should be eliminated.
- The proposal to make public the values used to score and evaluate storage project bids should be rejected.
- Proposals to address storage interconnection fees and retail rate design are beyond the scope of this proceeding.

I. THE STORAGE TARGETS PROPOSED BY THE ACR SHOULD NOT BE INCREASED IN THE ABSENCE OF A DEMONSTRATED NEED THAT CAN BE MET BY STORAGE

In their opening comments the California Energy Storage Alliance (CESA), and Sierra Club California and the California Environmental Justice Alliance (Sierra Club/CEJA) state that the proposed targets in the ACR should be increased.^{1/} These recommendations should be rejected. The storage targets set forth in the ACR should not be increased.

CESA provides no support for its request, other than to observe that some of the bulk storage technologies are large and would consume a significant portion of the targets. Sierra Club/CEJA assert that the targets should be increased because the current target of 1.3 gigawatts is insufficient to support renewables growth.

These observations, unsupported by any analysis, do not provide evidence to conclude that larger storage targets should be adopted. Further, there are ongoing efforts in track 2 of the long-term procurement plan (LTPP) proceeding (R.12-03-014) to determine what the system needs are with the expected changes to California's future supply and demand, including the increasing levels of renewable power that are coming online. Storage policy must ensure that storage is developed to meet identified reliability needs in a cost-effective manner and that storage procurement does not occur solely for the sake of having storage at any price, and regardless of whether there is any need.^{2/}

The Division of Ratepayer Advocates (DRA) makes this point forcefully, stating:

The IOUs should only procure storage that is the least-cost, best-fit resource for an identified system or local area need in any given year. If the grid does not require the targeted amount of storage in a given year/period, then consistent with the 100 percent flexibility rule DRA recommends, the Commission should excuse compliance going forward. Such relief will prevent additional costly and unnecessary obligations by the ratepayers.^{3/}

^{1/} CESA Comments, p. 6; Sierra Club/CEJA Comments, p. 12.

^{2/} *See, e.g.*, California Wind Energy Association Comments, p. 2.

^{3/} DRA Comments, p. 6.

The significantly increased targets proposed by CESA and Sierra Club/CEJA would likely set storage targets far in excess of any need demonstrated in the LTPP proceeding, and so should be rejected.

II. PG&E’S PROPOSAL TO SHIFT APPROXIMATELY HALF THE STORAGE TARGETS FROM 2014/2016 TO 2018/2020 MAKES SENSE IN THE ABSENCE OF ANY DEMONSTRATED NEED TO PROCURE ADDITIONAL RESOURCES

As PG&E notes in its opening comments, shifting the targets as recommended by PG&E has the potential to save customers tens or hundreds of millions of dollars and should not adversely impact the pace of technological advance.^{4/} PG&E’s recommended targets would provide a signal of future procurement, preserve the overall targets proposed in the ACR, and spur investment. With this modification to shift, not reduce, the targets, California can help the technologies move along the cost and learning curves *and* benefit customers by procuring larger quantities once costs have decreased.

Additionally, the recommended target shift makes sense for PG&E in light of the fact that there is not currently an established need for additional resources. Under the schedule for the current LTPP there will be substantial additional information about need that can be reflected in efforts to meet the later procurement targets proposed to be adopted by the ACR.

III. THE ACR SHOULD BE MODIFIED SO THAT STORAGE SOLICITATIONS DO NOT RESTRICT ELIGIBLE TECHNOLOGIES

In its opening comments the California Independent System Operator (CAISO) recommends that the Commission should “focus on the operational characteristics of storage technologies and not particular categories of use or technologies alone.”^{5/} PG&E agrees that no technologies should receive favored treatment at this point. Any storage solicitation should include all sources, including pumped hydro storage if it can provide the desired operational

^{4/} See also, Pilot Power Group, Inc., Comments, pp. 5-6.

^{5/} CAISO Comments, p. 4.

characteristics. Allowing all technologies to participate will help to ensure that customers benefit from the most cost-effective, useful storage projects.

IV. THE ACR SHOULD BE MODIFIED TO REMOVE THE LIMITS CURRENTLY PLACED ON COST-EFFECTIVENESS OFF-RAMPS FOR MEETING THE STORAGE TARGETS

In their opening comments several parties raise concerns with the limitations the ACR places on cost-effectiveness off-ramps for meeting the storage targets. For example, DRA recommends that “[t]he IOUs should be relieved from procurement when they can show that storage was not cost-effective, viable, or useful to meet an identified need.”^{6/}

The Utility Reform Network (TURN) voices a similar sentiment. While TURN does not recommend a specific percentage for the off-ramps, it states that “the off-ramps provided in the proposal may not be adequate. . . . TURN believes the [off-ramp] percentages [set forth in the ACR] should be raised.”^{7/}

DRA’s recommendation is consistent with AB 2514. By contrast, the ACR’s approach is not, because depending on what storage project proposals are actually put forth in response to the solicitations, it could require the utilities to pursue their storage targets by moving forward with projects that are not viable or cost-effective. AB 2514 does not require or encourage the development of storage projects that are not viable or cost-effective. Therefore, DRA’s recommendation, which is similar to the recommendation made by PG&E and others,^{8/} should be adopted. The ACR should be modified to eliminate the off-ramp caps. Otherwise, utility customers could be burdened with unnecessary costs associated with a large amount of storage projects with immature technologies.

In contrast to DRA and TURN’s recommendations, Sierra Club/CEJA urge the

^{6/} DRA Comments, p. 7.

^{7/} TURN Comments, p. 4.

^{8/} *See, e.g.*, SCE Comments, pp. 9-10.

Commission to further limit the availability of off-ramps.^{9/} But Sierra Club/CEJA provide no explanation of how the off-ramp limitations they support would be consistent with the cost-effectiveness requirements of AB 2514. The ACR off-ramp limitations endorsed by Sierra Club/CEJA are not consistent with the cost-effectiveness provisions of AB 2514, and it would not make sense for the utilities to be obligated to pursue projects that are not viable or cost-effective.

As PG&E notes in its opening comments, the burden will remain on a utility proposing to use the off-ramp to obtain relief from a portion of its storage targets to demonstrate that there are no viable, cost-effective storage projects available. Sierra Club/CEJA acknowledge this. This burden will ensure that the Commission, not the utilities, has the last word on whether specific proposed storage projects should be pursued in the effort to meet the adopted targets. The determination of whether, and to what extent, the off-ramps should be used should be made at the time when projects have been solicited, in light of the response to those solicitations. No informed decision can be made now, months or years before any specific storage project proposals have been put forth. Therefore, the ACR's *a priori* limitation on the use of off-ramps should be removed.

V. THE ACR SHOULD BE MODIFIED SO THAT IT DOES NOT LIMIT UTILITY OWNERSHIP OF STORAGE FACILITIES SERVING A DISTRIBUTION RELIABILITY FUNCTION

Many parties, including those not always aligned with the utilities, raise concerns with non-utility ownership of storage assets providing distribution reliability functions.^{10/} Storage assets serving a distribution reliability function should not be owned by third parties. The Commission has not evaluated the broader implications of changing the utility ownership model for distribution facilities, and in any event third-party ownership of distribution facilities is

^{9/} Sierra Club/CEJA Comments, pp. 28-29.

^{10/} See, e.g., Green Power Institute Comments, p. 3-4.

unlawful under Public Utilities Code section 399.2(a)(2).^{11/}

VI. ENERGY SERVICE PROVIDERS AND COMMUNITY CHOICE AGGREGATORS SHOULD NOT BE EXCUSED FROM THEIR SHARE OF ANY STORAGE TARGETS ADOPTED IN THIS PROCEEDING

Shell Energy North America (US), L.P. (Shell Energy) and Marin Energy Authority (MEA) argue that storage targets should not apply to energy service providers (ESPs) and community choice aggregators (CCAs).^{12/} If storage targets are applied to investor-owned utilities, then ESPs and CCAs should not be excused from their share of those targets. The ACR identifies three purposes as guiding energy storage procurement policy: optimization of the grid, integration of renewable energy; and reduction of greenhouse gas emissions.^{13/} All LSEs have a stake in these.

PG&E agrees with Southern California Edison Company (SCE)^{14/} that storage that provides a distribution reliability function should be allocated to all customers by being included in distribution charges. Any storage targets that are not for distribution reliability should be allocated to all LSEs so that bundled customers are not bearing an unfair burden relative to direct access and CCA customers.

VII. THE ACR SHOULD NOT BE MODIFIED TO GIVE ADDITIONAL WEIGHT TO THE COST-EFFECTIVENESS MODELING THAT HAS BEEN PRESENTED IN THIS PROCEEDING

CESA and Sierra Club/CEJA suggest that the results from the cost-effectiveness analysis from DNV KEMA and the Electric Power Research Institute and Energy + Environmental Economics (EPRI/E3) should be used to guide procurement targets and future energy storage

^{11/} Solicitations could be used to obtain “turnkey” projects. This would be consistent with the intent of the ACR to help transform the market, but simultaneously allow the utility to maintain control over the critical functions of the distribution system.

^{12/} Shell Energy Comments, pp. 3-7; *see*, MEA Comments, p. 3.

^{13/} ACR, p. 6.

^{14/} SCE Comments, p. 19.

policy.^{15/} On the other hand many other parties,^{16/} including PG&E, raise concerns with the use of the cost-effectiveness analysis that has been presented by these entities.

The Commission should reject CESA and Sierra Club/CEJA's proposals to give more weight to this analysis at this time. The results from DNV KEMA and EPRI/E3's analysis are driven by methodologies and input assumptions that do not have the consensus of the stakeholders participating in this proceeding. Also, DNV KEMA has used at least 4 distinct models for its analysis, and parties have not been provided with enough information to analyze the inputs and results of these models. It is not clear which of DNV KEMA's models the ACR is referencing when it discusses 'two models.'^{17/}

Some of the items that PG&E does not agree with are as follows:

- a. DNV KEMA and EPRI/E3 use estimates for the costs of storage projects that are low.
- b. EPRI/E3's projected future prices for regulation are high, which results in a likely overstatement of the benefits that storage projects will provide.
- c. EPRI/E3's model assumes that energy storage resources have perfect foresight of future prices and that all bids from storage clear the CAISO markets, both of which result in a likely overstatement of the expected benefits.
- d. EPRI/E3's results do not consider the changes to market prices that are likely to result from the addition of energy storage projects. Because the addition of storage is likely to lower the resulting prices, the EPRI/E3 results are likely to overstate benefits.
- e. DNV KEMA's analysis only includes an all gas portfolio. It does not model the existing flexible capacity in California's portfolio that exists through hydro resources. This assumption inflates the benefit that the storage portfolio can provide.
- f. DNV KEMA's calculated system savings from energy storage results in an overestimation of the \$/MWh benefit. In its calculation DNV KEMA does not include energy from all generation. It subtracts out the baseload and non-dispatchable resources. By artificially decreasing energy, the benefit is inflated.

^{15/} CESA Comments, p. 22; Sierra Club/CEJA Comments, p. 30.

^{16/} *See, e.g.*, Calpine Corporation Comments, pp. 8- 9; Beacon Power, LLC Comments, pp. 8- 9; TURN Comments, pp. 5- 6; Jack Ellis Comments, p. 15.

^{17/} ACR, p. 19.

- g. DNV KEMA's cost-effectiveness test for customer-sited storage does not use the appropriate test for the purposes of this proceeding. A total resource test, not a participant test, should be used.

In fact, the reports entered into the record of the proceeding are far from being complete. For example, at the workshop on June 28, 2013, DNV KEMA stated that some of its analysis indicated that in a portfolio of 20 GW of energy storage, only 200 MW would be dispatched. This suggests that storage would not be utilized much. But DNV KEMA has yet to include any information relating to utilization of storage resources into its report.

Of the 270 scenarios tested for stationary distribution storage in the DNV KEMA analysis, only eight were cost-effective. But these results are not clearly stated in the current draft version of the report.

In their opening comments Sierra Club/CEJA submit a report from Ecoshift Consulting which prematurely states that storage is cost-effective for nearly all scenarios tested.^{18/} The report states that storage is cost-effective under certain assumptions for costs and benefits, but makes no effort to verify the validity of assumptions that drive the costs and benefits.^{19/} Furthermore, the report claims additional societal benefits without making use of the existing framework of a societal test, and ignoring the fact that the appropriate measure of cost-effectiveness here is a total resource test.

For all of these reasons, the ACR should not be modified to give additional weight to the DNV KEMA and EPRI/E3 cost-effectiveness analysis in this proceeding.

VIII. THE TWO YEAR INSTALLATION REQUIREMENT PROPOSED BY CESA SHOULD BE REJECTED

CESA proposes that the ACR be modified to set installation targets, under which the utilities would be required to ensure that the storage projects used to meet the procurement targets are installed within two years.^{20/} This additional installation target should not be adopted.

^{18/} Sierra Club/CEJA Comments, pp. 34- 35.

^{19/} Sierra Club/CEJA Comments, p. 35.

^{20/} CESA Comments, pp. 15-17.

There is no reasoned basis at this point, given the current stage of commercial development of many storage technologies, for adopting a blanket requirement that all procured projects be installed within two years.

As a practical matter, two years is simply an infeasibly short period of time to develop many storage projects. Related to this, adopting the two-year installation requirement would create undesired incentives. For example, it would push the utilities toward procuring the most certain, tested technologies, and away from any potentially promising, but less well established, storage technologies where the lead time from contractual commitment to installation might be longer, or less certain. CESA's proposed blanket "two years to install" requirement should be rejected.

IX. THE STORAGE TARGETS PROPOSED BY THE ACR SHOULD NOT BE REALLOCATED TOWARD CUSTOMER-SIDE USES

In their opening comments Stem, Inc. and SolarCity Corporation (Stem/SolarCity) "urge the Commission to increase this [customer-side storage] procurement bucket to be one-third of the overall procurement target."^{21/} This recommendation should be rejected. The storage targets set forth in the ACR should not be shifted between the buckets.

Stem/SolarCity argue to shift targets to increase customer-side storage targets because of "the clear-cut value proposition... since it is located at the edge of the network where grid challenges originate, [customer-side storage] is able to support the grid in its entirety. It does so by managing customer load and thereby relieving pressure on both the distribution and transmission systems."^{22/} Stem/SolarCity's assertions are unfounded with respect to increasing customer storage. Specifically, they have provided no evidence to their claim that grid challenges originate at the edge of the network. Transmission and distribution system challenges result from a wide range of factors which include customer load. To conclude that customer-side storage can support the grid in its entirety is not correct.

^{21/} Stem/SolarCity Comments, p. 6.

^{22/} Stem/SolarCity Comments, p. 6.

Customers will choose how to use customer-side storage systems and the customer's preference may not correspond with "relieving pressure" on the system. Currently, customer-side storage uses are widely varied. For example, certain manufacturers are marketing customer storage primarily as a home backup system. While this use may provide significant value to customers, it would not necessarily lend itself to the overarching goals of grid optimization, investment deferral, or renewable power integration as stated as the primary guiding principles within the ACR.^{23/}

In addition, the benefits provided by customer-side storage systems will be highly dependent on the physical location of the storage facility. To the extent that the location of a storage facility is dependent on the location of a customer, not the needs of the grid, the resulting storage facility may not provide system benefits. In short, Stem/SolarCity have not supported their recommendation to increase customer-side storage targets, and so it should be rejected.

X. THE FOCUS WITH RESPECT TO CUSTOMER-SIDE STORAGE SHOULD CONTINUE TO BE ON OTHER EXISTING COMMISSION PROCEEDINGS

PG&E agrees with SCE, and to a certain extent with Sierra Club/CEJA, that customer-side storage projects would find it difficult to participate in a renewables auction mechanism (RAM)-type solicitation.^{24/} PG&E also agrees that for customer-side projects existing proceedings such as the 2015-2017 demand response application, the distributed generation/California solar initiative rulemaking, and the alternative fuel vehicle rulemaking should be relied on for any potential customer-side storage project development. Nothing in the energy storage rulemaking should be used to change or modify the approaches being taken in those proceedings either now or in the future. This proceeding should not be used to set or modify the standards that are being used in those proceedings to evaluate or propose programs,

^{23/} PG&E is not intending to argue against these third-party storage offerings. Customers should be free to adopt them based on their preferences. PG&E already offers programs to support customer-side storage third-party offerings.

^{24/} SCE Comments, p. 11; *see*, Sierra Club/CEJA Comments, p. 25.

projects and activities.^{25/}

However, PG&E disagrees with Sierra Club/CEJA that customer-side storage projects could be suited for a standardized process as seen in net metering programs.^{26/} Net energy metering programs were specifically developed for renewable energy resources and not for customer-side storage.

PG&E also disagrees with Sierra Club/CEJA in connection with the adoption of a standard contract or feed-in tariff as a result of this proceeding.^{27/} To the extent that customer-side storage projects are procured in a solicitation resulting from this proceeding, they should not be subjected to any one-size-fits-all framework, regardless of whether their sizes are above or below one MW.

XI. THE ACR'S DETERMINATION TO NOT ADD STORAGE AS A PREFERRED RESOURCE TO THE STATE'S LOADING ORDER IS CORRECT, AND SHOULD NOT BE MODIFIED

In its comments CESA recommends that the Commission determine that “energy storage is *implicit in* the Loading Order categories at the same level as energy efficiency and demand response.”^{28/} This recommendation should be rejected. The ACR takes a different approach, and the ACR should not be modified on this point. As the ACR notes, it proposes to make “storage a priority by virtue of setting targets.”^{29/} Accordingly, the ACR rejects the idea of formally revising the loading order to include energy storage.^{30/}

^{25/} Customer-side programs, such as demand-side management programs, should count toward any customer-side storage target in this proceeding, and any targets should be achieved through existing and future customer-side programs to the extent possible. In the future PG&E may propose to continue, modify, or end current programs and/or to develop future programs.

^{26/} Sierra Club/CEJA Comments, p. 25.

^{27/} Sierra Club/CEJA Comments, p. 23.

^{28/} CESA Comments, p. 4 (emphasis in original).

^{29/} ACR, p. 21.

^{30/} ACR, p. 21.

The approach adopted in the ACR makes sense. The ACR explains that “[t]he hoped-for result is that when the storage market becomes sustainable, procurement targets for storage will no longer be needed and it will compete to provide services alongside other types of resources.”^{31/} This is the approach that should be followed, rather than one where storage is given a “loading order priority” that might give storage a long-term preference over other resources that it would otherwise have to compete against. Over the longer term storage projects should have to compete with other projects to provide cost-effective benefits to the grid, rather than be given an artificial preference over other, non-storage projects that might be able to provide the same benefits more cost-effectively.

XII. THE ACR SHOULD BE MODIFIED TO ELIMINATE THE REQUIREMENT THAT PROPOSED POWER PURCHASE AGREEMENTS BE SUBMITTED AS PART OF EACH PROPOSED SOLICITATION PROTOCOL

Many parties, including PG&E, raised concerns generally with the use of a RAM-type auction mechanism for storage solicitations at this time.^{32/} As part of those concerns, PG&E disagrees with the ACR requirement that the utility should file a proposed power purchase agreement (PPA) for approval as part of each proposed auction protocol.^{33/}

For similar reasons that RAM is not an appropriate procurement mechanism for storage at this time, having the Commission review and approve an *a priori* standard PPA would not be appropriate for storage solicitations, either. A single, non-modifiable, standard PPA would not be sufficient to cover the different technologies, attributes, and differences in operation for energy storage resources.

Similar to existing procurement mechanisms for intermediate and long-term dispatchable resources, PG&E recommends that the Commission not require the utilities to obtain approval of a standard PPA prior to issuance of an energy storage solicitation. Many of the energy storage

^{31/} ACR, p. 3.

^{32/} See, e.g., CESA Comments, p. 9.

^{33/} ACR, p. 18.

technologies are still emerging. Given the nascent stage of this industry and the variation in storage technologies, utilities should be allowed the flexibility to negotiate PPA terms individually with counterparties based upon each project's specific attributes. The Commission can review the negotiated, executed contracts when they are filed for Commission approval. Allowing such flexibility instead of requiring a pre-approved, non-modifiable PPA will result in more effective solicitations.

XIII. THE PROPOSAL TO MAKE PUBLIC THE VALUES USED TO SCORE AND EVALUATE STORAGE PROJECT BIDS SHOULD BE REJECTED

The Clean Coalition recommends that the Commission require development of a comprehensive list of benefits that storage projects may provide, and then make public the value of each of those benefits.^{34/} PG&E strenuously objects to the notion of making the values of these benefits public. Such a public release would run counter to D.06-06-066, the Commission's definitive decision on electric procurement confidentiality. That decision adopted a "confidentiality matrix" which specifies, among other things, that the details of the scoring and evaluation of bids should remain confidential for three years after winning bidders are selected. If the Commission were to decide to limit the public release of benefit values to only the storage requests for offers (RFOs), it would still run counter to D.06-06-066 in other RFOs because many of the benefit values are directly transferable, e.g. resource adequacy benefits. For these reasons, The Clean Coalition's proposal for making benefit values public must be rejected.

XIV. PROPOSALS TO ADDRESS STORAGE INTERCONNECTION FEES AND RETAIL RATE DESIGN ARE BEYOND THE SCOPE OF THIS PROCEEDING

In opening comments, parties raise issues that are out of the scope of this proceeding. Stem/SolarCity state that this proceeding should consider storage interconnection fees as impediments to meeting storage targets.^{35/} But Stem/SolarCity provide no factual evidence that current interconnection fees are inappropriate or an impediment to the storage market. Storage

^{34/} Clean Coalition Comments, p. 9.

^{35/} Stem/SolarCity Comments, p. 8.

projects can interconnect under the current tariffs.

Sunverge Energy, Inc. (Sunverge) suggests that the Commission should consider coordinating the exploration of unbundling residential rate structures to encourage customer management of demand during peak periods with storage solutions, and that the inherent structure of net energy metering (NEM) hurts the value proposition of storage and that therefore an alternative option to NEM should be explored.^{36/}

The Commission should not address the substance of either of these topics in this proceeding. Other proceedings are more natural venues to address each of these issues. Neither has received a careful evaluation here. There are significant levels of policy and technical expertise that reside within the more appropriate proceedings to consider these issues, and this expertise should be leveraged when analyzing them. Specifically, phase II of the interconnection OIR (R.11-09-011) is examining the storage interconnection process, and the distributed generation proceeding (R.12-11-005) governs any issues related to the net-energy metering tariff.

In sum, any issues related to the interconnection process or rate structure evaluation are out of the scope of this proceeding.

Respectfully submitted,

By: /s/ Mark R. Huffman
MARK R. HUFFMAN

CHARLES R. MIDDLEKAUFF
MARK R. HUFFMAN
Pacific Gas and Electric Company
77 Beale Street, B30A
San Francisco, CA 94105
Telephone: (415) 973-3842
Facsimile: (415) 973-0516
E-Mail: MRH2@pge.com
Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

Dated: July 19, 2013

^{36/} Sunverge Comments, p. 4.